



COMPREHENSIVE GUIDE FOR AOM EXAM

SOUTH CENTRAL RAILWAY

DISCLAIMER

Though sufficient care and precaution has been taken while preparing this material, wherever any conflicting opinion occurs, presentation in the rule books prevails over this material. It has been designed to ensure that material for the complete syllabus of the examination of AOM/ATM as given in the application is covered to the maximum possible extent. It is to be read in conjunction with G&SR, Block Working Manuals, Accident Manual, Disaster Management Plan, Operating Mannual, Advanced operations book by other Authors, Amendment slips, JPO's, Working Time-Table and Safety related Circulars issued from time to time, Commercial Mannuals, Establishment Mannual, Accounts Mannual and IR and SCR official website.

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Syllabus for AOM/ATM exams for 30% LDCE**Paper – I Professional Subject**

- I. General:- Hierarchical set up and line of control of Operating Department at the Divisional, Zonal and Railway Board level.
- II. Traffic Train and Power Control Organization.
 - a) Objectives and functional set up of control offices.
 - b) Duties of Section Controllers and efficiency indices of controllers viz.
 - (i) Speed and throughput of a section (ii) Punctuality,
 - (iii) Engine detention (iv) Observance of 10 hour Rule.
 - c) Duties and responsibilities of Deputy chief controllers and station/Yard staff towards control organization.
 - d) Train ordering principles
 - e) Special Instructions during abnormal conditions of working such as during emergencies like cyclones, civil disturbances etc.
 - f) Working of trains and responsibilities of Station Master when control is interrupted and functions of control duties and accidents.
 - g) Basic and important registers maintained in the control office.
 - h) Daily performance reporting from stations/yards/shed to area sub-control, area sub control to divisional control office and from divisional control office to zonal control office and from zonal control office to railway board.
 - i) Periodical performance reporting and analysis of operating performance.
 - j) Power control organization; Engine and crew scheduling.
 - k) Factors effecting engine performance and engine utilization and methods of improvement.
- III. Goods train operations
 - a) Working of Marshalling Yards and Transshipment points,
 - b) Causes of yard and section congestion and remedial strategies
 - c) All India Marshalling order and Railway wise marshalling orders – Principles and procedures.
 - d) Formation of through, shunting and small quick transit (S&T) trains.
 - e) Rules regarding carriage of explosives and other general goods,
 - f) Indent, allotment and supply of goods stock at stations.
 - g) Priority schedules,
 - h) Imposition of operating restrictions on wagon loading and acceptance of wagon indents.
 - i) Observance of Civil ban and carriage of contraband goods etc.
 - j) Organization of Divisional, Railway and National level for daily supervision and control on goods operation.

- k) Daily status report from divisions to the railway headquarters central control and from the railways to railway board central control.
- l) Causes of yard and section congestion and remedial strategies.
- m) Wagon utilization. Factors effecting optimum utilization of the wagon fleet and methods of improvement
 - i. Running of unit trains and formation of captive rakes.
 - ii. Block train operations,
 - iii. Nominated day loading
 - iv. Rationalization scheme of movement of goods traffic for avoiding congestion by specific routes at specified stations.
 - v. Rationalization of booking and destination points and rationalization of movement via transshipment points.
- n) Engine Utilization-Factors requiring special attention – Supervision and control over movement of special type of stock, ODC consignments.
- o) Specialized Movements – Oil tanks, Vegetable oil tanks, acid tanks, LPG tanks and BFRs etc.
- p) Sick lines and TXR repair depots and their functions.
- q) Supply of coaches/wagons to V&W shops for POH and special repairs.
- r) Working of traveling traffic cranes for handling heavy consignments at intermediate stations.
- s) Detaching of sick wagons at enroute stations and their repair and clearance.
- t) Inter-change transactions-Junction returns of inter railway inter change traffic.

IV. Crew Scheduling and 10 hour run:

- a) Engine crew and train crew schedule.
- b) Rules regarding outstation and home station rest etc.
- c) Supervision at station/shed level and in control office to ensure observance of 10 hour rules.

V. Operating statistics

- a) Definition meaning and method of compilation of the fundamental and derived units
- b) Analysis of the operating statistics.
- c) Important operating efficiency indices, their meaning and use

General Knowledge

This paper contains questions on subjects of interest as well as importance. The questions shall be so based as to test the knowledge of candidates which they would acquire by general observation/reading without specific study or detailed knowledge of text books. The paper shall also contain questions on topics of national importance, achievements of Railways as also questions which will test the awareness of candidates to developments which are taking place.

Paper – II Professional Subject

- I. Working of trains generally and general & Subsidiary Rules
 - a) Responsibility and functions of engine crew before starting and while on run
 - b) Responsibility and functions of Guard/Asst.Guard before starting and while on run
 - c) Responsibility and functions of station staff in working of trains.
 - d) Various systems of working of trains
 - e) Classification of stations, standard of signaling.
 - f) Station working instructions and block working instructions.
 - g) Line capacity and measures for augmenting it, signaling and train controlling improvements namely MAUQ, Tokenless working, CTC, Doubling, Automatic block, AFB etc.
 - h) Uses of combined train report, guards rough journal book. Vehicle guidance, Drives ticket, brake power certificate etc.
 - i) Rules regarding marshalling of vehicles on passenger, mixed and goods trains rules regarding AVB piped and non AVB vehicles on trains and Brake power rules, Ghat section Brake power rules.

- II. Passenger train operation
 - a) General Principles and methodology of time tabling of passenger trains.
 - b) Consultative machinery for revision of time table at divisional, Zonal and Railway Board level.
 - c) Publication of working time tables, Public time tables and sheet time tables.
 - d) Punctuality of passenger carrying trains.
 - e) Factors effecting punctuality of passenger carrying trains and methods of improving the punctuality.
 - f) Augmentation of train loads for meeting traffic requirements.

- g) Running of Tourist coaches, Special Carriages and Special trains.
- h) Planning and running of Holiday specials, Mela Specials and Tourist Specials. Etc.
- i) Introduction of new trains, extension of train runs, introduction of through and sectional coaches.
- j) Preparation of engine links and driver/guard links

III. Accidents and Safety Organization:

- a) Accidents, type and their classification, causes and their prevention.
- b) Functioning of the Railway Safety Organization
- c) Chief Commissioner of Railway Safety and his functions.
- d) Rules for reporting accidents.
- e) Action to be taken in case of accidents.
- f) Functioning of the various officials and departments during accidents.
- g) Responsibilities of the control organization and of Stations Masters and Traffic staff on the affected section.
- h) Accident enquiries and DAR action against staff held responsible for the accidents.
- i) Review and analysis of accidents
- j) Accidents statistics – Returns
- k) Scientific analysis through psychometry and the accident proneness of staff connected with train/station or yard operations.
- l) Improved Mechanised aids to prevent human error.
 - i. Improved signaling and inter-locking arrangement.]
 - ii. SM's Control and inter cabin control over routes.
 - iii. Track circuit and axle counters
 - iv. Route Relay Inter locking
 - v. Automatic cab warning system and automatic braking system.
- m) Safety camps and safety campaigns.

IV. Planning on the Railways:

- a) Functioning of the Chief Planning Officer and Traffic Planning Officer.
- b) Perspective Planning and Planning of works to be undertaken under annual works programmes and immediate works under urgency certificate.
- c) Analysis of Traffic bottle-necks and of traffic trends to forecast future traffic requirements.
- d) Planning of Line capacity works and their justification.
- e) Procedure for allocation of Line Capacity works etc. to capital. Revenue and Development fund.
- f) Annual works programmes, Lumpsum works and powers of DRMs/HODs and GMs for sanctioning works.

- V. Computers on the Railways: Use of computers in
- i. Compilation and analysis of Operating Statistics.
 - ii. Compilation and Analysis of Daily Inter-change of Traffic between Railways.
 - iii. Tracing of Movement of wagons.
 - iv. Potential use of the computers for centralized wagon movement control.

Establishment Rules:-

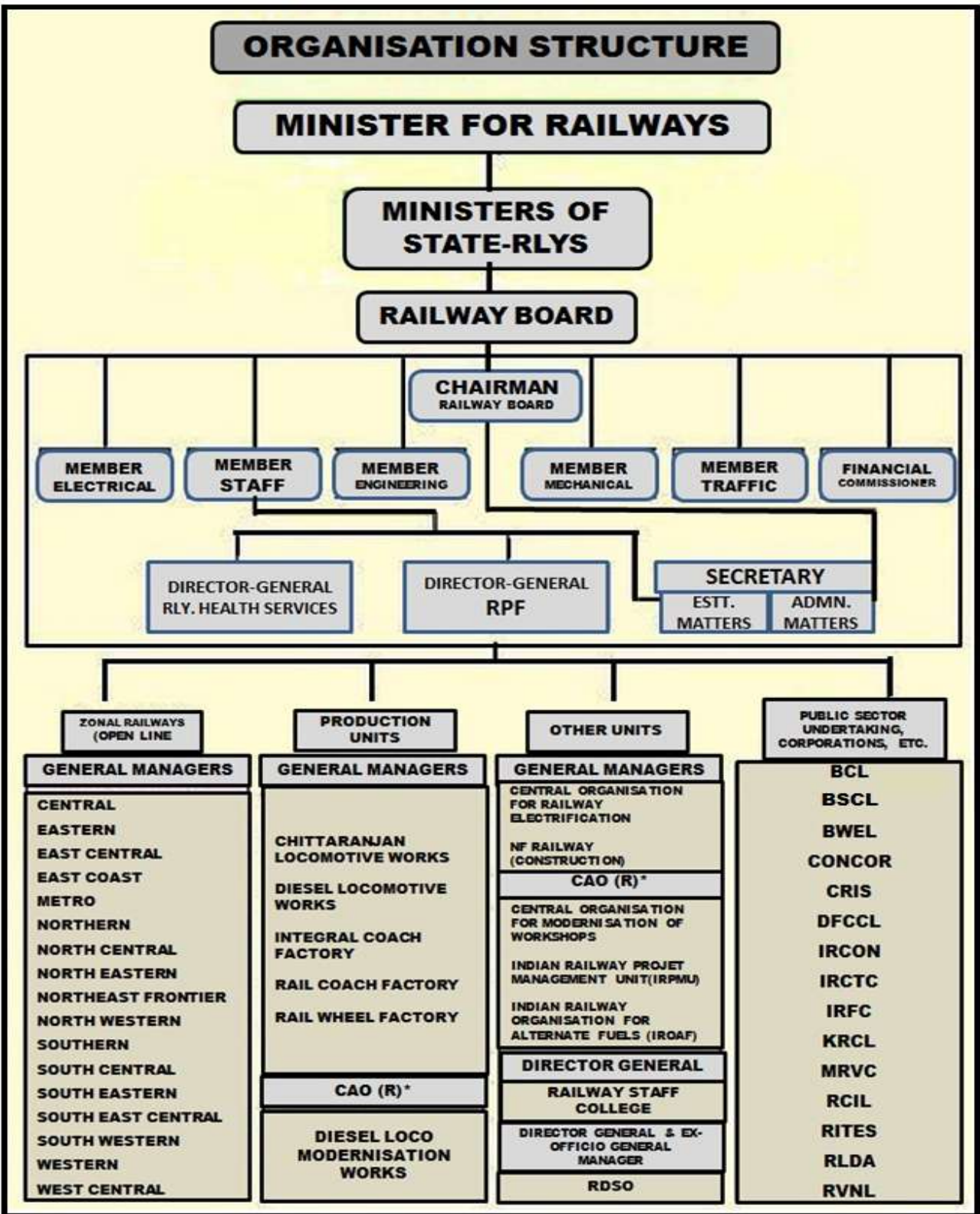
1. Organization of Personnel Department in Railways – Objectives, functions and policies of Personnel Department- Role of Personnel Officer in the Headquarters and on the Division.
2. Classification of Services – Recruitment to the different service, viz. Group A to Group D – Recruitment of Artisan Staff – Reservations on Railway services – Role of RRBs in recruitment – Recruitment through other than usual channels – Promotion policy and methods.
3. Personnel Supervision – Leadership qualities and styles – formal and informal leadership – Democratic and participative leadership styles – Advantage of participation – Joint councils of management – Negotiating machinery schemes – Zonal, Divisional Corporate Enterprise Groups.
4. Inspections of Loco Sheds, C&W Depots, Stations and Engineering Offices.
5. (a) Labour Relations & welfare: Important recognized Trade Unions in Railways- Role of unrecognized Unions and method of dealing with them.
(b) Industrial Disputes and Legislative frame work, Causes for industrial disputes, basic remedies, the Industrial Disputes act 1947. Strikes, Lockouts and Lay off, Handling of Grievances at Divisions and in the Headquarters by Labour Enforcement Officers.
© The Hours of Employment Regulations – Overtime – Job Analysis and its Mechanics.
(d) The Factories Act, Special Rules for workshop staff in the Railways.
(e) The Workmen Compensation Act, Ex-gratia Payment – Incentive Bonus Scheme.
6. Welfare Pass Rules, Retirement Benefits under PF and Pension Schemes. Final Settlement – Welfare for the whole family of Railway men, - Concept and practice obtaining on the railways.
7. Rajbhasha; Official Language rules and policy etc.

Financial Rules

1. Parliamentary control over Railway Finances – Public Accountability – Canons of Financial propriety.

2. Financial Planning and Budgeting – Budgetary and Financial Reviews – Appropriation Accounts.
3. Rules of Allocation- Classification of expenditure – Control over Expenditure – Responsibility accounting – Performance Budgeting – Exchequer control- Financial results of working
4. Works Programme – Financial justification of works – Surveys – Preparation of Estimates – Capital Budget – Control over Capital Expenditure – Productivity Test.
5. Financial Control over Stores Expenditure – Purchase and stores keeping procedure -Inventory control and ABC analysis.
6. Financial and Cost control in Railway workshops
7. Rules and procedure relating to Tenders and Contracts for execution of works and procurement of stores.
8. Procedure for processing and finalizing the Audit objections and Draft Paras.
9. Delegation of Powers.
10. Losses, Frauds and Embezzlements.

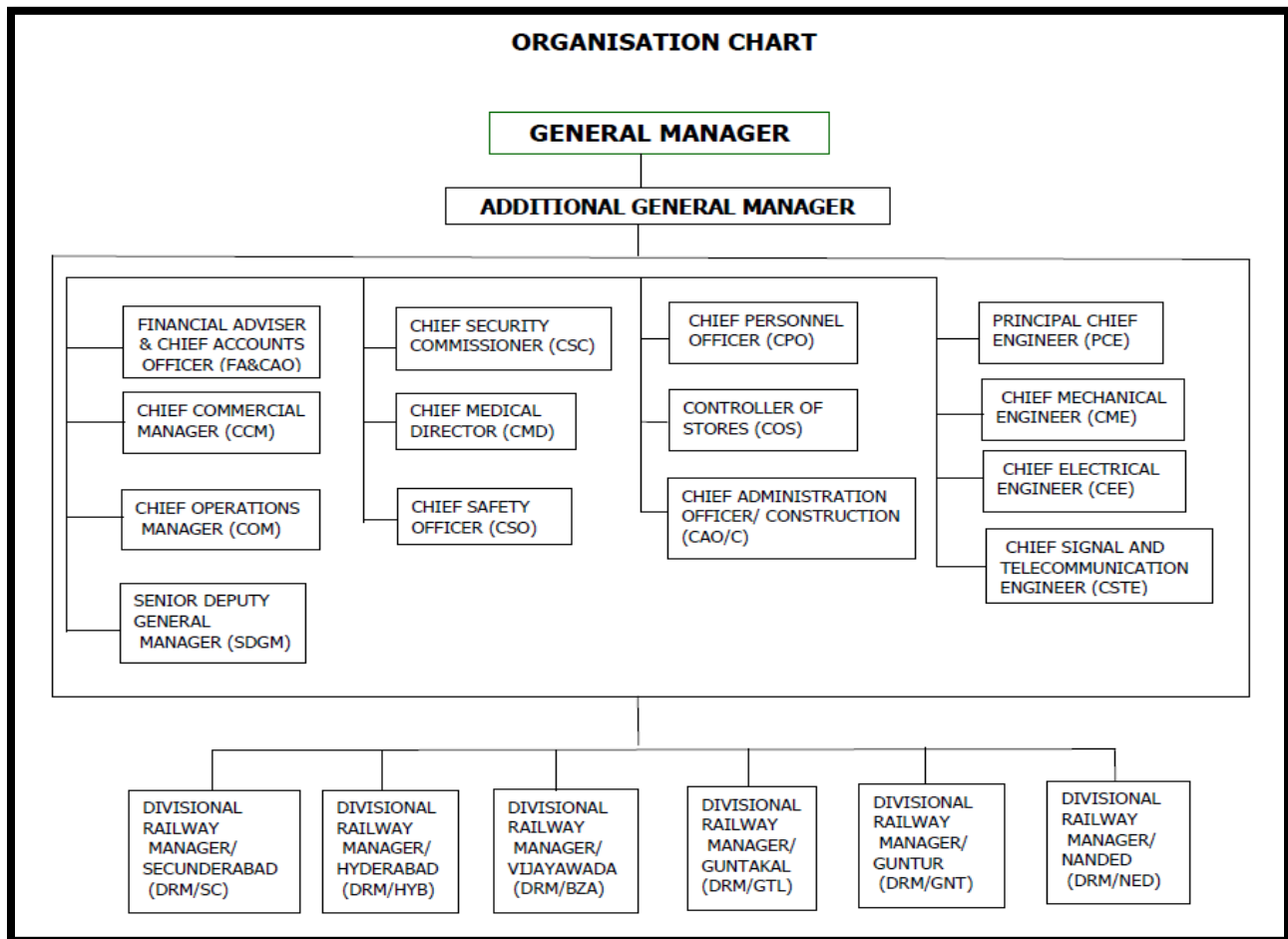
General:- Hierarchical set up and line of control of Operating Department at the Divisional, Zonal and Railway Board level.



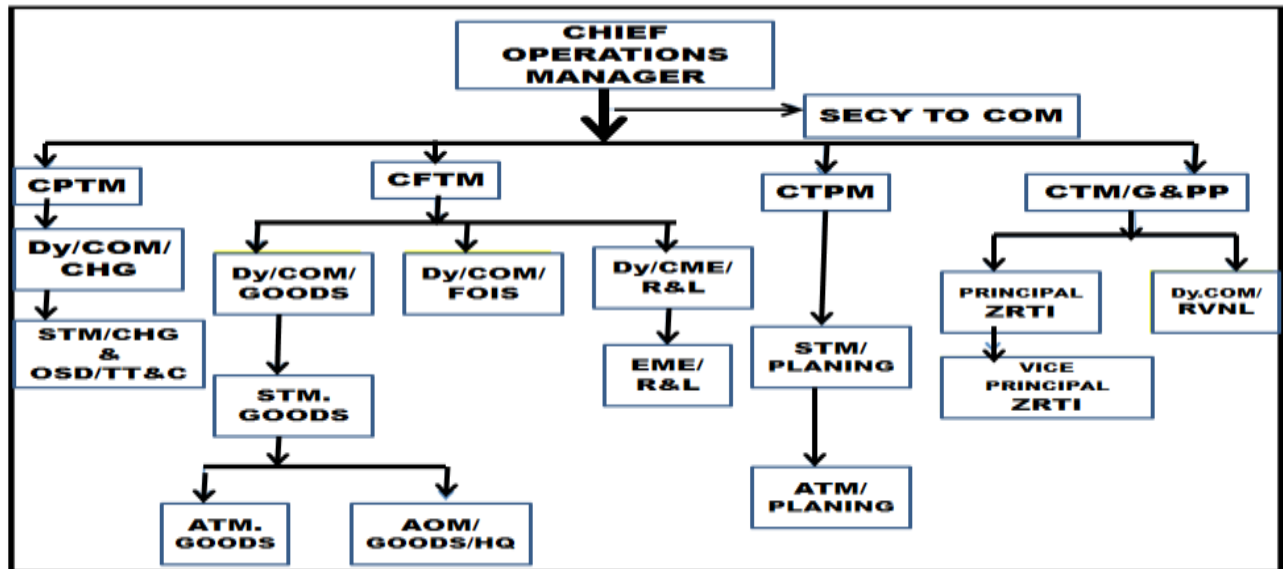
NAMES OF THE ZONES AND THEIR HEADQUARTERS WITH CODES

1.	Central	CR	1951, November 5	3905	<u>Mumbai</u>	<u>Mumbai, Bhusawal, Pune, Solapur, Nagpur</u>
2.	East Central	ECR	2002, October 1	3628	<u>Hajipur</u>	<u>Danapur, Dhanbad, Mughalsarai, Samastipur, Sonpur</u>
3.	East Coast	ECOR	2003, April 1	2572	<u>Bhubaneswar</u>	<u>Khurda Road, Sambalpur, Visakhapatnam</u>
4.	Eastern	ER	1952, April	2414	<u>Kolkata</u>	<u>Howrah, Sealdah, Asansol, Malda</u>
5.	North Central	NCR	2003, April 1	3151	<u>Allahabad</u>	<u>Allahabad, Agra, Jhansi</u>
6.	North Eastern	NER	1952	3667	<u>Gorakhpur</u>	<u>Izzatnagar, Lucknow, Varanasi</u>
7.	North Western	NWR	2002, October 1	5459	<u>Jaipur</u>	<u>Jaipur, Ajmer, Bikaner, Jodhpur</u>
8.	Northeast Frontier	NFR	1958, 15th Jan	3907	<u>Guwahati</u>	<u>Alipurduar, Katihar, Rangia, Lumding, Tinsukia</u>
9.	Northern	NR	1952, April 14	6968	<u>Delhi</u>	<u>Delhi, Ambala, Firozpur, Lucknow, Moradabad</u>
10.	South Central	SCR	1966, October 2	5803	<u>Secunderabad</u>	<u>Secunderabad, Hyderabad, Guntakal, Guntur, Nanded, Vijayawada</u>
11.	South East Central	SECR	2003, April 1	2447	<u>Bilaspur</u>	<u>Bilaspur, Raipur, Nagpur</u>
12.	South Eastern	SER	1955	2631	<u>Kolkata</u>	<u>Adra, Chakradharpur, Kharagpur, Ranchi</u>
13.	South Western	SWR	2003, April 1	3177	<u>Hubli</u>	<u>Hubli, Bangalore, Mysore</u>
14.	Southern	SR	1951, April 14	5098	<u>Chennai</u>	<u>Chennai, Tiruchirappalli, Madurai, Palakkad, Salem, Trivandrum (Thiruvananthapuram)</u>
15.	West Central	WCR	2003, April 1	2965	<u>Jabalpur</u>	<u>Jabalpur, Bhopal, Kota</u>
16.	Western	WR	1951, November 5	6182	<u>Mumbai</u>	<u>Mumbai Central, Ratlam, Ahmedabad, Rajkot, Bhavnagar, Vadodara</u>
17.	Kolkata Metro		2010, December 25	24.5	<u>Kolkata</u>	

ZONAL ORGANISATION SET UP



ORGANIZATION OF OPERATING BRANCH AT ZONAL LEVEL



OBJECTIVES OF OPERATING DEPARTMENT

Corporate Objectives

- I. Capacity building** to meet the requirement of passenger, suburban and freight traffic
- II. Cost –** Reduction in transportation cost
 - i. High productivity in resources
 - ii. Cost effective technological up gradation
 - iii. Better management of men & material
 - iv. Rational tariff policy for passenger and freight services
- VI. Return on capital-**
 - i. Additional capacity with minimum investment
 - ii. Additional provisions for depreciation
 - iii. Maintain reasonable surplus to cover dividend liability and development expenditure
- VII. Quality & Reliability of service-** passenger and goods
- VIII. Safety-** reduction in train accidents

Functions of Operating Department

1. Operating department plays a vital role in producing service called Transportation.
2. Transportation of men and materials as required for economic, industrial and social progress of the country
3. Optimum utilization of the most costliest available resources such as locomotives, coaches, wagons, track, signalling and telecommunication, equipment and staff etc
4. BETTER QUALITY OF SERVICE
 - i) Passenger Operations (Courteous, comfortable, Better Time Tabling, Punctuality, Adequate Accommodation, Safety)
 - ii) Goods Operation (Prompt, regular and assured supply of wagons, Quick & Safe Transit)
5. HIGH PRODUCTIVITY OF RESOURCES (Coaches and Wagons, Track, Signallining & Telecommunication, Fuel and Electricity, Staff, etc.)
6. MAXIMISING LOADING AND EARNING (Prompt supply of wagons, Attracting high rated and high yielding traffic profitable to Railways, increasing Passenger capacities on profitable routes))
7. ESURING SAFETY (Train Operation, Yard Operation and shunting, Personnel & Consignments)
8. TIMELY PLANNING (meeting the expectation of the customers, visualization of the future growth and judiciously planning for additional capacity)

9. Efficiency: Providing prompt and courteous service with utmost safety and security of passengers, goods and employees.
10. Economy: Regain the lost traffic to road by promptly supply of freight loading giving incentives which will cause the national saving in the form of diesel.

These functions are executed at different tiers

A- Railway Board

Primary policy making

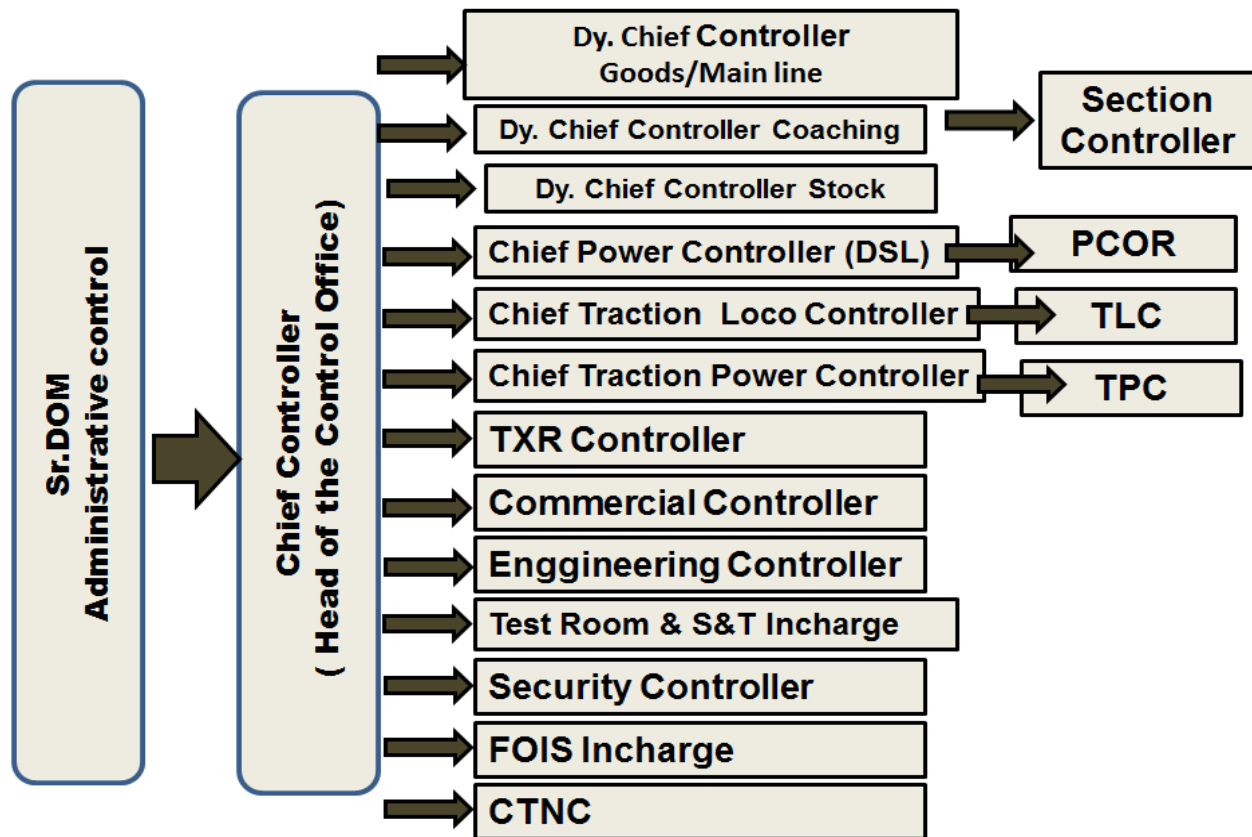
B- Zone

Interpreting boards policies and ensuring co-ordination control and monitoring of operation

C- Division

Being field unit execution of policies as it is the field where commodity transport is produced with the physical resource available.

OPERATING CONTROL OFFICE AND ITS FUNCTIONS



1. The Control Organisation is one of the Principal Means by which the essential Co-ordination is obtained in Railway Operation.
2. It is from where, the planning activities of day to day working are done and the orders are issued to the stations and yards for execution.
3. It can be compared to the brain of human.
4. Normally the Divisional Control Office is located in the Divisional Head Quarters and connected to the station and yards through various communication systems.
5. Sr.DOM has the administrative control of the Divisional Control Office.
6. Chief controller is the head of the control organisation.
7. The Chief controller is assisted by Dy.Chief controller in Freight and Passenger train operations.
8. Dy. CHC looks after the Traffic Control.
9. For easy and effective controlling, the entire division is divided into various sections and each section is monitored by a Section Controller with a well knit communication between the SCOR and Stations for monitoring minute to minute activities at stations and yards.

10. A section is generally of the range of 150 to 200 km stretch and the trains are controlled in the section by the Section Controller.
11. The entire organization works round the clock, all days of the year without any interruption to monitor actual movement of trains on the entire rail network.

Functions of Control:

The main functions of Traffic Control are:

1. Continuous supervision of the movement of all traffic in the controlled area with a view to achieve the maximum possible operating efficiency.
2. Systematic maintenance of accurate charts of train movements and the arrangements of crossing and precedence to the greatest advantage.
3. Analysis of detentions to trains
4. Planning, ordering and running of goods trains to the best possible paths.
5. Maintaining the fluidity of marshalling yards/freight terminals.
6. Taking remedial action in the event of yard/terminal congestion.
7. Elimination of avoidable detentions to goods stock at loading and unloading points and at transshipment stations.
8. Allotment and distribution of goods stock to stations,
9. Supply of information to adjoining controls, terminals and engine changing stations regarding the movements of trains to enable adequate timely arrangements for their reception and onward despatch.
10. Arranging of engineering and other departments blocks with minimum detention to traffic.
11. Running of material trains and other track machines, tower wagons etc.
12. Arranging relief for engine crews and Guards.
13. Ensuring maximum utilization of locomotives.
14. Issuing instructions for train working in case of equipment failures and whenever abnormal methods or working have to be resorted to.
15. Speedy arrangements for relief rescue and restoration in the event of accident.
16. To assist in the realistic planning of time tables and punctual running of passenger trains in co-ordination with various departments, other divisions and other railways.
17. To keep a watch over damaged stock at road side stations, yards and sick lines and to ensure that they are promptly attended to
18. To rectify immediately the irregularities on the part of line staff and provide them necessary guidance.
19. To provide operations management information.
20. To ensure smooth functioning of FOIS and other IT applications.

Basic Functions of various Control:

Train Control: Supervising & regulating movement of trains from station to station on the section to avoid delay to trains and to maximize utilization of the capacity of the section by:

1. Monitoring movement of trains from station to station and recording paths detention charts.
2. Arranging crossing and precedence of trains judiciously. Arranging working of departmental and material trains.
3. Giving time signal to all stations on the section daily at appointed time
4. Fulfilling interchange commitment.
5. Arranging proper movement of assisting/banking /light engines.
6. Clearance of sick wagons from Roadside stations.
7. Arrangement of relief for 10 hrs duty staff.
8. Incident management on rail network & at station
9. Arranging Engineering and/or power blocks in such a way as to involve minimum disturbance to train running.
10. Maintaining fluidity of yards by controlling the flow of stock in and out of yard
11. Arranging Speedy relief in case of accidents.

Traffic Control is the general and over-riding control for supervision of the movement of goods and coaching traffic on the section. It is exercised by:

Collecting information from the various stations on the section in respect of –

1. Registration for wagons outstanding at stations and arrangements for supply of wagons
2. Number of wagons loaded and empty wagons/rakes awaiting despatch.
3. Arranging running, regulation, putting back and cancellation of trains.(both freight & coaching)
4. Securing maximum loads for trains.
5. Collecting stock position from the different stations, marshalling and terminal yards.
6. Arrangement of Crew & Guard for freight trains
7. To keep liaison with adjoining Railways and Divisions for interchange commitments
8. Monitoring and co-ordinating working of yards, goods sheds sidings, loco-shed, TXR depots etc.
9. Supervising of stock control.
10. Arranging supply of wagons against pending registration.
11. Securing optimum utilization of stock, with minimum detention.
12. To ensure optimum utilization of loco and staff.
13. To arrange ART & Crane from adjoining Railway/Division in case of accidents and other coordination.

Power Control is responsible for

1. Provision of motive power to all trains by maintaining position of availability of locomotives
2. Requisitioning engines from loco sheds for all operating requirements, i.e. Train working, Shunting and Banking.
3. Ensuring economical use of engines by close supervision in Traffic Yards and sheds.
4. Ensuring engines are returned to their "Home Sheds" at regular intervals for servicing and maintenance.
5. Ensuring an even balance of engines and crews between running sheds for meeting demands of traffic,
6. Ensuring that light engine kilometres is kept to the minimum.
7. Planning and directing engine movements so as to ensure efficient engine utilization and maintaining the prescribed charts, and regular statistics.
8. Co-ordination with sheds and Dy. Chief Controllers (movement) for sending overdue engines and obtaining time of engines coming out of shed.
9. Making timely arrangement for the relief of crew whose duty hours are likely to be exceeded enroute
10. Taking timely action to balance crew so as to prevent cancellation or putting back of trains on account of shortage of crew.
11. Arranging relief in case of accidents
12. Maintaining charts indicating engine position/utilisation.
13. Rendering advice and assistance to locomotive running staff regarding trouble shooting.
14. Carrying out any other duties allotted to him by the Sr.DME/DME or Sr.DEE/DEE from time to time.
15. Monitoring day-to-day stock position of HSD and lube oil and watching movement of diesel fuel tank wagons (for power controllers only)

Carriage and Wagon Control is responsible to

1. Assist the train and traffic control and to- ensure timely examination and fitness of all trains
2. To keep a watch over the detachment of sick wagons/coaches and to arrange for their early repair and fitness.
3. Keeping a watch over availability of vital C&W components, like Air Hoses, Washers, Clamps etc.. and efficient working of equipments & machines in C&W depot to avoid detention to trains.
4. To keep a watch over placement of wagons/coaches in sick line and their release. To keep account of detention to trains on C&W account and take remedial action. To provide guidance to running staff for trouble shooting.
5. For Electrical Multiple Units, this function is performed by EMU controller.
6. Monitor the movement of POH due stock to workshops
7. Carrying out any other duties allotted to him by Sr.DME/DME from time to time.

Commercial Control assists the Traffic and Train Control.

1. To expeditiously dispose off unclaimed and unconnected wagons, parcel consignments.
2. To keep a watch on detention to trains on Commercial account like Alarm Chain Pulling, loading/unloading, sealing, issue of tickets etc..
3. Carriage watering, Parcel working etc., and take remedial measures.
4. To ensure quick transshipment of sick wagons by arranging matching stock and labour.
5. To keep a watch over submission of station returns.
6. Monitoring of public complaints lodged at the stations.
7. To ensure proper maintenance of public amenities available at stations.
8. To collect figures of the station and daily put up to higher officials.
9. Any other job entrusted by Sr. DCM/DCM.

Traction Power Control is provided to assist in Traffic and Train Control for -

1. Arranging maintenance blocks for OHE
2. Arranging alternative power supply in case of tripping etc., through remote control.
3. Monitoring OHE failures and taking remedial action.
4. Monitoring detention of trains on OHE accounts.
5. Guiding running/ station staff in trouble shooting.

Engineering Control

1. Monitors imposition & cancellation of Engineering Restrictions, Working of track machines & monitoring integrated maintainable blocks.
2. To co-ordinate works during maintenance blocks Running of Material trains.

Signal Control assists Traffic and Train Control and is responsible -

- a) To keep a watch over the S&T failures and take remedial action.
- b) To ensure efficient working of communication channels
- c) To record the number of failures and inform to their officers

Security Control is responsible for

- a) Prevention of theft of property and assists passengers in trains/stations..
- b) To report to their higher officials any untoward incidents at stations/trains

Duties of Control Staff:**1. Duties of controllers:****Chief Controller (In-charge).**

The Chief controller is in- overall charge of control office and is responsible to use his expertise in train and traffic controlling. His duties include-

1. A review of previous day's performance to confirm that all forecasts made have been fully met. For shortfalls, reasons have to be pinpointed to prevent recurrence
2. Prepare current forecast indicating assistance needed from Headquarters, adjoining Divisions, railways generally related to interchange, loading and locomotive utilization.
3. Checking control charts and bringing to the notice of the Senior DOM/DOM all avoidable detention to trains.
4. Punctuality performance with particular reference to trains which lost punctuality Maintaining statistics regarding the punctuality of passenger trains. Scrutiny of stock papers, Monitoring interchange obligations.
5. Watching detention to stock at stations and terminals
6. Watching the work of marshalling yards/freight terminals.
7. Maintaining liaison with neighboring Divisions
8. Watching utilization of loco and their terminal detention.
9. Checking duty hours of running staff and balancing of crews.
10. Granting engineering blocks, power blocks etc., as per schedule/plan.
11. Have a good liaison with other departments like Loco, C&W, S&T, etc.
12. Maintain the staff position and ensure nobody is put to over working
13. Attending control office in cases of accident
14. Establishment work of control office

Chief controller (Movement)/Dy. Chief Controller / Shift duty:

1. General supervision of control office in the absence of CHC and supervision of the work over SCOR and PCOR.
2. Gather information from all the section control boards about the flow of trains.
3. Co-ordinate the work of various Section Controllers.
4. Receive specific orders/standing instructions from Sr.DOM/DOM for the movement of trains and plan accordingly.
5. Contact adjoining divisions, interchange points of other railways, collect the expected incoming train particulars and repeat the outgoing train particulars for interchange.
6. Ensure trains are running with valid BPC whenever required arrange for checking by the TXR depots.
7. Monitor movements of locos in and out from shed and connect them to appropriate trains.
8. Keep close watch on the control boards and give suggestions wherever required.
9. Keep special watch over movement of CC rakes, Container specials, Perishable and live stocks and ODC traffic..

10. Allotting empty stock/rakes to loading stations in accordance with current priority
11. Dealing immediately with significant detentions or transport bottlenecks and other unusuals.
12. Keeping constant touch with the working of major terminals & Marshalling yards and taking timely action to deal with congestion.
13. Giving advice of serious accidents to all concerned, and taking charge of the affected sections.
14. Maintain discipline among control staff in the absence of Chief Controller.
15. Maintain co-ordination and liaison with various functionaries involved in train running.

Chief Controller (stock) / Dy. Chief Controller:

1. To receive the wagon demands from different loading points and register them in sequence in a register.
2. Scrutinizing the indent register in detail with regard to the oldest date of registration, nature of goods and type of stock required for transport at various stations.
3. Assisting the Sr. DOM/DOM in allotments.
4. While allotting cross checking the daily Bans & Restriction Bulletin with Restriction Messages received from HQ office and issuing the same.
5. Checking Divisional stock report and position of empties as per demand.
6. Planning to issue loading order to stations in advance the supply of stock, checking, loading and clearance keeping in view interchange obligation and orders received
7. In case shortfall arrange to get the wagons from adjoining division/zone.
8. Checking transshipment activity
9. In case of cancellation of demand after physical supply or sluggish loading , ascertain cause and record.
10. Chasing movements of stock as per supply order issued on the previous day. Keeping a close watch over hot axle, special type and unconnected wagons and special type of rakes for their speedy movement.
11. Keeping a close watch over the movements of seasonal perishable traffic and supply of suitable stock for its clearance.
12. Watching movements of damaged loaded stock in sick line and yards on their division.
13. Informing all major customers about their inward trains' expected arrival based on FOIS pipe line, Optimizing loading, unloading, transshipment etc.
14. Maintaining record of performance of the corresponding previous period for comparison.

Duties of Deputy Chief Controller (Punctuality)

1. Responsible to monitor the punctuality position of Passenger/Express/Suburban trains.
2. Have a special watch on movement of Special trains and other important passenger carrying trains (daily/non daily)
3. Ensure rake links are properly materialized.
4. Ensure rake composition are not disturbed.
5. Monitor overlapping rakes and scratch rakes for properly used in case of exigencies.

6. Try to maintain the ineffective % of coaches are not exceeding the authorized limit.
7. Correct the "Master Chart" in case of any mistake or variation in train timing.
8. Meticulously plan movement of tourist traffic, marriage parties, student/delegate specials, VIP coaches, officers saloon etc.
9. Project the operational constraints in the time table meeting.
10. Dy CHC (Punctuality) is to receive and record accidents/unusual occurrences convey them to all concerned.
11. Order MRT/ART and monitor their run.
12. Be responsible in planning and diverting cancelling/regulating passenger carrying train whenever accidents takes place.
13. Record all the information received from accident spot in a log book.
14. Inform the developments at the site of accident to the officers whenever required.
15. Maintaining Detention Reports of Coaching trains

Section Controller:

SCOR is a competent person with profound knowledge and vast experience. He should have thorough knowledge of the section which he controls (topography, system of working, signals, traffic facilities, nature of traffic. Etc.). Hence he is a friend, philosopher and guide to field staff. He controls trains in his section. Some important duties are mentioned below

1. Appear on duty as per roster after availing rest.
2. Collect instructions from Dy. CHC, CHC particularly about any special movements.
3. After noting the instructions on the chart, take over charge enquiring about special task to be carried out.
4. Arranging for the supply and clearance of stock as ordered by Dy. Controller.
5. In case chart is computerized plan the running of trains 2 hours advancedly.
6. Record all special events for every train in remarks column of chart.
7. Inform terminal stations and crew control cell about late running of trains to avoid the calling of Crew and Guards earlier than necessary or to put back trains wherever advisable.
8. Repeat forecast programmes of trains and locos to terminal points/yards/loading points.
9. Monitor every train constantly; any delay is caused to the train draw attention of LP/Guard through SM.
10. Judiciously arrange crossing and precedence. Be an opportunist to utilize the path whenever delay is caused to regular train.
11. Ensure passenger trains running punctually.
12. Keeping in close touch with Engineering-blocks and working of material trains so as to give the maximum possible time with least detention to other traffic.
13. Incident management to include adjusting movements of trains in view of the likely impact of the incident, informing all concerned
14. As far as possible avoid stabling of trains. If it is warranted ensure stabling is not

done on main line.

15. Be vigilant in noting the Block instrument and signal failures and accordingly change the planning.
16. Give time signal at 16.00 hrs to all stations.
17. Record signal failures and convey to test room.
18. Record and transmit caution order messages to notice stations.
19. Repeat promptly, weather warning messages and take acknowledgement from stations.
20. Maintain prescribed registers correctly.
21. Record accident messages and repeat the same to all concerned.
22. Regulate traffic during accidents.
23. A special register to be opened to record all events during accidents in a sequence.
24. Order MRT/ART when message of accident is received.
25. Maintain chart neat.
26. While handing over chart do not be in a hurry. Make the reliever understand all instructions.
27. Keeping a watch over damaged vehicles detached at road side stations and arranging repairs or transshipment of their contents and proper attention on the part of the train examining staff. .
28. Making timely arrangements for the relief of Guards /loco pilots whose duty hours are likely to exceed enroute.
29. Recording stock report (where stock clerks are not posted)

Working of Trains when Control is interrupted:

When the control is interrupted and no communication with the Controller is possible, Station Masters will be responsible for the working and regulating of trains, keeping in view the instructions issued by the railway administration.

Books/Documents and basic records to be kept in Control Office:

1. Station Working Rules of all stations.
2. Working facilities available on the transshipment sheds.
3. Schedule of shunting engines in the various yards.
4. Link diagrams of rakes and engines working the passenger services and also of goods trains where laid down.
5. Crew link diagram of the various services, for the running staff.
6. Details of maximum moving dimensions permitted on the various section of the railway.
7. Map showing the maximum permissible axle load on all the railways with which traffic is interchanged.
8. Charts showing line capacity of the various sections.
9. Index sections and plans of the various sections of the jurisdiction and details of train watering, Engine fuelling etc.
10. Master charts depicting all trains indicated in the working time table in force.
11. Charts showing jurisdiction of the various officials
12. Zone and telephone numbers of Civil, Police, Military authorities

13. . List of various hospitals with Telephone Numbers.
14. List of stations Civil, district-wise.
15. OHE Sectioning diagram.
16. Diagrams showing the layout of line wires of the Control Circuit.
17. Line patrol chart
18. A calendar of returns
19. Cranes and Wagon weigh bridges. Turn tables and Triangles.
20. List of spare coaches based in the division as well as slip coaches running on and across the division.
21. List of coaching Rakes allotted to the division and those passing over division.

Registers generally maintained in Control:

By the Section controller:

1. Section controller's diary and charge book. Inward message book.
2. Sick wagon register. Yard report registers.
3. In-coming and out-going trains RD (Running Daily) (other than passenger).
4. Train Advice (T. A Book).
5. Caution Order Register.
6. Caution Order Message Book.
7. Morning (6.O clock) Position Register
8. Interchange Register.
9. Load Register.
10. Incoming and Outgoing passenger Train Running Daily.
11. Points and S & T Failure Register.
12. Important Yard Balance Register.
13. Control Failure Register.

By the Chief Controller (Movement),(Coaching)/Dy. Chief Controller :

- i. Yard Running Balance Register.
- ii. Dy. Chief Controller's Diary & Charge Book. Train Advise book.
- iii. Forecast and Acceptance Book. Train Ordering Book.
- iv. Punctuality Register.
- v. Accident Register.
- vi. HQ's Conference Register.
- vii. Goods Train Performance Register.
- viii. GM's Unusual Occurrence Register.
- ix. CTNL (Movement)/(Coaching)/Dy TNL's Order Book.
- x. ODC Register.
- xi. Rajdhani Express (and similar trains)
- xii. Caution Order Register.
- xiii. Emergency and General Control Office Message Register (Inward). Engine Book.
- xiv. Emergency and General Control Office Message Register (Outward.) Interchange Register.

DAILY STOCK REPORT

Daily Stock Report is an analysis of the position, utilisation and requirements of rolling stock of a station. At major stations and yards it helps SSs/YMs to initiate action for early clearance of stock and satisfy that allotment of wagons done correctly or not. Also helps to know outstanding demands for wagons at the station.

It helps the control office in the following ways:

1. Preparation of Divisional Stock Report and Divisional Wagon Balance.
2. Ordering of trains based upon number of loads available.
3. Allotment of wagons.
4. To watch the detention to special type of rolling stock and other rolling stock and commodities.
5. Requirement of crane for loading and unloading.
6. It helps DOM to study the complete picture of various stations regarding their performance and their traffic requirements and to study the detention of inward wagons and pattern of traffic of particular stations.

Report of the daily disposition of traffic at a station is prepared under two heads.

1. Traffic outstanding and requirements.
2. Stock available under various categories with wagons loaded, and released for the last 24 hours. It is reported to control office, at a fixed time 18.00 hrs or 20.00 hrs. For big yards, it is reported at an interval for six hours or any other shorter interval as per local instructions.

In control office, requisition register for each station is separately maintained and all required information obtained through stock report.

Loading Report:

Fresh indents accepted Priority wise, commodity wise, route wise, no. wise

Loading of the day or Priority wise, commodity wise, route wise, no. wise

Indents cleared Priority wise, commodity wise, route wise, no. wise

Outstanding Priority wise, commodity wise, route wise, no. wise

Cancellation Particulars Priority wise, commodity wise, route wise, no. wise

PRINCIPLES TO BE FOLLOWED IN TRAIN ORDERING

Train Ordering

It is an advice offered to the LP, Asst.LP and Guard to be in readiness to work a Train from the station / Yard. It is done by the section controller keeping in mind, the availability of stock, locomotive, Crew and path.

Objectives:

- i) To achieve optimum usage of stock and locomotive.
- ii) To Reduce Pre-Departure Detention of Staff at Crew changing point.
- iii) To strictly enforce 10 Hrs Rule for Running Staff.
- iv) To reduce congestion in yards and in sections.
- v) To make use of available paths.

Principles in Train ordering:

Train ordering has to be done keeping the following factors in mind.

(i) Stock, (ii) Locomotive (iii) Crew (iv) Path.

- i) Stock** : Train shall be ordered only when the formation is kept intensively examined and tested for Brake Power with the help of exhaustor / compressors. This will reduce last minutes marking sick, detachment, en-route poor brake power cases. The Intensive examination shall preferably be carried out in the empty condition of the rake.
- ii) Locomotive** : The engine ordered for working a train shall be an effective loco. Loco due for schedule if ordered for a train. May develop technical problem en-route. Apt load shall have to be offered for working.
- iii) Crew** : The Guard and driver shall have to be booked at appropriate time. Keeping the targets for Pre-Departure Detention in mind crew can be ordered. Ordering the crew in an erratic way will result in payment of over time, making the staff rest less.
- iv) Path** : Even though stock, engine, crew are available, if the path is not secured it will lead to detention to above three. Hence, a suitable path is to be identified and train to be ordered, preferably following express block. Some times paths may be available but if dissimilar speedier trains are ordered, they congest the section. Hence, all similar speedier trains ordered at regular intervals. Ordering all trains at one and the same time is absurd. In Konkan Railway S.Rly, Computers are installed to identify the paths available. Accordingly basing on the availability of other factors trains can be effectively ordered. Some of them are:

Effects of Poor Trains Ordering:

- i) Under Utilization of Engine, Stock and Crew
- ii) Losing Path for the Trains
- iii) Reduction in speed for the Goods Train
- iv) Through put affected
- v) Interchange commitments not fulfilled
- vi) Congestion in section & in Yards.
- vii) Stabling of Loads short of Destination
- viii) Goods sheds idling.
- ix) Poor Loading / Unloading
- x) Increase in Claims.

Effective Train ordering will eliminate the above problems.

How Effectively Trains Can Be Ordered

1. A close and proper liasoning with field staff: like SM, YM, Loco foreman, TXR's to get current status of the Trains.
2. Too many trains ordering in one and the same time can be deferred with.
3. Before ordering ensure stock is ready in all respects.
4. Offering more locomotives to a single yard will delay the start of trains from yard.
5. During power Block, Engg. Block Ordering may be deferred.
6. Watch the in flow of trains form adjoining division, adjoining zones and order accordingly.
7. Keep the two calls system for running staff.
8. If there is a delay for the incoming trains, booking of staff can be cancelled and fresh booking can be given.
9. Know the target time of each depot to reduce the pre-departure detention and achieve as far as possible.
10. Monitor the running of the goods train and periodically advice the running staff to run the train on time.
11. Avoid converting trains as shunting trains and avoid frequent ordinary goods shunting enroute.
12. Keep similar speedier trains in one bunch and run them at selected path.
13. Advance intimation may be given to yard / station.

MONITORING OF GOODS OPERATION AT DIVISIONAL, ZONAL LEVEL AND BOARD LEVEL

Control of Goods operation at Divisional/Zonal level

Daily control of Goods operation could be broadly considered in the following heads

- I Planning/Forecasting
- II Execution/Implementation
- III Review

Planning

Objectives:

1. To plan for fulfillment of interchange commitments.
2. To plan for achieving maximum possible throughput and keeping the balances of stock at various points as low as possible.
3. To arrange for supply and clearance with a view to maximizing un loading and loading and minimizing the detention to wagons.

The following items should be included for the day's planning.

- Forecast of Interchange.
- Forecast of running trains
- Forecast of supply of empties.
- Forecast of un loading.
- Planning for placement and removals.
- Planning for engineering blocks and special moves.

The following information is needed for day's planning.

- a. **Power availability** – Detailed disposition of Diesel and Electric power must be available for realist and accurate forecast. A close co-ordination between Dy.CHC and PCORs is necessary in this regard.
- b. **Availability of load** – Dy CHC must obtain by 700 hrs the line position and floating balances of various yards. Particulars of block loads expected to receive from adjoining division have also to be included in the basic data for trains planning.
- c. **Disposition of empties and planning for loading** – Type wise disposition of empties available on the division and expected to be received from adjoining division.
- d. **Planning for un loading** – Mid night position of balances inward loaded wagons at various points which have to be transported and placed at un loading points, left over of the previous day as well as in sight figures on adjoining divisions are required for planning of un loading.

- e. **Analysis of mid – night DWB.** – Dy.CHC night shift should chalk out a rough plan in consultation with the adjoining Dy.CHC. Rough plan must be ready in all respects by 700 hrs.

Chief controller will finalise the days forecast/planning by 08.00 HRS after checking the information, drafts plan, and consultation with CHC of adjoining divisions. Copies of the forecast should be sent to Sr.DOM / DOM to reach them by 08.15 hrs. Sr DOM after scrutinizing the same, he should give instructions by 09.00 hrs to CHC for final amendments. It must be repeated to Central control by 09.10 hrs. HQ directions regarding interchange must also be communicated to the divisions by 1000 hrs.

Implementation:

Finalised plan should be communicated to operators at supervisory level viz Deputy controller, controller, yard master, LF, Terminal SMs

Review:

Objectives:

1. Analyzing the short falls during previous day so as to take suitable remedial measures.
2. Providing basic data for planning for the current day.

Some of the important aspects /items of review

- Inter change information for the previous day's performance.
- Number of trains run section wise, stock cleared, balance left over.
- Analysis of DWB.
- Particulars of stabled loads.
- Detailed break-up of yard balance.
- Registrations and loading.
- Unloading in division
- Transshipment performance.
- Placement, release and removal of wagons.
- Punctuality
- Power utilisaton
- Accidents, unusual occurrences.

The information for review of previous days work is generally reported to as morning position. It should reach the SR DOM by 6.30 hrs. The Sr.DOM may glance through the same by 800 hrs red marking the information, which needs further attention. Previous day's balance should be communicated to central control before 800 hrs.

Zonal Head Quarter role:

The Zonal HQ plays a vital role in day-to-day operations in two important ways.

A. Guidance B. Assistance

Zonal HQs could pin point areas, which need special emphasis and attention at Division level. Educate the officers at Divisional level how maladies in operations are diagnosed and how the same have to be put right.

Secondarily assistance of zonal HQs in certain areas plays a vital role in efficiency in operation in a Division.

So far as day's planning is concerned the HQ has to co-ordinate regarding

- level of interchange between divisions and adjoining railways
- co-ordination in Diesel and electric locos holding on various divisions.
- Pinpointing excessive balances, drawing attention of SR.DOM's to the same and giving assistance to clear the same by way of giving extra powers, regulating traffic or imposing restrictions.
- Helping the loading division in getting adequate supply of empties and also balancing of goods brake-vans.

CONTROL OF GOODS OPERATION AT THE RAILWAY BOARD LEVEL

1. Member Traffic is the head of the Transportation and Commercial in the Ministry of Railways.
2. On the transportation side Additional Member (Traffic Transportation) and other Executive Directors assists Member Traffic.
3. He is ex-officio secretary to the Central Government and assists Minister of Railways, in respect of policy matters pertaining to Railway operations.
4. Managing freight operation on the railways is an important aspect of working of Member Traffic.
5. The primary objective of ministry of railways in respect of freight is to maximise loading and carry efficiently and economically.

Important functions of Ministry of Railways with regard to Goods Operation.

1. Making realistic forecast of traffic which is expected to be carried by rail.
2. Analysis on major commodity for traffic origin , destination wise
3. Keeping loading targets for every zonal railway.
4. Augmenting the capacity keeping in view the future developments.
5. Close coordination with other Ministeries (like coal, power, surface transport etc.,)
6. Ensuring Inter-Railway coordination
7. Monitoring, directing and controlling the freight operation on the Zonal Railways.

A meeting of COMs is organised by Railway Board once in 6 months to discuss various items on freight operations. Some of them are listed below.

(a) Loading Potential and targets for the Zonal Railways:

Targets for movement of major commodities are refined basing on consultation with other ministries. Loading targets for April to September and then October to March are separately given.

(b) Wagon Holding Targets:

Depending on pattern of traffic and loading requirements this is fixed for every Railway.

(c) Power Plan:

Targets of holding of locos are set basing on the pattern of traffic facilities for attention in the sheds.

(d) Loco Performance:

Targets on utilisation of locos are fixed. Reasons for poor performance is analysed traction wise.

(e) Wagon Utilisation:

Wagon turn round, Wagon Kilometer Per Wagon Day, NTKM per wagon day are reviewed in relation with the prescribed targets. A strict day to day control is exercised over loading unloading and movements.

An implementation on 'Engine on load' system over the Zonal Railways is analysed.

(f) Interchange Commitments:

An analysis on commitments for daily average interchange of wagons between Zonal Railways at various interchange points is done and suggestions are conveyed. In addition with above mentioned 'Critical Result Areas' some of the specific problems and other important issues are discussed in COM's meeting. They are mentioned below.

- (i) Formation of CC Rakes.
- (ii) Formation of unloadable wagon (Box)
- (iii) All India marshalling orders.
- (iv) Feeding of due POH wagon to work shops.
- (v) Eliminating mixed traction.

Day - to - day Control of goods Operation at the Railway Board Level

Additional Member, TT and ED (Freight Movement) assist Member Traffic in exercising day to day control of goods operation. The following are monitored to have a control over goods operation.

- Whether railways fulfill Interchange Commitments with adjoining Railways.
- Whether wagon holding in a zone is more than the target
- Analysis of empties supplied for loading.
- Loading performance of railways in relation to outstanding registration and oldest dates of registration.
- Distribution and performance of BOXN, BCN, BCX rakes.
- Number of stabled loads and then clearance
- Insight of wagon for unloading at major points.
- Locomotives and then utilisation.

Sectional Congestion and Remedies:

The section is said to be congested when it loses its normal mobility i.e. when the normal traffic cannot be passed easily through the section.

- a) For a given line capacity, the speed declines as the density of traffic increases. The rate of decline increases as the average density approaches the capacity.
- b) For a given density, the speed improves as the capacity increases. The rate is more pronounced when the section is working nearer to capacity.
- c) For a fixed elemental increase in density, the capacity remaining unchanged, the speed declines faster as the utilization of capacity increases. If however, the capacity is correspondingly increased, the decline in speed is natural arrested.
- d) When the utilization of capacity exceeds the limit of say. 80% the rate of fall in speed with even slight increase in density is great, pointing to the need for an increase in the capacity. For lower stages of utilization, the rate of falls is substantially less and below 50% utilization, experience shows that a corresponding increase in the capacity is immaterial.

From the above remarks we can make out that sectional capacity and the density of traffic are inter linked with each other and the speed is the resultant of both:

1. Density of Traffic :

If the density of traffic offering increases that the available capacity and more trains are put in then speeds of trains will decline causing them long hours on road which is the main cause of section being congested.

2. Yard Congestion :

- a) If yard is congested, it will cause heavy detentions to incoming trains due to its inability to accept.
 - (i) At signals thus increasing the running time in the block section and temporarily decreasing the sectional capacity.
 - (ii) At adjacent stations reducing the facilities of the station as well as making the trains longer hours on road.
- b) (i) Due to yard congestion, loads are stabled in the block section to give immediate relief to the yard and due to its inability to accept, stabling of loads make two line crossing stations as non-crossing station as only one line will be available for working traffic. It will increase the length of the block section and temporarily decrease the capacity.
- (ii) Even if load is stabled at a three or four line station, it will debar the station to make use of all available facilities such as simultaneous reception facilities of trains, it will further create difficulties in working. Thus it can be concluded that if the yard is congested, section is sure to be congested.

3. Poor Maintenance of Engines :

If Engines are not maintained properly the drivers loose time in the section causing time failures or engine failures. It further results in making the trains longer hours on the road or stabling the loads. Light engines are to be run to clear the stock which further puts heavy strain on the already congested section.

4. Poor Maintenance of Rolling Stock :

Makes the wagons marked sick on the way feeding to unproductive shunting for detaching / attaching.

5. Late Start :

Looses the path-heavy detention-resulting in crew working longer hours or claiming rest at IMS.

6. Bad Controlling :

With judicious crossing and precedence only, the controller can take all the trains through in the minimum possible time. If the train is once put out of path due to bad crossing or precedence, it will further suffer detentions with all its attendant disadvantages.

7. Want of Continuity in the Flow of Traffic:

If the flow of traffic is checked due to any reason and it is blocked by the adjacent division or railway, then the loads will be stabled in the section, causing sectional congestion.

8. Unbalanced Movements :

If the flow of traffic is not balanced and more traffic is offering in one direction only, then the trains will be started in quick succession one after the other which may cause bunching of trains short of terminal or at stations adjacent to ruling block section and may cause congestion.

9. Inadequate terminal Facilities :

If terminal facilities are not improved according to the necessity; it will cause section congestion.

10. Non-Utilisation of full capacity of Loco:

Under load causes running of more trains to clear the same amount of traffic resulting in heavy strain upon the capacity.

11. Poor Maintenance of Block or Time Barred block Instruments :

Causes detention to trains due to more failures.

12. Poor Maintenance of Signal-OHE-Track:

More speed restrictions which retard the movement of traffic.

13. *Accidents, Breaches or any other unusual occurrence holds up the trains and causes congestion.*

Remedies to remove congestion :

Prevention is better than cure and foresight with imagination can usually prevent congestion. If action is taken as soon as it is known that increased traffic is expected or some times symptoms of congestion come to light, congestion can be avoided easily. But if; congestion takes place due to any reason, the first and foremost duty is to diagnose the cause of congestion correctly, then there will be no difficulty in finding out the remedy and remove the congestion.

1. Increase in density of traffic : enhance the capacity or regulate the traffic by diversion.
2. Yard congestion analyse and remove
3. Trouble free maintenance of engines
4. Rolling stock properly maintained
5. Late start avoided
6. Efficient controlling with calculated risk
7. If LE's run to balance traffic-may be attached to trains
8. Terminals Facilities improved
9. Trains to run with full load on graded sections, double headed or banker arranged.
10. Trouble free block or signal maintenance.
11. Track maintained to the standard.
12. Efforts should be taken to minimize the number of accidents if take place normally restored with short time.

TERMINAL DESIGN AND PLANNING**Object**

Main objects for planning & designing of freight terminal are: –

- To provide all operational facilities.
- To save the detention of locomotive & rolling stock.
- To maintain operational flexibility.
- To provide convenient facilities to traders.

Important Components of Goods Terminal Yard

1. Goods reception lines
2. Goods departure lines
3. Goods transfer lines
4. Goods holding/stabling lines

5. TXR examination line for Operations
6. Engine escape line
7. Independent shunting neck
8. Simultaneous facility for goods shunting w/o interfering reception & dispatch
9. Proper arrangements for stacking
10. Small spurs to facilitate transshipment of wagons if required and keeping damaged/spare fit wagons in case some wagon is marked sick.
11. Small sick line
12. Weigh bridge siding
13. Full length rake handling siding for loading unloading

Facilities to be provided at Goods Terminal

A. Operational Facilities :-

1. Direct reception/despatch facilities for rakes to & from goods handling siding.
2. Full length rake handling siding and full length reception/despatch lines.
3. Yard flexibility to permit isolated free shunting.
4. Full length shunting neck

Goods handling siding on the same side of goods reception line to avoid crossing of main line.

B. Commercial Facilities

1. Goods supervisor and Goods Clerk office near the rake handling siding for effective supervision.
2. Separate Goods handling sidings for bags consignment, bulk consignment & minerals.
3. Standard height goods PF having sufficient width with proper covered shed to facilitate loading/unloading.
4. Sufficient shed accommodation adjacent to rake handling for stacking the bags consignment.
5. Proper goods office with computer & FOIS facility having adequate accommodation and facilities for keeping the records and smooth office arrangements.
6. Suitable adequate accommodation for stacking the consignments by the traders.
7. Accommodation for keeping tarpaulins.

C- Traders' Facilities:

1. Merchant's rest room.
2. Good approach road to goods shed & rake handling siding.
3. Availability of proper road of sufficient width attached to rake handling siding facilitating direct loading/unloading by trucks and free movement of trucks.
4. Adequate light arrangements to facilitate proper loading/unloading especially if the terminal is open for round the clock loading/unloading.

5. Provision of generator to provide light in case of power supply failure.
6. Provision of proper accommodation for taking rest by the labors/coolies.
7. Proper drinking water arrangements as well as labors.
8. Weighment facilities for traders.
9. Provision of shady trees adjacent to sidings of bulk consignments & minerals to facilitate labors to take rest as & when required.
10. Availability of PCOs
11. Availability & timely supply of wagons/rakes as per indent.
12. Small canteen adjacent to the site.

Provision of longer loop length:

To meet with the requirement of operating strategy of running full length freight trains & also over powering for improving the speeds according to operational needs, longer loop length should be planned.

1. The standard loop length on BG is 686 Mts. which is able to accommodate a full train length of 58 BOXN wagons, one brake van and two diesel locomotives having a total length of 664 Mts. leaving a cushion of 22 Mts.
2. To facilitate full train length without its being broken and to overcome the difficulties encountered by the existence of gradients, the motive power has to be suitably increased.
3. With the three locos length of train comes to 681.7 Mts and with four locos, it comes to 699 Mts. Presently the loop line length is enhanced to 700 to 720 meters in order to accommodate latest type of wagons in full rake.
4. For enabling the driver to have a better control over the train to ensure safety of operation and also clear view of starter signal while restarting, a cushion of 33 to 45 Mts. is considered essential. Hence it is decided that-
5. On the sections where three locos are deployed, the length of loop should be 715 Mts. and where four locos are required the length of loop should be 732 Mts.
6. Provision of track locking through a track circuit in place of a lock bar is being adopted which has not only released the additional loop length of 13 Mts on each end, but give rise to economy.

Planning of the Work:

Terminal facility works which include freight terminal works like yard remodelling, additional rake handling lines, rake stabling lines, sick lines etc are processed under **TRAFFIC FACILITIES**.

1. The work is to be proposed in the Works Programme (LWP or PWP based on the estimated cost).
2. Proper justification should be prepared supported by required statistics indicating clearly the existing constraints causing detentions and also clearly mentioning the benefits anticipated on completion of the proposed work.
3. The works proposed chargeable to Capital must show rate of return (ROR) minimum of 14% for which financial justification may be wiped out & attached to the proposal.
4. If the proposal is treated as un-remunerative & if such works are considered to be processed for operating improvement may be charged to development fund-III. Justification for such works should include a Para on financial implication indicating-

Cost of the work, interest @ 6%, depreciation @ 3.75% assuming life of asset to be 30 years, operational & maintenance charge @ 3%, operational expenditure including staff cost. Calculation of ROR forms a part of financial justification which should be worked out by taking the following factors into consideration:

- i. Cost of the Project
- ii. Cost of moving addition traffic on the basis of data published in the booklet "Summary of End Results" by Rly. Bd.
- iii. Earnings from moving additional traffic.
- iv. Savings due to saving in detention to existing services. This should be worked out with the help of data published in IR annual Statistical statement, IR Works & Machinery Programme.
- v. Remarks indicating increase/decrease in chartered capacity as compared to last year with the reasons, sanctioned works in progress with their target dates of completion & the likely effect of the proposed work on the sectional capacity, special feature prevailing in the section.
- vi. A-4 size yard plan showing the existing & proposed facilities must be enclosed alongwith the justification.
- vii. The proposal along with financial justification must be got financially concurred by the associate finance.
- viii. After finance concurrence the proposal should be included in the LWP/PWP as the case may be.
- ix. After getting sanction & allotment of fund through Pink Book, the execution of work should be started.

Wagon Pooling

Each zonal railway of IR has a fleet of freight wagons that it owns. Of necessity, most freight trains traverse through territory of more than one zonal railway, and wagons of one railway may end up outside their home zone after a run. **Wagon Pooling** refers to the practice of allowing other zonal railways to use the wagons for their own freight trains. In effect, the wagons from all zonal railways are 'pooled' together and scheduled for goods trains indiscriminately, without a zone giving preference to wagons it owns. Pooling generally increases wagon utilization, since it avoids transshipment from one zone's wagons to another zone's wagons at zonal boundaries, and also avoids having wagons return empty to their home railway. It also minimizes shunting as a result and improves yard and siding utilization.

The **Directorate of Wagon Interchange (DWI)** under the IRCA is responsible for coordinating all wagon interchanges across IR. Officers in charge of wagon interchange are assigned to each nodal point where interchange occurs.

Non-pooled wagons and local traffic wagons

These are wagons that do not participate in wagon pooling. Some wagons may be marked as **Non-Pooled Wagons** (usually stencilled 'N.P.' on the wagons) - these are usually some special-purpose high-capacity wagons used by various railways that generally earmarked for some particular operations on that railway or on particular routes. They do travel to other zones, but are not scheduled for further trips by the other railways. When they are loaded to adjoining railways, they are usually marked to be sent back to a station on the route they took, or back to their home railway by any route.

A few other wagons in each railway may also not participate in wagon pooling - these are **local traffic wagons**, which are usually low-capacity wagons used for internal movements such as departmental trains and which do not venture outside their home zone.

Types of Freight trains on IR

Goods trains are classified into a few different categories.

1. **Departmental trains** are trains run for internal purposes of the railway, such as track maintenance or conveying equipment. They may be **ballast trains** or other **material trains**. **Breakdown trains** and other special-purpose trains for dealing with accidents are also considered to be departmental trains.
2. **Work trains** are trains used for short-distance movements of freight, especially small packages ('smalls') transshipped from long-distance freight trains.
3. **Shunting trains** are used for moving wagons to different stations in a section, and are involved only in attaching and detaching such wagons. They are also known as **section trains** (especially on CR) and **pick-up trains** elsewhere.
4. They are known as **pilots** if they run from serving station to the siding.
5. Trains with wagons that are actually loaded or unloaded with smalls at various stations are called **Road Vans**, or **transship trains** (CR) or **smalls quick transit (SQT)** on ER. Road vans are a vanishing breed these days with the widespread use of block rakes and container traffic and increasing reliance on transshipment of goods from freight terminals to road transport for onward delivery rather than transporting smalls by rail.
6. **Through goods trains** are freight trains transporting goods from one goods yard to the next without stoppage at intermediate points.
7. **Long-distance goods**, also known as **solid trains** include various special long-distance freight trains that get precedence, such as the **Freight Chief** or other **Express Goods** trains with timetabled operations and guaranteed delivery time (including QTS or Quick Transit Service goods), **Jumbo trains**, and **Sherpa trains**.
8. The remainder of the through goods trains, which run at lower precedence, are known as **Ordinary Through** trains.
9. **Block Rake**: It is a train carrying wagons for a single destination. The number of wagons constituting a Block Rake for different types of wagons is notified by Railway Board.
10. **Mini Rake**: This is a short rake composed of lesser number of wagons than specified for a Block Rake.
11. **Multi Point Rake**: This is a train carrying wagons destined to more than two destinations.
12. **Two Point Rake**: This is a freight train carrying wagon destined for two terminals.
13. The term 'jumbo' originated when longer and heavier freight rakes could be hauled as better wagons (bogie stock), more powerful locos, and air-braking begin to come into use. A 'jumbo' rake is usually a BCX/BOY/etc. rake of up to 3500-3750 tonnes, which is much larger than the old 'CG' rakes which used to be limited to 1800 tonnes or so. All air-braked rakes of BCN/BCNA wagons up to 4500-4750 tonnes are known as 'super-jumbo' rakes.
14. Among goods trains, **Link Trains** are or were those with a pre-specified regular weekly or daily schedule (the 'link' for the train). Often, these goods trains had

dedicated sets of crew, and these trains were usually given priority by the controllers as well. High utilization is achieved by extended running with longer distances between rake examinations. Today, the term is not used much, and there are a variety of high-priority timetabled goods services that use the same management principles. Historically, the introduction of Link Trains was a significant step in improving the efficiency of goods services.

15. **Crack Trains** (scheduled engine and staff). the idea was to run these trains with one set of crew for the outward and homeward journeys, by having a very quick turn-around (1 hour or less) at the out-station. The outward and homeward journeys together constituted just one cycle of duty for the crew. A goods rake for the return journey was kept ready and waiting in the other portion of the yard so that the engine could be coupled to it and start on its return journey as soon as possible. Because the same crew comes back on the homeward journey, the entire trip has to be fairly short, within about 10 hours to comply with regulations on running duty hours, and definitely within 12 hours.
16. Link trains and crack trains both represent landmarks in goods train management in India.

EXPLOSIVES AND OTHER DANGEROUS GOODS

Definition:

Goods, which by nature are explosive, irritant, inflammable and highly combustible in nature and are likely to endanger human life or likely to damage public property are known as explosive and other dangerous goods.

General rules:

1. Detailed instructions for acceptance, booking, carriage and delivery of are given in the IRCA Red Tariff.
2. Red Tariff contains 8 chapters and each chapter deals with one class of dangerous goods.
3. These commodities are suffixed in IRCA Goods Tariff Part I, Vol. II with a letter'd'.
4. As per section 67 of the Railways Act, 1989, no person shall bring dangerous goods into the railway premises without giving a notice of 48 hours to the station master for booking the same.
5. In contravention to section 67 of the Railways Act 1989, if any person brings such goods, shall be liable for penalty as per section 164 of the Railways Act, 1989.
6. The penalty is up to `1,000/- or 3 years imprisonment or both.
7. In addition to the above fine, the sender is also responsible for any loss or damage to the property as a result of bringing such goods into the railway premises.

Classification of explosives and dangerous goods:

With regard to the risk involved in the carriage of the goods, these goods are classified into 8 groups as follows.

1. *Explosives*: Gunpowder, nitrate mixtures, nitro compounds etc.
2. *Gases* (Compressed Liquefied or dissolved under pressure): Argon, Coal Gas etc.
3. *Petroleum and other Inflammable goods*: Aviation Turbine Fuel, Petrol, Diesel etc.
4. *Inflammable solids*: Magnesium Powder, Potassium etc.
5. *Oxidizing Substances*: Bleaching Powder, Chlorides of lime etc.
6. *Acids and Corrosives*: Sulphuric Acid, Nitric Acid etc.
7. *Poisonous and Toxic substances*: Arsenic, Antimony, Carbolic Acid etc.
8. *Radio Active Materials*: Radium, Uranium etc.

The following precautions should be taken for acceptance, booking, carriage and delivery of explosive and other dangerous goods.

Acceptance:

- Packing conditions prescribed in the red tariff for explosive goods are compulsory.

- Consignment must be accompanied with form 16 in duplicate issued by explosives department.
- No package containing explosive goods shall exceed the weight of 50 kilograms.
- All packages weighing more than 35 kgs. should be provided with strong slings.
- Pictorial labels should be pasted on the packages containing explosives.

Booking:

- In case the consignment is booked as 'Self' the name of the intended consignee should be declared in the forwarding note.
- Explosives should not be accepted forming a part of consignments with other goods.
- The maximum permissible weight by any wagon is 10 T.
- Powder type of wagons should be used for explosives. If powder type wagons are not available, CA type wagons should be used.
- Prepayment of freight is compulsory.

Carriage:

- Lead wire seals should be used for sealing the wagon.
- Routing of explosive goods should not be accepted by the dearer route for carriage, except where the normal route is closed for traffic.
- Dummy wagons should be provided on either end of the loaded wagons for safety purpose.
- The maximum number of wagons that can be carried per goods train is 10 and mixed train is 3.
- While in transit, loose shunting, fly shunting, rough shunting etc. must be avoided.
- Repairs to the wagons if any should not be done without unloading the goods.

Delivery:

- As soon as the goods are dispatched, a message should be given to the destination station regarding despatch of the goods.
- The consignee must remove the goods immediately after the goods are made available for delivery.
- The goods unloaded should be kept separately.
- If the consignment is not removed within the free time for removal, sale notice shall be served under sections 83 & 84 of the Railways Act, 1989.

Precautions to be taken while handling explosives and dangerous goods:

- The maximum number of wagons that can be dealt at a time while loading / unloading is 5.

- Ensure that the wagons are properly cleaned before loading.
- Loading and unloading of goods should be done during day light hours only.
- Packages should be handled by authorized persons only.
- Goods should not be thrown, dragged or pulled.
- Ensure that packages are compactly loaded so that they do not shift during transit.
- Packages should be stored in one layer only in case of barrels.
- In case of rectangular / square packages, they can be stored upto 5 layers.
- Naked light should not be brought near the wagons.
- Foot wear with nails should not be used.
- Trolleys should not be used.
- Packages should be physically carried.
- Children should not be allowed to handle these goods.

CONTRABAND GOODS

Contraband goods are those, the possession or carriage of which is prohibited under the law e.g. arms, ammunition, military stores etc.

Arms: Includes firearms, bayonets, swords, daggers, spears, bows and arrows etc.

Ammunition: Includes dynamites, RDX and other explosive materials.

These are accepted for booking under the following conditions:

1. When transported by a person who is lawfully entitled to possess along with him.
2. When a licensed dealer transports it.
3. When carried as military stores, ordered by state or central government.

Precautions to be taken:

1. Whenever these articles are booked, they should be accompanied by a license and shall satisfy the following points:
 - Arms and ammunition tally with the description given in the license.
 - The license is identical with the copy received from the license granting authority.
 - Original license should be produced at the time of booking.
 - A copy of the license should accompany the consignment along with the invoice.
2. The bulk of the consignment should not be broken and should be moved at a time as one lot.
3. Soon after dispatch, a message is sent from forwarding station to destination station.

INDENT, ALLOTMENT AND SUPPLY OF GOODS STOCK AT STATIONS**WAGON DEMAND REGISTRATION FEE*****Registration:***

1. Any person who desires of dispatching his goods by wagon should register his indent in wagon demand / priority register.
2. Registration is done in Wagon demand register giving particulars of commodity and type of wagon required.
3. Wagon demand registration fee(Excluding service tax) is collected for the wagons registered under different gauges as under”:

Gauge	WDRF per wagon Rs..	WDRF per Standard rake Rs.
BG	1500	50,000
MG	1500	50,000
NG	1500	1,500 xNo.of Wagons

4. Service tax as applicable is levied on the above WDRF.
5. After collecting the W.D.R.F., the indents are registered in priority registers maintained separately for wagon loads and train loads for each series and signature of the party is obtained.
6. Any number of indents can be accepted, except to quota points, where individual railways impose restrictions.
7. No indent should be accepted for destination which has been restricted “Until further advice”
8. Clubbing of commodities is permitted upto a maximum of 2 in a wagon.
9. These registers are kept open to public for inspection.

Exemptions from payment of WDRF:

- Kit wagons booked on kit passes issued to railway employees on retirement on transfer account
- Railway material consignments booked by railway officials
- Container traffic
- Military Traffic
- Platinum, Gold and Silver card holders(Platinum-Offering more than Rs.100 crores in the previous year, Gold-Between 50-100 crores and Silver-Between 25-50 Crores)

Forfeiture of wagon demand registration fee:

- When wagon demand is cancelled after the physical supply of wagons.
- When wagon demand is cancelled within 10 days of registration.
- When loading is not commenced within the free time allowed for loading.
- When consignor has given in writing to detain the wagon and the loading is not commenced within 24 hours from the expiry of free time, indent is cancelled, WDRF is forfeited and demurrage charges levied without granting any free time.
- When consignor is not willing to pay freight charges as per existing railway tariff.
- An amount equal to WDRF will be collected from premier customers when they cancel their indents under any of the above conditions.
- When WDRF refund is not claimed within 3 years as per limitations Act.
- When a wagon / rake is supplied to an indenter which he commences loading within the free time but takes more than the free time permitted, the wagon registration fee will not be forfeited but demurrage will be recovered in accordance with the rule.
- When a rake is supplied to an indenter at congested goods shed and he commences loading within the free time but does not complete the loading within twice the permissible free time, one subsequent pending indent of the said consignor will be cancelled along with forfeiture of WDRF. Similarly, if he does not complete the loading within three times the permissible free time, another pending indent will be cancelled along with forfeiture of WDRF and so on.

Refund of wagon demand registration fee:

Station master is empowered to give refund of wagon demand registration fee when paid in cash and WDRF is refundable under the following circumstances.

- When wagon is booked and loaded.
- When supply of wagon is not made up to 10 days and the consignor wants to cancel his indent.
- When open wagon is supplied against an indent for covered wagon or vice versa and the consignor is not willing to load.
- When restrictions are imposed without any time limit.

Note:

1. On surrender of money receipt, refund is granted.
2. If money receipt is lost, refund can be granted on execution of a stamped Indemnity Bond.
3. The amount can be adjusted towards the freight charges in case of paid traffic.
4. When WDRF is paid through credit note, refund will be granted by CCM

Change / Cancellation of Indents under special conditions:

Cancellation of indents will be dealt differently when Railway Board issues notice to withdraw transportation of particular business segment or a particular stream of traffic or even a specific commodity for any of the following reasons.

- Disruption of a particular section due to Force majeure conditions
- Closure of the section after due notification
- Closure of the originating goods shed after due notification
- Closure of the destination goods shed after due notification
- Phasing out or withdrawal of a particular type of rolling stock altogether for which indent had been placed

Change of commodity:

1. It is permitted by DCM if the commodity is within the same priority.
2. It is permitted only once

Supply of wagons or allotment of wagons:

1. Each demand of wagon registration is given a serial number in the order of priority.
2. Separate priority registers should be maintained for wagonload traffic and trainload traffic.
3. Allotment / loading orders are issued in accordance with the priority of registration as per preferential traffic order.
4. Stations should load wagons in accordance with the allotment / loading orders from the appropriate authority i.e. Sr.DOM.
5. The loading order given is called as Specific Loading Order (SLO).
6. At some stations, station masters are authorized to give loading orders in case of inward released wagons, which is called as 'back loading'.
7. The allotment or loading orders should be exhibited on the notice board of the station for the information of the public.
8. Before allotment of wagons, the registers of bans and restrictions should be verified to see whether the commodity is banned from booking or a particular route is closed for traffic.
9. All wagons allotted and supplied should be certified by TXR (Train Examination) staff.
10. If TXR Staff is not available the wagons are jointly selected by the consignor and the station master after physical check.
11. Non-water tight wagons should not be supplied for goods damageable by wet.

Lumpsum deposit:

1. Lumpsum deposit for government departments is 10,000/- for any number of wagons.
2. Public sector undertakings / corporations and the private sidings having regular transactions with the railways may be permitted at the discretion of the railways for the facility for payment of lumpsum deposit for wagon demand registration fee.
3. They will have to apply to divisional commercial manager, through the station master concerned.
4. The parties having regular transactions with a railway may be permitted at the discretion of the Railways to pay a lumpsum deposit in lieu of payment of registration fee each time an indent is made for wagon supply. The lumpsum deposit payable will be fixed by Railway in such cases taking into account the number of wagons that the parties concerned have to register at a time.
5. On receipt of the sanction from the DCM, the station master will collect the lumpsum deposit and issue a money receipt.
6. If the consignor fails to load the wagons, registration fee is forfeited for the rake not loaded and the party is requested to make good the amount forfeited.
7. If the amount is not made good immediately, the deposit should be reduced and thereafter the party will be entitled to place indents for the wagons by the reduced amount of deposit only.

ROUTING OF GOODS TRAFFIC

Goods will be dispatched by the route operationally feasible and freight charges will be levied by the shortest route.

If the sender or his authorized agent desires to book his goods by other than the shortest route, he must give in writing and signed instructions on the forwarding note.

RATING OF GOODS TRAFFIC

- Minimum distance for charge is 125 kilometers.
- Minimum weight for charge is CC of the wagon.
- Minimum freight charge is Rs.50.

DYNAMIC PRICING POLICY

1. Dynamic pricing policy for transportation of goods was introduced in the year 2006.
2. The objective of dynamic pricing policy is
 - To optimize utilization of transport capacities
 - To reduce idling of assets and capacities
3. This policy includes demand management strategy of combining incentive schemes granting attractive concessions in freight and fare.
4. This will enable the railways to
 - Give boost to sluggish demand
 - Improve market share by competitive pricing and
 - Utilize idle assets together
5. This policy is directed at shifting demands
 - From excessively preferred routes and terminals to less patronized sectors
 - To recover higher cost of operation on account of skewed demand pattern
6. Base class rates for freight charges for various commodities have been assigned vide goods tariff.
7. Under dynamic pricing policy, the demand management charges if any, such as busy season surcharge, supplementary surcharge plus the base freight charge constitute the *Normal Tariff Rate* (NTR).
8. Any other charges such as development surcharges, punitive charges and penal charges for misdeclaration should be levied on NTR.

Similarly, freight concessions (discount / rebate) will also be granted on NTR

Busy season - Freight business:

It refers to the period from 1st October to 30th June of following year.

Lean season - Freight business:

It refers to the period from 1st July to 30th September.

SERVICE TAX

The Service Tax is being levied on total freight charges with effect from 1st October 2012.

- i. Service Tax of 12 % will be charged on 30% of freight
- ii. Education Cess of 2% on Service Tax will be added
- iii. Higher Education Cess of 1% on Service Tax will also be added

Total Service Tax implication will be (i) + (ii) + (iii) = 3.708% on the total freight

CLASSIFICATION OF GOODS

- Classifications of the commodities have been given in the goods tariff Part-I Vol - II under 25 Main Commodity Heads.
- The total number of classes is 14.
- Only train load classification of commodities has been indicated in the goods tariff. The wagon load classification is as follows.

Low Rated Tariff	General Tariff		
LR3	100	130	170
LR2	110	140	180
LR1	120	150	190
		160	200

Train load class	Wagon load class
LR3 – LR1	Class 120
100 – 140	Class 150
150 – 190	One class higher than train load class
Class 200	Class 200 + 5% of BFR of class 200

DEMURRAGE

Demurrage is the charge levied for detention of rolling stock beyond the permissible free time allowed for loading and unloading.

- Demurrage is charged per 8-wheeler basis
- Free time for loading / unloading for different types of rolling stock is notified by the railway board.
- Normal working hours are from 06.00 to 22.00 or any other working hours as notified by railway administration.
- All days are working days including dies non-days.
- Free time is not allowed when demand is cancelled after the physical supply of wagon.
- When a wagon demand is cancelled after physical supply of wagons, no free time is allowed and demurrage charge is levied from the time of placement of wagons till the cancellation of the indent.
- If the loading is not commenced within the free time for loading, allotment is cancelled, WDRF is forfeited and demurrage charges are collected without granting any free time.
- When a wagon / rake is supplied to an indenter which he commences loading within the free time but takes more than the free time permitted the wagon registration fee will not be forfeited but demurrage will be recovered in accordance with the rule.
- When a rake is supplied to an indenter at congested goods shed and he commences loading within the free time but does not complete the loading within

twice the permissible free time, one subsequent pending indent of the said consignor will be cancelled along with forfeiture of WDRF. Similarly, if he does not complete the loading within three times the permissible free time, another pending indent will be cancelled along with forfeiture of WDRF and so on.

- If the consignor gives in writing to detain the wagon beyond the free time for loading, in such case if the loading is not commenced within 24 hours, indent is cancelled, WDRF is forfeited and demurrage charges are levied without granting any free time.
- In case of block rake, even if one wagon is detained beyond the free time demurrage charges are levied on the entire rake. Separate free time is given for crane consignments.
- Demurrage charges should be collected locally and should not be included in railway receipts.
- Demurrage charges should be accounted on the debit side of the balance sheet.
- If the wagons placed for loading and unloading are disturbed for the purpose of shunting by operating staff, the period should not be taken into account either for granting of free time or for the purpose of calculating demurrage.
- The SM should give in writing the reasons for disturbing the wagons after placement.
- Demurrage charges for other than steel plants are levied at the rate of Rs. 150/- per hour or part of the hour, per eight wheeler wagon, on all types of 8-wheeler goods wagons and coaching vehicles (other than passenger vehicles) irrespective of their carrying capacity.
- In case of excessive congestion at any terminal / steel plant, CCM / COM / DRM can increase the demurrage charges even at progressively increasing rates subject to a maximum of 6 times of the prevalent rate after giving a notice of 48 hours and applicable for a notified period.
- The rates for demurrage charges in respect of 4 – wheeler wagons / vehicles on BG, MG and NG shall be half of the rates prescribed for the 8 – wheeler.
- For RMC and military wagons, demurrage is collected on par with public rates.

As an introductory incentive for the consignors / consignees to release the rakes during the extended night hours beyond 22.00 hours, only 50% of the time taken between 22.00 hours and 06.00 hours of the time upto which the working hours have been extended should be reckoned for calculation of free time for loading, unloading or removal of consignments from the railway premises.

Permissible free time for loading and unloading:

Type of Wagons	Permissible free time (in hours & minutes)			
	Mechanized		Manual	
	Loading	Unloading	Loading	Unloading
Open wagons* BOXN, BOXNHA, BOXNHS,	5.00	7.00	9.00	9.00
Hopper Wagons* BOBS, NBOBS, BOBR,	5.00	2.30	N.A.	N.A.
Flat Wagons BFR, BRH, BRN, BFK,	6.00	N.A.	8.00	8.00
Covered Wagons(BCNHL)	N.A.	N.A.	5.00 (1 - 20 wagons)	5.00 (1 - 20 wagons)
			7.00 (21- 30 wagons)	7.00 (21 - 30 wagons)
			9.00 (31 to 45 wagons)	9.00 (31 to 45 wagons)
			11.00 (46 and above)	11.00 (46 and above)
Tank Wagons (White Oil)	6.00	6.00 (upto 29)	N.A.	N.A.
		8.00 (30 & above)		
Tank Wagons (black oil)	7.00	7.00 (upto 29) 9.00 (30 & above)		
Military wagons – KM	N.A.	N.A.	4.00	4.00
Military wagons Other than KM wagons like DBKM etc.	N.A.	N.A.	5.00 (upto 20 wagons) 7.00 (21 & above)	5.00 (upto 20 wagons) 7.00 (21 & above)
Type of Commodity				
Containers #	3.00	3.00	N.A.	N.A.
Consignments handled by crane	7.00	8.00	N.A.	N.A.
Livestock	N.A.	N.A.	4.00	4.00

Note: Loading by pay loaders is a type of mechanized loading. N.A. means not applicable.

Permissible free time in case of double operation of container traffic i.e. unloading followed by loading in the same wagons shall be 5 hours. However in the case of container commodity handled by sling cranes, the free time for loading/unloading will be 6 hours for single operation and 8 hours for double operation.

Additional free time given on account of extra shunting for placement / removal of rakes to and from the serving station to the siding should be 2 hours. However, in cases where the additional free time had been fixed less than 2 hours as per time and motion, studies, the same should be continued.

Multiparty / multi-consignor / multi-consignee rake(s) shall be treated as a unit for the purpose of free time for loading / unloading and levy of demurrage.

WHARFAGE

Wharfage charge should be levied on goods / consignment not removed from railway premises after the expiry of free time. No wharfage will be levied on the consignment held by railway administration on lien in terms of Section 83 of Railways Act 1989.

Classification of railway premises:

- Classification should be reviewed every year in the month of May on the basis of “average number of rakes dealt with per month during 1st Jan to 30th Apr” or “the average number of rakes dealt with per month during 1st May (of previous year) to 30th Apr, which ever is higher”.

Group	No. of Rakes
I	More than 12 rakes per month
II	7 - 12 rakes per month
III	Less than 7 rakes per month

- Classification should be reviewed every year in the month of May based on the actual performance during January – April and notified for the period July to June.
- Divisions will notify the classification of railway premises.

Permissible free time for removal of goods from railway premises:

Free time for removal of goods from railway premises will be as under.

(a) Goods stacked in goods sheds waiting to be loaded in wagons / rake.

Group	Time
I	12 working hours from the expiry of free time for loading of wagons/rake
II	15 working hours from the expiry of free time for loading of wagons/rake
III	30 working hours from the expiry of free time for loading of wagons/rake

(b) Goods unloaded from wagons / rake, waiting to be removed from goods shed.

Group	Time
I	12 working hours from the expiry of free time for loading of wagons/rake
II	15 working hours from the expiry of free time for loading of wagons/rake
III	30 working hours from the expiry of free time for loading of wagons/rake

Note: National Holidays, namely 26th January, 15th August and 2nd October will not be reckoned while calculating free time for removal of goods from railway premises and for charging Wharfage except in the case of live stock, perishable goods and goods loaded / unloaded at such stations/goods sheds which are notified as 'Notified Station' for removal of goods without delay.

Wharfage rates:

Wharfage charge will be levied on per wagon per hour basis uniformly for all types of wagons, whether 4 wheeler or 8 wheeler or any other type.

Group	Rate
I	Rs.150/- per wagon per hour or part thereof
II	Rs.120/- per wagon per hour or part thereof
III	Rs.75 /- per wagon per hour or part thereof

50% of the time will continue to be reckoned between 22.00 hours and 06.00 hours.

PREFERENTIAL TRAFFIC ORDER

General order No 86 (For allotment of wagons)

In exercise of the powers conferred by section 71 of the Railways Act, 1989 the Central Government hereby directs that the Railway Administrations shall give special facilities for or preference to the transport of goods/class of goods at a station/siding as per priority/preference mentioned in the order.

2. Priority 'A'

Military Traffic, when sponsored by MILRAIL and approved by Railway Board.

3. Priority 'B'

- (i) Goods for emergency relief work for victims of natural calamities, like floods, drought, earthquakes etc. when sponsored by an officer not below the rank of Deputy Secretary of Central/State Government or a non official organization nominated by the Central/State Government and accepted by the originating Zonal Railway or Railway Board.
- (ii) Foodgrains and levy sugar for Public Distribution System or other welfare schemes sponsored by Food Corporation of India and approved by Zonal Railways/Railway Board. Proposals for sponsorship of any other commodity by a Central Government Agency will require specific approval of Railway Board.

4. Priority 'C'

All programmed traffic of the following commodities when sponsored and accepted by authorities as under:

Commodity	Sponsoring Authority	Accepting Authority
Coal	Coal companies, public or private, for quantities specified as per short-term linkages approved by the Standing Linkage Committee.	Executive Director Rail Movement,
(i) Non-refined Edible Salt	Salt Commissioner	Zonal Railways
(ii) Common Salt (to approved iodisation plants)		
Raw Material to Steel Plants	Steel producers who satisfy specific criteria.	• Executive Director Rail Movement, or COM/CFTM of the loading Railways in consultation with the COM/CFTM of the Railway where the plant is located.
Fertilizer	Concerned fertilizer Manufacturers/Importers	Zonal Railways
POL	Oil companies	Railway Board

Proposals to accord priority for movement of any other commodity or traffic will have to be sent to Railway Board for approval.

4. Priority 'D'

All traffic not included in Priority 'A' to 'C'

5. General Instructions

1. Traffic offered in block rakes, including clubbed indents constituting a block rake will be given preference over traffic in piecemeal, irrespective of the class of priority and date of registration of the later.
2. Block rake traffic will have preference over other traffic within the same class of priority in the following order:
 - (a) Traffic covered by contractual obligations and/or guaranteed under specific Schemes like Wagon Investment Scheme, Freight Forwarder Scheme, Terminal Incentive-cum-Engine-on-load scheme(TIELS) etc.,
 - (b) Traffic in rakes loaded from a Siding/Goods shed of the station having round the clock working.
 - (c) Traffic in rakes from a full rake handling siding of the station having mechanized system of loading.
 - (d) Traffic offered for distance or more than 700 kms within the same classification.
 - (e) Traffic offered in single point block rakes (including clubbed single point rakes) over two point/multi point block rakes and mini rakes.
3. Chief Operations Manager is authorized to reserve and notify maximum upto two days in a week for allotment of rakes as per the date of registration irrespective of the class of priority.
4. Any traffic can be accorded preferential loading and movement under a higher priority under special orders issued by the Ministry of Railways, Railway Board/Zonal Railways.

This Preferential Traffic Order General Order No 86 will come into force w.e.f. 1st April 2013.

Quotas and Restrictions

Quotas:

1. There are certain places and areas at which the facilities available permit handling of a limited number of wagons only.
2. If the potential of originating traffic to these areas or places exceeds this capacity and if the loading is not controlled there will be heavy accumulation of wagons for such areas leading to congestions and wastage of wagon fleet.
3. In order to regulate the inflow of wagons into these areas in conformity with the facilities available to handle the incoming traffic, 'quotas' are fixed for loading of wagons to such areas.
4. These quotas are allotted to various railways in proportion to the requirements of those railways.
5. Zonal HQs and Railway Board keep a watch that these quotas are adhered to.
6. In exceptional cases permission could be given at the discretion of the Railway Board and Zonal HQ to load wagons on a particular railway in excess of the quota.

Restrictions

1. In sight figures of wagons which are destined to a particular place/area/via are daily obtained by the Zonal HQs are obtained through FOIS.
2. In case the figures mount up unproportionately or due to some unusual occurrence like accident, labour, strike, mechanical failures etc. daily handling of wagons is reduced.
3. Zonal HQs has to take timely action to prevent further loading and dispatches of wagons to such a place/area/via as this will lead to unnecessary hold up of wagons and congestions enroute.
4. Each Zonal HQs therefore must issue timely 'Restrictions Messages' for restricting loading to such places/areas/via where congestions are likely to take place.
5. Timely regulation of loading could possible avert subsequent traffic congestions.
6. However while issuing restrictions the fact that the railways must maximize their loading has to be kept in view and a judicious balance has to be struck to ensure that on one hand congestions are anticipated and avoided and on the other hand loading is not unnecessarily curtailed due to avoidable restrictions.

Supply of wagons and clearance from the loading points/sidings.

1. The requirements of wagons are compiled in the control office after obtaining information from station.
2. Stock reports given by the station contains the information regarding the requirements in different priorities, number of wagons awaiting for clearance etc.,
3. On the basis of the stock report the work programme of the sectional goods train, which performs shunting at the station, is made by control office.
4. These trains pickup out going wagons and place in the goods shed and loading points and clear the loaded wagons.
5. At the industrial sidings the supply and clearance is made by running out industrial pilots.
6. At major units/sidings pilots with complete train formation are run out with empties, which can back to the terminals with loads.

FREIGHT INCENTIVE SCHEMES AND TRANSPORTATION PRODUCTS

Following comprehensive guidelines for various Freight Incentive Schemes & Transportation Products are introduced.

Introduction:

Main objective of the Freight Incentive Scheme is to generate additional traffic volumes and additional revenues. Grant of freight concessions should, therefore, serve this very objective. A close watch needs to be kept to ensure that this objective is being served.

The following traffic are excluded from all FIS

- Coal and all its variants including washed and imported coal.
- Coke and all its varieties including metallurgical, petroleum and imported coke.
- Iron Ore
- POL
- Traffic moving in privately owned wagons (including OIWS and WIS/LWIS wagons) such as cement in bulk in loose, food grains in bulk in loose, caustic soda, LPG, ammonia, Phosphoric acid etc. availing freight concession under any other scheme.
- Traffic loaded in ports.
- Container Traffic.
- Military Traffic.
- RMC
- Short lead traffic of 100 kilometers.
- Marine Gypsum

Freight Incentive Schemes: Following Schemes are included in this category.

- (a) Incentive Scheme for Loading Bagged Consignments in Open and Flat Wagons
- (b) Incentive Scheme for Traditional Empty Flow Direction.
- (c) Incentive Scheme for Freight Forwarders.
- (d) Incentive Scheme for Incremental Traffic.

Processing Procedure

A customer will be able to participate in any of the Freight Incentive Scheme only if he specifically applies for the same except for those schemes explicitly mention that such an application is not required.

- 1 Customers will apply to the Divisional Railway Manager of the concerned Division for grant of benefits under the specific Freight Incentive Scheme they wish to participate in.
- 2 These applications will include details in respect of their monthly NTKMs for two previous years.
- 3 The application should also indicate the type of wagons used in case of Incentive scheme for Traditional Empty Flow Direction.
- 4 The application should be supported by the documents duly authenticated by the Station Manager/Chief Goods Supervisor of the concerned terminals.
- 5 The proposals will be passed on to the nominated DEC(Divisional empowered committee –Sr.DCM&TIA) to verify and submit a report within 15 days.
- 6 The report submitted by DEC will be put up by Sr.DCM to DRM through Sr.DOM.
- 7 DRM gives a authorization to Goods Supervisor granting the concession or otherwise party will be issued regret letter.
- 8 DRM before giving authorization shall ensure the conditions specified in the relevant Sheme are complied with.
- 9 Freight concessions under these Incentive Schemes should generally be granted by means of discounted freight rate at the time of issue of Railway Receipt itself.
- 10 If the destination terminal falls on a different Division a copy of the authorization should be sent to the concerned CCM and DRM.
- 11 The Commercial Staff to maintain the NTKMs earned under these schemes for two corresponding years.
- 12 FIS has been framed for applicability over all Zonal Railways and cannot take care of Specific peculiar requirements of a particular stream of traffic moving over individual Divisions/Zones.
- 13 In case Division/Zone finds that there is adequate justification for freight concessions for such type of traffic which are not covered under any of the FIS, then detailed proposals for freight concessions should be forwarded to Railway

Board for consideration with approval of COM, CCM, concurrence of FA & CAO and personal approval of GM.

Concurrent Freight Concessions:

Freight concession under following schemes will be permitted concurrently with concessions under various Freight incentive scheme:

- (i) 6% Concession to and from North East
- (ii) TIELS (train incentive on engine on load system) and liberalized siding rules.
- (iii) Incentive Scheme for Traditional Empty Flow Direction
- (iv) Incentive Scheme for Incremental Traffic.

Concurrent concessions will be given one after the other on the discounted NTR.

Incentive Scheme for Loading Bagged Consignments in Open & flat Wagons:

Objective:

Normally, bagged consignments take a longer time to load in Open and Flat wagons and also need to be covered with tarpaulins. In addition to above, in some cases their loadability is also less This Scheme aims to facilitate such loading.

Incentive:

Following freight discounts will be granted on NTR(normal Tariff rate) for loading bagged consignments in open and flat Wagons.

Commodity	Discount Percentage
All types of fertilizers (except rock phosphate), bentonite powder, cement, china clay, DOC, Food grains, Lead/ zinc concentrate, quick lime, soap stone powder, caustic soda, hydrated lime, soda ash, chalk powder, calcite powder, calcinated bauxite and marble chips.	20
Fly Ash. Urea	30

Conditions:

1. Commodities should be loaded in standard size of bag up to a maximum of 100 kgs.
2. Tarpaulins, if any, for covering the wagons should be provided by the consignors at their own cost.
3. Consignors will be required to furnish an undertaking on the forwarding note giving their consent for loading in wagons and to the effect that they would bear full risk for damage/pilferage of the consignments.
4. Supply of wagons for loading under the Scheme will be subject to operational feasibility.

Incentive Scheme for Traditional Empty Flow Directions:**Objective:**

The main objective of this policy is to generate additional traffic from sidings and goods sheds for loading in Inter-Zonal and Intra- Zonal Traditional Empty Flow Direction across which traffic movement traditionally comprises predominantly of empty wagons in order to achieve improved utilization of the rolling stock.

Zonal Railways is empowered to notify additional Intra Zonal empty flow directions with the personal approval of GM in consultation with Traffic Transportation Directorate of Board.

Incentive:

Slabs of Freight discount of NTR for traffic loaded in the notified Traditional Empty Flow Directions are as under:

Distance slabs for TEFD	All Terminals
Lead \leq 500 kms.	NIL
Lead more than 500 kms and upto 600 kms	10
Lead more than 600 kms and upto 700 kms	20
Lead more than 700 kms and upto 900 kms	30
Lead more than 900 kms and upto 1200 kms	35
Lead more than 1200 kms	40

Note: The net freight for distances falling in the higher slabs should not be less than the net freight for the maximum distances in the lower slabs.

Restricted Commodities: All Ore, Minerals and Salt in open wagons

Lead Restriction: Up to 500 Kms

Permitted Wagons: Covered (excluding tank wagons), Open (excluding hopper wagons) and Flat wagons

Conditions:

1. New traffic which has not been loaded during each of the two previous years will not be eligible for these concessions
2. This Scheme will be applied to each terminal separately and independently for customers operating from multiple terminals.
3. Application for availing this discount will have to be finalized in 15 days at the Divisional level and 30 days at Zonal Level.
4. Concessions granted under this Scheme will always be for one year with prospective effect only and issue of notification.
5. Traffic booked under this scheme will not be rebooked or diverted normally. In case such traffic is to be rebooked or diverted then normal freight will be charged for the entire distance without any concession.
6. Customers already availing freight concessions under the existing incentive scheme for Traditional Empty Flow Direction will continue as per the agreement entered into between the customer and Railways under the existing scheme.

Incentive Scheme for Freight Forwarders:

Objective:

The Scheme aims to facilitate cargo aggregation and thereby expand the commodity basket on Railways.

Incentive: Cargo loaded in any wagon under this Scheme will be charged at the rates indicated below.

	No.of Wagons	Restriction	Freight Rate
Individual wagons loaded with a single commodity	Any number of wagons	None	Train load rate for each wagon for the commodity loaded
Individual wagons loaded with two commodities	Any number of wagons	None	Train load rate for each wagon for the higher class of two commodities loaded

Individual wagons loaded with more than two commodities	Not more than 10 wagons	Restricted Commodities not permitted	Composite class rate of 120
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Restricted Commodities:

The following commodities are also restricted in addition to those listed above. Wagons loaded with more than two commodities cannot contain any one of the following

- (i) All types of Ores and Minerals.
- (ii) Cement
- (iii) Food grains.
- (iv) Fertilizers
- (v) iron and Steel.

Lead Restriction: Minimum 700 Kms

Permitted Wagons: Covered, BOXN and Flat wagons

Conditions:

1. Loading at the forwarding terminal and unloading at the destination terminal will be the responsibility of the Cargo Aggregators.
2. A wagon may be loaded with a single or multiple commodities.
3. Any number of wagons can be loaded with a single of two commodities.
4. Not more than 10 wagons can be loaded with more than two commodities.
5. Freight would be charged for each wagon in the rake for the notified Permissible Carrying Capacity of the wagon at the Class rake indicated in the above table.
6. These services will be run only on prepaid basis at Owners' Risk. 'Said to Contain' Railway Receipts will be issued for 'Self'.
7. All extant Commercial rules and regulations including those for free times and demurrage will apply.
8. In cases of incorrect declaration of description of commodity or any other misdeclaration for availing benefits under his scheme, only those multi commodities wagons of the rake will be charged at Class 200, which are found misdeclared. In case of wagons loaded with either single or two commodities the normal rule of misdeclaration shall apply.
9. The customers will have to pay all other applicable charges like busy season surcharge, terminal charges, development charges etc. over and above the freight rakes indicated above.
10. Supply of wagons for loading under the Scheme will be subject to operational feasibility.
11. Indent will be placed by the freight forwarder indicating the station from, station to, approximate indication of wagon-wise break-up of commodities along with names of consignors / consignees, However, at the time of loading a modified

forwarding note will be submitted by the freight forwarder indicating the final status of station from, station to, wagon-wise break up of commodities along with names of consignors and consignees. This will be subject to the condition that in the modified forwarding note to be submitted at the time of loading, not more than 20% of the wagons for each commodity can be changed.

12. In notified empty flow direction, indent can be placed for less than standard rake size. Indent should be placed for a minimum of 20 wagons in case of covered and flat wagons and a minimum of 30 wagons in case of BOXN wagons.
13. for indent of less than rake size, supply of wagons will be made only for full rake. After loading, the entire rake will move carrying both the loaded and empty wagons. Block rake will not be split-up for loading this category of traffic.

Incentive Scheme for Incremental Traffic:

Objective:

This Scheme aims to generate additional business volumes.

Incentive:

Discounts in the freight rate (NTR) will be granted for the Incremental NTKMs at the time of issue of railway receipt itself. The percentage discount in freight rate would be as indicated in each slab of incremental NTKMs in the following table. Slabs of freight concessions are as under.

Slabs of Incremental NTKMs	Percentage Discounts on Applicable Freight Charges
10% \geq Incremental NTKMs	NIL
20% \geq Incremental NTKMs > 10%	10% on the Increment beyond 10 %
30% \geq Incremental NTKMs > 20%	(b) + 20% on the Increment beyond 20 %
Incremental NTKMs > 30%	(b) + (c) + 30% on the Increment beyond 30 %

Conditions:

1. No freight concession will be admissible in case of new traffic.
2. This Scheme will be applied to each terminal separately and independently for customers operating from multiple terminals.

3. If a customer is dealing with more than one commodity at a single terminal for eg. (Cement and Clinker) then combined NTKMs from different commodities should be taken into consideration for deciding the eligibility under this Scheme.
4. NTKMs from a terminal to any number of destinations will be eligible under this scheme.
5. Concessions will be given at the stage of issue of RR itself on incremental NTKMs over the annual Bench mark. However, if incremental NTKMs have been loaded before issue of notification then freight rebate will be granted.
6. Customer should apply in the month from which he wishes to enter into the scheme with complete data for 2 years upto the previous month.
7. Application for availing this discount will have to be finalized in 15 days at the Divisional level and in 30 days at Zonal Level.
8. Concessions granted under this Scheme will always be for one year..
9. Customers already availing freight concessions under the existing incentive scheme for Incremental Traffic will continue as per the agreement entered into between the customer and Railways under the existing scheme.

Quick Transit Service:

1. Under QTS system the goods are moved by express goods trains and delivered with the guaranteed period/fixed by the Railways between nominated pairs of stations.
2. An extra service charges of 5 % subject to a minimum of RS 10/- is collected only if the goods are delivered within the guaranteed time.
3. Control offices keeps a watch on the movement of QTS wagons and arrange quick movement with minimum detention in yards and at intermediate stations.

Out Agency:

1. Towns and villages situated far away from Railway station are provided with out agency for booking of goods and parcels.
2. A commission agent appointed by the Railways operates the out agency.
3. The agent collects the goods and offers to Railways for booking at the serving station and similarly collect the goods from serving station and delivers at out agency.
4. Out agency charges fixed by the CCM for road, mileage is added in the Railway Receipt.

Station to Station Rate:

1. These rates are applicable to a specific stream of traffic of a particular commodity for movement between specific pairs of originating and destination station/points.
2. These rates can be granted either to the consignor or consignee both for paid and to pay and only for block rake traffic.

3. STS is granted in the form of percentage discount.

Domestic container service:

1. In order to attract high rated traffic, this service has been introduced.
2. The container service is a door- to-door service available between specific pairs of stations.
3. Advantages: packing costs are saved, door- to- door service, no damage/pilferage and reduced claims.

Volume Discount Traffic

1. This scheme is introduced by the board to give incentive to certain category of traffic if additional traffic is offered over the previous years loading with a view to increasing its market share.
2. It is applicable to
Group – I cement, iron and steel, sponge iron clinker and sugar and clinkers.
Group – II Iron ore, barrettes, limestone, dolomite, and gypsum.
3. The consignors/consignee, loading more than 7% compared to the bench mark shall be eligible for discount on the freight paid traffic.

TERMINAL INCENTIVE CUM ENGINE-ON-LOAD SCHEME” (TIELS)

Applicability:

- Existing sidings only notified for charging freight on through distance basis.
- All future sidings are to come up with EOL concept and loading / unloading time for TIELS would be applicable without any financial benefits.
- Private sidings and terminals handling a maximum of 5 rakes per day on an average.
- Goods sheds and rail side warehouse complexes subject to conditions separately specified for goods sheds.

Financial incentive would be given to such freight customers who help to reduce terminal detentions through one or more of the following means:

- Investment in or augmentation of infrastructure for mechanized loading and unloading such as increase in number of pay-loaders, tipplers, in motion weigh bridges, loading chutes etc.
- Invest in yard layout of their sidings.
- Introduce round the clock working in terminals to save detention to wagons.
- Increase in number of labourers.

Direct benefits accruing to freight customers would be as follows:

- Freight rebate as stipulated for a period of 10 years.
- Utilization of railway loco during the duration of free time, without paying engine hire charges.

Loading / unloading time for various types of block rakes with TIELS working is prescribed as follows:

Type of Wagon	Free Time in Hours	
	Loading	Unloading
Open Rake (BOXN etc)	3	5
Hopper Rake (BOBR etc)	3	2
Covered Rake (BCN etc)	6	6
Tank Rake (BPTN etc)	5	5

- The free time from placement to release.
- If at any terminal, additional shunting time etc. have been permitted at present (from the exchange yard to siding and back) the same would continue.
- For ascertaining placement and release timings, automatic timing devices linked to specified track circuits would have to be installed by the customer. If these are not available, appropriate safeguards with personal approval of the concerned DRM be put in place, till these devices are available.
- Customer to opt for either inward traffic or outward traffic, or for only one particular type of rake.

Modalities for switching over to TIELS working is as follows:

- Customers who agree to switch over to TIELS would be eligible for incentives.
- Incentive worked out for all rakes handled at the terminal for the type of traffic.
- It would be given as a percentage rebate in freight charges.
- The customer would be eligible for the above rebate for a total period of 10 years.
- Financial incentives to terminal/siding owners opting for TIELS are given below.

Year	Freight rebate	Penalty charges
1	5%	1%
2	4%	1%
3	3%	1%
4	2%	1%
5 - 10	1%	1%

- Financial incentives to customers opting for TIELS at goods sheds and rail side warehouse complexes.

Year	Freight rebate	Penalty charges
1 - 10	2%	1%

- Freight rebate admissible for rakes loaded / unloaded within the EOL free time. Penalty charges levied for rakes detained for more than 1 hour beyond the EOL free time.
- Following stipulations operative for rakes detained beyond free time.
 - (i) Normal demurrage charges would be levied for rakes detained beyond the EOL free time.
 - (ii) No freight rebate would be admissible.
 - (iii) For rakes detained for more than 1 hour beyond the EOL free time, penalty charges @ 1% of freight would be payable
 - (iv) No penalty levied for first three month after start of TIELS working,.
- At those terminals, railway will withdraw all C&W examination facilities from inside the terminal.
- Terminals from where C&W examination cannot be shifted will not qualify for being included in this scheme. However, in case terminal owner is prepared for the scheme and zonal railways are not able to withdraw C&W examination facilities, case referred to Railway Board.
- Non-electrified terminals/sidings in electrified sections where customers opt for TIELS, railway will undertake electrification of their sidings on priority, prior to introduction of TIELS. The criteria for electrification is (For sidings up to 5 Kms in length, a traffic volume of 5 BOXN / 7 BCN rakes per month. For sidings up to 10 Kms in length, a traffic volume of 9 BOXN / 12 BCN rakes per month).
- For bulb type sidings, freight will be charged on the basis of through distance up to a specified loading/unloading point and not for the entire length of the siding. No siding/shunting charges for haulage of wagons within the siding will be leviable under TIELS.
- Railway will bear the entire cost of all railway staff deployed at the siding operated under TIELS.
- Within the same class of priority, will be accorded in supply of rakes to TIELS customers.
- In case of multi – plant/multi – commodity sidings, if more than 50% of rakes being handled are covered under TIELS, then such a siding can be treated as TIELS siding for the purpose of no cost of railway staff to siding owner.

The modus operandi of implementation of the TIELS would be as follows:

- Customers, interested approach the division concerned.
- Customer will introduce round the clock working at his terminal in order to be eligible to participate in TIELS.
- In case of goods sheds or rail side warehouse complexes, the customer will have to agree for round the clock working for all his rakes to be covered under TIELS.
- Division will sign an Agreement with the terminal owners modalities of traffic.
- In case of goods sheds or rail side warehouse complexes, division will sign an Agreement with the customer nominating the goods shed,.
- All such goods sheds must have full-length placement lines for handling a block rake in a single placement. The format of the Agreement will be circulated by Railway Board.

- Division will thereafter notify the above revised free time for loading/unloading, for different types of rakes covered under this scheme.
- Since this freight discount is in the nature of repayment and incentive for investment made, it will be admissible in addition to all other rebates that the siding owner/customer may become eligible for such as lean season policy, empty flow direction, incremental loading etc.
- All outward traffic loaded from the siding / terminals or goods shed will be 'paid' traffic.
- For outward traffic originating from sidings/terminals or goods sheds this discount will be given up front in freight charges at the time of booking.
- The goods clerk will maintain a separate register containing details of all outward traffic moved along with discount given.
- In case the loading is being done by the consignor whereas freight is being paid by the consignee, then the freight rebate would be given to the consignor by way of a 6 monthly refund
- For inward traffic this discount will be given by way of 6-monthly refund.
- Once the terminal / siding owner or a customer in a goods shed or rail side warehouse complex goes in for TIELS working, it would normally be binding on him to continue with TIELS working for future handling of traffic at that terminal.
- However, in case he wishes to move out of this scheme after 10 years, it would be permissible for him to do so.

Important steps taken by Indian Railways in the recent years to improve loading.

- I. Improving wagon mobility and availability by**
 - Reducing terminal detentions by increasing goods sheds working hours
 - Improving the infrastructure at the goods sheds;
 - Rationalizing maintenance practices by extending the maintenance cycle of closed circuit rakes (CC Rakes) to 35 days/7500 kms from 15 days/4500 kms; introducing "premium" examination at nominated depots with a validity of 15 days
 - Using FOIS (freight operations information system) for better monitoring; complete roll-out of rake management system module enabling on-line monitoring of freight train operations
- II. Increasing lengths of trains** - BOX-N rake lengths were increased from 58 to 59 wagons and BCN rake length from 40 to 41/42. No significant move, however, was made to operationalise long length freight trains as run in countries such as Australia, Canada and other countries.
- III. Increasing the carrying capacity of wagons by:**
 - **Increasing axle-load** from 20.3 to 22.9, thereby increasing loadability by 10 tonnes per wagon
 - **Universalizing CC+6** loading except on certain branch lines
 - Upgrading 26,000 kms of important routes to **CC+8 standards**

- Upgrading approximately 4,800 kms of track to 25-tonne axle-load
- IV. Inducting new BOXNHL and BCNHL wagons with axle-load of 22.9 tonnes**
- Increasing CC no doubt brought in extra earnings but it exposed the track and rolling stock to the risk of premature deterioration.
 - Railways also took a number of preventive measures to ensure that overloading did not take place, including installation of electronic in-motion weigh-bridges for weighing all rakes and wheel impact load detection (WILD) systems to monitor axle loads being exerted by wagons in dynamic conditions. Systems were put in place to ensure that a maximum number of loaded rakes were weighed to detect overloading. Monitoring of track behavior by recording track geometry parameters using track recording cars (TRCs) at least once in four months,
 - procurement and installation of acoustic bearing detectors and finally levy of heavy penalties on customers to discourage overloading were some of the other steps taken.
- V. Phasing out of vacuum brake wagons.**
- VI. Running of double-stack container trains from 2006 onwards**
- VII. Implementation of a number of identified low-cost high return works such as** IBSSs, by-passes, electrification of sidings and up gradation of goods sheds.
- VIII. Use of IT in freight operations**
- Terminal management system (TMS) introduced at 560 locations accounting for more than 75% of originating loading and online generation of RR
 - Expansion of e-payment facility to cover more than 227 customers accounting for over 30% of freight earnings
- IX. Opening of the container sector to private players bringing investment in** container rakes and in container depots.
- That the strategy achieved its goal of using existing assets more effectively is borne out by the improvement seen in critical efficiency parameters for freight operations like wagon utilization, NTKM per wagon day and wagon turn round Wagon turn-round (WTR), the single measure that encapsulates the overall operating efficiency of the freight system, improved by a CAGR of over 6% per annum.
- X. Operation of container and special freight trains**
- Private operators have been allowed to manage rain borne container services on Indian Railways. Concession Agreement setting out the terms of such operation has been signed with 16 private operators including CONCOR
- XI. Connectivity works and other infrastructure projects**
- RVNL has been established to undertake capacity augmentation works and port connectivity projects by establishing special purpose vehicles. On South central Railway RVNL has taken up the project Obulavaripalli and Krishna patnam project linking the Krishna patnam port of Andhra Pradesh

TRANSPORTATION PRODUCTS (TRAINLOAD CONDITIONS)**Block rakes:**

Railways offer transport services primarily in Block Rakes. Single point Block Rake with a wagon composition as notified by the Railway Board will be booked at Trainload Class rate in accordance with the conditions noted below.

Conditions:

1. Both the Originating and Destination terminal should be notified as either Full Rake Terminal or Half Rake Terminal.
2. The number of wagons indented must be for the applicable standard rake size of Block Rake.
3. Trainload rates will be granted subject to payload in the train being a minimum of 1400 tonnes.
4. If the number of fit wagons supplied by Railways is falling in the range, the party will have to load all the wagons to avail train load rate benefit.
5. In cases where even the minimum number of wagons qualifying for Block Rake cannot be supplied by the Railway against trainload indent due to operating or any other constraints the rail user(s) shall not be penalized. In such cases also, the benefit of trainload rate can be extended.
6. In cases where the load of block rake moving over a particular section is restricted below the minimum of the standard rake size due to operational constraints such as gradients, hauling capacity etc. then conditions stipulated will apply regarding standard rake size.
7. In cases where rake is split up during transit due to gradient or other operational reasons but has fulfilled all other conditions for availing trainload rate at originating point, the trainload rate benefit shall be admissible.
8. Trainload rate benefit shall be extended to block rakes at the serving station by clubbing wagons loaded from more than one siding served by the same station or loaded partly from a siding and partly from the station serving that siding for a single destination.
9. Trainload benefit shall be extended to trains originating from one point and terminating at two points provided that the two points are either the serving station and its siding or two sidings of the same serving station, or two sidings notified as independent booking points but operationally branched out from the same station.
10. In case more than one commodity is loaded in a wagon, the freight will be charged at the highest class of goods which the wagon contains. The maximum number of commodities loaded in a wagon should not exceed two.
11. Indents for BCX/BCN/BCNHL groups of wagons will be treated as interchangeable for the purpose of supply of rakes. Trainload conditions will be applicable as per type of stock supplied. The customer must place an indent for 40 BCX / 42 BCN / 58 BCNHL wagons.
12. The customer will have to pay all other applicable charges like busy season charge, terminal charge, congestion charge, development charge, etc.

Mini Rake:

Mini Rakes can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. Mini rakes are permitted only in covered wagons.
2. Mini Rakes will have a minimum composition of twenty wagons.
3. Mini Rakes can be loaded to and from any notified full or half rake terminal.
4. Free time for loading/unloading of Mini Rakes will be 5 hours.
5. Mini Rakes can be loaded only for distances up to 400 kms.
6. Mini Rakes cannot be loaded with Coal, Ores and RMSP.
7. A Supplementary charge of 5% will be levied on base Freight Rates for Mini Rakes for the period October to June.

Two Point Rake:

Two Point Rakes can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. This product is available only for Covered wagons for specific combinations notified by Railway Board.
2. Originating terminal should be a notified full or half rake terminal.
3. The current list of combination of destination terminals notified is given in Annexure.
4. A minimum of 10 wagons should be loaded for each destination
5. The total number of wagons indented and loaded must conform to the Block Rake composition as notified for various types of wagon by the Railway Board.
6. A Supplementary charge of 5% will be levied on Base Freight Rates for two-point rake for the period October to June.

Multi Point Rake:

Multi Point Rakes can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. This product is available only for Covered wagons for specific combinations notified by Railway Board from time to time.
2. Originating terminal should be a notified full or half rake terminal.
3. The combination of Multi Point destination terminals has been mentioned in Annexure V.
4. A minimum of 10 wagons should be loaded for each destination.

5. The total number of wagons indented and loaded must conform to the Block Rake composition as notified for various types of wagon by the Railway Board.
6. A Supplementary charge of 20% will be levied on Base Freight Rates for multi point rakes for the period October to June.

Two and Multi Point Rake (Other Than Covered Wagons):

Two and Multi Point Rakes for other than Covered wagons can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. Originating terminal should be a notified full or half rake terminal.
2. Each destination terminal should be a notified full or half rake terminal.
3. Notified Two Point or Multi Point combinations for other than covered wagons are at Annexure-VI.
4. A minimum of 10 wagons should be loaded for each destination.
5. The total number of wagons indented and loaded must conform to the Block Rake composition as notified for various types of wagon by the Railway Board.
6. For the period October to June, a Supplementary charge of 5% on two point rakes and 20% on multi point rakes will be levied on Base Freight Rates.

Rakes from Two Originating Terminals:

Rakes from two Originating Terminals can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. This product is available only for Covered wagons from notified specified terminals.
2. Two Point combination from which loading is permitted will be notified by the Zonal Railway concerned.
3. In case the two terminals are on different Railways, the Railway issuing notification will take recorded prior consent of the concerned Railway.
4. Each Originating terminal should be a notified full or half rake terminal.
5. The destination terminal should be a notified full or half rake terminal.
6. Loading of rakes from two terminals can be done only if the two loading terminals are less than 200 KM apart.
7. A minimum of 10 wagons should be loaded from each originating terminal.
8. The total number of wagons indented and loaded must conform to the Block Rake composition as notified for various types of wagon by the Railway Board.
9. The customer cannot cancel indent at one point after he has started loading at the other point. If he does so, the entire freight will be charged irrespective of loading only one portion of traffic.

10. For the period October to June, a Supplementary charge of 5% on two point rakes will be levied on Base Freight Rates.

Rakes from Two Originating Terminals (Other than Covered Wagons):

Rakes from two Originating Terminals in other than covered wagons can be loaded at Trainload Class rate under the following conditions.

Conditions:

1. Notified Two Point combinations from which loading is permitted, are at Annexure-VII.
2. Each originating terminal should be a notified full or half rake terminal.
3. The destination terminal should be a notified full or half rake terminal.
4. A minimum of 10 wagons should be loaded from each originating terminal.
5. The total number of wagons indented and loaded must conform to the Block Rake composition as notified for various types of wagon by the Railway Board.
6. The customer cannot cancel indent at one point after he has started loading at the other point. If he does so, the entire freight will be charged irrespective of loading only one portion of traffic.
7. For the period October to June, a Supplementary charge of 5% on these rakes will be levied on Base Freight Rates.

WAGON INVESTMENT SCHEME

Objective: In order to encourage public-private partnership in procurement of wagons to meet with the anticipated incremental freight traffic in the coming years, honorable Minister for Railways, while presenting the Railway Budget 2005-2006 has announced introduction of a new scheme called wagon investment scheme (WIS). Customer's investing in Railway wagons will be assured of the supply of a guaranteed number of rakes every month based on the number of rakes procured and turn round of the type of wagons with 10% concession in freight. In addition, two bonus rakes per month will be supplied without freight concession or penalty. Investors opting for Engine of load (EOL) Scheme will get additional bonus supply of two BG rakes per month without concession in freight. This guaranteed supply will be in addition to the normal supply of rakes to such customers.

Eligibility: Wagons under this scheme can be procured by

- (i) Individuals as producers.
- (ii) Corporate entity as producers:
- (iii) Association or group of companies, such integrated steel plants of SAIL or a group of a cement companies in a cluster etc.

Customers who don't have their own siding can also participate under the scheme. In such cases, reference will be given to customers investing in wagons over other indenters at the time of supply of guaranteed number of rakes with concession in freight and bonus supply of rakes as is applicable to other investors.

Mode of procurement: Directly by the owner from builders approved by Ministry of Railways, subject to current Indian Railways Standards (IRS) designs and specification and inspection by nominated agency of Indian Railways namely RDSO. All critical components will be procured from RDSO approved sources and to current IRS specifications.

Through Indian Railways: Wagons can also be procured through wagon builder of foreign country subject to Indian Railways Standards Designs and specifications and subject to inspection by nominated agency of Indian Railways.

Foreign exchange or its equivalent, if any, for imported components would be provided by customers participating in the WIS.

Guarantee/Warranty of Wagons: In case of direct procurement of wagons, customers will be required to incorporate a warranty clause in the purchase contract with the wagon manufacturers as under:

Supplies shall be fully guaranteed against any manufacturing defect/poor workmanship quality etc. for a period of 24 months of commissioning or 30 months from the date of delivery, whichever is earlier. During this period contractor will arrange to repair/replace any defective part free of cost or replace complete set if required. Further, since these wagons are to be utilized by the customers of India Railways that are hereby authorized to invoke this warranty clause in case of any default on the part of wagon manufacturer.

Pattern of movement; Wagons procured under the scheme will merge and operate in general pool of wagons of Indian Railways.

Extent of Private ownership: Users can own any number of wagons in unit of rake loads without any ceiling, to the extent required by them, subject to a minimum of one rake and 4% additional wagons as maintenance spare. Procurement of wagons in piecemeal shall not be permitted.

Categories of Procurement of Wagons: There will be two categories for procurement of wagons under the scheme:

- (i) Category I – BCN wagons
- (ii) Category II – BOXN wagons.

Benefits admissible to owners: For investment made in every BG rake with maintenance spares, customers will be assured of supply of guaranteed number of rakes every month as follows:

	BCN rakes	BOXN rakes
Freight rebate	10%	10%
Period of rebate	15 years	10 years
Guaranteed number of rakes with freight rebate	4 rakes per month	6 rakes per month
Bonus: Additional Guaranteed number if rakes without Freight rebate or penalty		
(a) Without EOL	2 rakes per month	2 rakes per month
(b) With EOL	4 rakes per month	4 rakes per month

No lease charges shall be payable under WIS.

Salient parameters are summarized as under:

Maintenance of wagons: Investors in WIS will not be required to any maintenance charges for wagons. However, if the Investor owns a private siding, he will be governed by the relevant siding agreement in respect of infrastructure facilities including maintenance of wagons within the siding premises.

Wagons involved in accidents: In the event of wagons getting condemned as a result of accident where responsibility is conclusively established that the accident occurred owing to acts of omission and commission on the part of owner of the wagons, the guaranteed clearance will be reduced proportionally. In all other cases, Indian Railways will continue to meet the commitment of guaranteed supply during the contract period.

Condemned wagons can be disposed of by the Investor directly or through Railways. The commitment of guaranteed supply will cease for wagons so disposed off.

Failure to maintain/consume guaranteed supply of wagons:

The guaranteed supply of wagons will be monitored on a monthly basis.

In the event of Investor being unable to use the guaranteed supply of wagons, the quantum of supply will be reduced proportionately for the number of days the wagons remained unutilized or stabled. The number of wagons idling will be those stabled in the owners siding to the extent the Investor has contributed the rake/wagons.

Free time and Demurrage Rules: Free time and demurrage rules applicable to railway owned wagons will be applicable to wagons procured under WIS. In case wagons are detained on Investors account for loading/unloading for than 50% of the normal prescribed free time over a month the guaranteed monthly supply of wagons will be reduced proportionately.

Termination of Agreement: in the event of termination of the arrangement by the Investor on account of liquidation/merger with other company or due to any alteration/deletion in the scheme, the ownership of wagons would remain with the Investor. However, the Investor shall have option to sell the wagons to Indian Railways at a mutually agreed price.

Change in the scheme: Terms of the scheme may be altered by mutual consent of both parties.

Arbitration: In the event of a question, dispute or difference between the parties hereto relating to any matter arising out of or quoted with this agreement, such dispute or difference shall be referred to the ward of thee arbitrators. One arbitrator is to be nominated by the Investor, the other by the railways and third arbitrator to be nominated by mutual agreement between the parties and, in the event of non-agreement, the third arbitrator shall be appointed in accordance with the provisions of the Arbitration and Conciliation Act, 1996.

WAGON LEASING SCHEME

The objective of this scheme is to develop a strong wagon leasing market by encouraging third party leasing of wagons, particularly with a view to bring in wagons of better designs. This document lays down the policy for leasing of wagons and their operation on the rail network of Indian Railways.

TYPES OF WAGONS

Following types of wagons may be procured for leasing:-

- (i) High Capacity Wagons (HCW)
- (ii) Special Purpose Wagons (SPW)
- (iii) Wagons for Container movement.

LEASING OF WAGONS

Wagons may be leased to the following agencies:-

- i. End Users (for HCW and SPW)
- ii. Operators (for only such types of wagons as are permitted under the Concession)

ELIGIBILITY CRITERIA

The applicant should fulfill the following eligibility criteria to become a WLC:-

- It should be an entity registered in India under the Companies Act, 1956.
- It should have at least 5 years experience of asset leasing business
- It should have a net worth of at least Rs. 250 Crore.
- In case the applicant is a subsidiary company, experience and net worth of the holding company, owning more than 50% equity. However, in such cases, the applicant company should have a minimum of 25% of the prescribed net worth.

REGISTRATION OF WLC

- An entity intending to offer railway Wagons on lease for operation on IR network will be required to register itself as a WLC with MOR by paying a one time non-refundable registration fee of Rs. 5 Crore.
- Registration of a WLC will be valid for 20 years from the date of registration.
- Validity of registration will be extended for one more term of 10 years without any fee or charge subject to satisfactory performance of the WLC and as per the extant policy of IR in this regard.
- Registration of a WLC will be summarily cancelled on the Company becoming insolvent or on being found to be acting in manner which constitutes a breach of its contract with MOR.

PROCUREMENT OF WAGONS BY WLC

- A WLC will be required to procure Wagons directly from wagon manufacturers or through imports.
- Procurement of wagons will be allowed only with prior administrative and technical approval of MOR.
- Procurement of wagons would be in units of the prescribed composition of block rakes for such wagons plus 4% wagons as maintenance spare along with a brake van for each rake.
- Freight concessions to which investors are entitled under LWIS will be made available to Lessees (End Users or Operators under Concession granted by IR to run trains on IR network). However, this benefit will not be available if wagons are leased to Operators.
- These Wagons will be inducted into service only after completion of the mandatory safety and quality inspections by authorized agencies as notified by MOR.

LEASING CONTRACTS

- Wagon Leasing Contracts will be bi-partite agreements between the WLC and the Lessee.
- IR will not have any responsibility or liability in respect of wagon leasing contracts except to the extent set forth in this document.
- The WLC (as Lessor) and the Lessee will furnish to IR a jointly authenticated copy of their Wagon Leasing Contract which must include clauses certifying the ownership of the Wagons with the WLC and articulating an explicit and unambiguous right of WLC to singly terminate the lease of Wagons to Lessee.

LIBERALIZED WAGON INVESTMENT SCHEME (LWIS)

1. Ministry of Railways has formulated a new Liberalized Wagon Investment Scheme (LWIS).
2. **GENERAL:** Wagon Investment Scheme(WIS), with various amendments, as well as Own Your Wagon Scheme(OYWS) along with all related modifications and amendments, stand superseded by the Liberalized Wagon Investment Scheme (LWIS).

However, customers who have already invested in wagons, or obtained approval of MOR under the above schemes shall have the option to continue as per the terms and conditions of that particular scheme/agreement.

3. TYPES OF WAGONS PERMITTED FOR PRIVATE PROCUREMENT

- (i) High Capacity Wagons (HCW)
- (ii) Special Purpose Wagons (SPW)

4. PROCUREMENT OF WAGONS

Following types of investors may procure wagons.

- (i) WLC (for leasing to End users)
- (ii) End users (for their own traffic only)

5. PROCEDURE FOR PROCUREMENT OF WAGONS

- I. Procurement of wagons will be allowed only with prior administrative approval of MOR.
- II. Privately procured wagons will be inducted into service only after completion of the mandatory safety and quality inspections by authorized agencies as notified by MOR.
- III. MOR reserves the right to terminate the Agreement with any investor procuring wagons under LWIS on payment of the residual value as assessed by IR.

6. OPERATION OF PRIVATELY OWNED WAGONS

HCW and SPW will be operated as per the provisions prescribed

7. MAINTENANCE OF WAGONS

Maintenance of Wagons will be undertaken by IR on payment as per agreements to be executed with the investor.

8. FREIGHT RATES AND CONCESSIONS

- a. Freight concessions will be permitted to End Users only
- b. However, if the investor has availed of any concession, subsidy or any other financial benefit for procurement of wagons from any other Ministry or from Ministry of Railways under any other Scheme, he will not be eligible under this scheme.
- c. The investor will give an undertaking to this effect. In case of false undertaking, benefit given if any, shall be recovered through a suitable mechanism to be developed by the Railways.

9. RESTRICTED COMMODITIES Transport of Coal and coke, ores and minerals including iron ore will not be permitted in privately owned wagons.**10. LIEN** In cases of default of payment by the investor, IR may exercise lien on the privately owned wagons and the consignment loaded in such wagons to recover its dues. However, in case of leased wagons the relevant provisions of the WLS will apply.**11. DISPUTE RESOLUTION** All disputes in regard to implementation of the agreements with the Zonal Railway, under this scheme, will be referred to an Arbitrator nominated by General Manager of the Zonal Railway.**General conditions and procedure for procurement of High Capacity and Special Purpose Wagons**

1. The Chief Operations Manager (COM) of the concerned loading railway should be contacted along with specific details of the proposal.
2. The details should include number of rakes required, type of wagons, commodity, loading station(s), destination station(s), proposed specific route(s) or close circuit(s) and any other information relevant to the proposal.
3. After examination of the proposal regarding its operational feasibility, No Objection Certificate (NOC) shall be issued by the COM of the loading railway in consultation with the COM of the destination railway.
4. NOC should normally be issued within 10 days of receipt of application.
5. NOC should clearly indicate number of rakes, type of wagon, loading station, unloading station(s), commodity, route or the close circuit for movement of the traffic in such rakes, etc
6. Application along with NOC should be forwarded by the zonal railway to the Executive Director/Freight Marketing (EDFM), Railway Board for examination by the TT Directorate and issue of final approval of the Railway Board for permitting procurement of rakes under LWIS.

7. On the basis of the approval of the Railway Board, an Agreement will be signed between the Chief Commercial Manager (CCM) of the concerned Railway and Investor.
8. Wagons should be procured in units of rake with 4% maintenance spares and one brake van.
9. Rakes will be procured by customers directly from wagon manufacturers or through import subject to compliance with IRS designs and specifications and inspection by nominated agency of IR, namely, RDSO.
10. Customers will be required to incorporate following warranty clause in the purchase contract with the wagon manufacturer. "Supplies shall be guaranteed against any manufacturing defect/poor workmanship quality etc. for a period of 24 months of commissioning or 30 months from the date of delivery, whichever is earlier.
11. During this period contractor will arrange to repair/replace any defective part free of cost or replace complete set if required.
12. Further, since these wagons are to be utilized by the customers of Indian Railways, they are hereby authorized to invoke this warranty clause in case of any default on the part of wagon manufacturer."
13. Information regarding placement of order for procurement of rakes may be advised to the COM of the concerned zonal railway as well as EDFM, Railway Board.
14. Date of actual induction of the rake on IR network may be informed to the COM and EDFM, Railway Board. The zonal railway will keep the details of the wagons and brake-vans procured for each rake
15. On receipt of documents about commissioning of the rake under LWIS, a commercial notification will be issued by the CCM in consultation with COM.
16. The notification should have all relevant details mentioning inter alia, the details of the concession, the date of commencement of the concession period, the name of the investor, wagon numbers, commodity, approved circuits, the base freight at the time of notification etc.
17. Each rake procured by investor will thus have an associated loading and unloading point(s) over specific route(s) or closed circuit(s) as approved by the Railways as per the above procedure. No changes will be permissible at any stage for any reason.
18. However, in the case of leased wagons, changes in the associated loading and unloading point(s) and the route(s) or closed circuit(s) can be made as per the requirement of the WLC subject to the certification of operational feasibility and approval of the Railway Board.
19. Rake(s) should be procured under this scheme within one year from the date of signing of the Agreement, unless specific prior extension is given by the Railway Board.

Conditions for operation of High Capacity and Special Purpose Wagons
IR will operate HCW and SPW as per the conditions prescribed below:

1. Private wagons falling in this category will not be merged in the wagon pool of IR. Rakes comprising of such wagons will be identified as exclusively belonging to the private investor who has procured them.
2. Loading in wagons procured under this Scheme will be permitted only against indents registered by End Users subject to extant rules for allotment of wagons.
3. Indents for loading in such wagons will be placed at the approved loading point for the approved destination point for movement over specific route(s) or closed circuit(s) as approved by the Railways.
4. If the End User does not place any indents, these wagons will remain idle in his premises.
5. If IR has to stable these rakes in railway owned yards at the request of the End User or otherwise, stabling charges as notified by MOR will be payable.
6. IR will have no right to use these wagons, except as stipulated
7. HCW or SPW may be used by IR for traffic offered by customers other than the End User subject to a prior mutual written agreement between IR and such Investors or WLCs regarding the terms of such usage.
8. Investor will not be entitled to any residual value of the rake procured by him.
9. Freight traffic transported in the SPW in an approved close circuit will originate from a private siding or terminal and terminate at a private siding or terminal capable of handling the traffic in such special purpose wagons.
10. Wherever relevant, provisions of the Terminal Development Scheme will apply for operation of SPW.

Freight Concessions

Freight concessions to the End Users that will be granted for each loading in the rakes consisting of new HCW and SPW procured under LWIS are as under:-

A. HCW operating on approved specified routes

1. Investments in HCW, with a payload of 2 tonnes more than the payload of extant similar wagons will be eligible for a freight concession of 12% for a period of 20 years.
2. For each additional tonne of payload in excess of what is prescribed in Para 1 above, an additional 0.5% of freight discount will be granted for 20 years.
3. Payload will be reckoned in terms of integral units of tonnes after rounding off the fractions to the lower integer.

B. SPW operating in approved Closed circuits

Freight concession of 15% will be granted for a period of 20 years for each loading of a new rake of SPW procured under LWIS operating between existing or new private terminals capable of handling the traffic in such special purpose wagons in an approved close circuit.

The above mentioned freight concessions of 12% and 15% will be granted in each case on the Base freight rate prevailing at the time of issue of commercial notification by the CCM or the Base freight rate applicable at the time of booking, during the currency of the concession period of 20 years, whichever is lower.

IX. Operating statistics

- d) Definition meaning and method of compilation of the fundamental and derived units**
- e) Analysis of the operating statistics.**
- f) Important operating efficiency indices, their meaning and use**

Statistical Units in Railways and *important operating efficiency indices?*

The Railways have to carry certain Quantity of traffic to some Distance under stipulated conditions of Time by the medium of Service performed by the Railways. There are four primary conceptions of Quantity, Distance, Time and Service.

(a) Primary Units.

Railway Statistics are based on the above said four factors. When these primary conceptions are expressed in the statistical language, they are called Primary Units. The primary factors denoting these units are

- Quantity:** Expressed in number of tonnes; number of passengers transferred etc.
- Distance:** Expressed in KMs.
- Duration:** expressed in Hrs. and Days.
- Service:** expressed in Vehicles, Wagons, Trains and Engines etc.

(b) Fundamental Units.

The primary unit does not convey a complete idea about the volume of service or transport. For instance, only the number of passengers carried will not convey the correct idea about the amount of work done, unless it is related to the distance also. Hence when these primary units are linked together denote joint conceptions and expressed in composite terms are called fundamental units. It is arrived by multiplying one primary unit by another P.U. It is also called as Quantitative Statistics.

- Tons * KMs = Ton kms.
- Passenger * kms. = Passenger kms.
- Wagons * days = Wagon days.

(c) Derived Units.

The fundamental units deal mass of data and are difficult to grasp. For instance, if one is told that railways worked 129 million train kms. To. Lift 163,789 million ton kms; one gets confused because the mind can, not assimilate these figures. But, if he is told that the average trainload was 2200 ton it is easy to grasp.

Thus the eventual conceptions on which statistics are based i.e. the relationship that exists between two sets of primary or fundamental units and the results thus arrived is termed as Derived Units. They are either a ratio or percentage of one to another. There are also called Qualitative Statistics.

The process by which the relationship is ascertained is illustrated below.

1. $\text{Passr.Earnings (PU) / Passr. Carried (?) = Earnings per pass.}$
2. $\text{Passr.kms.(FU) / Number of passr.carried(PU) = Avg. distance travelled per passr.}$
3. $\text{Wagon kms. (FU) / Train kms(FU) = Avg. load in wagons per train.}$

Operating Statistics.

The term operating statistics includes all those figures which through adequate light on various aspects of railway operations. In other words, the compilation of facts & figures pertaining to various aspects of train operation is termed as operating statistics. Operating statistics serves the following purposes.

1. To judge the efficiency of railway operations. For instance, the output of the traffic carried is judged by train kms", "Loaded wagon kms.. Net ton kms. Etc., and the unit of cost is Engine hour.
2. It helps to know as to whether maximum use is being made of wagons, engines etc. For instance, wagon usage statistics indicates the wagon mobility.
3. It helps the administration in curtailing waste and enhancing the efficiency on Railways. For instance, the unproductive services statistics helps to identify the amount of unproductive work.
4. It shows the standard of service rendered to the public, example the punctuality statistics.

It is for these reasons that the operating statistics are compiled. All these figures help and guide the railways in reducing the working expenses and enhance the efficiency in railway operations Operating Statistics consists of the following statistics.

- ⇒ Wagonload statistics.
- ⇒ Wagon usage statistics.
- ⇒ Engine usage statistics.
- ⇒ Repairs & Maintenance statistics.
- ⇒ Train statistics.
- ⇒ Punctuality Statistics.
- ⇒ Unproductive to Productive services statistics.

The more important and commonly used operating efficiency indices are

- a) Wagon Kms per Wagon day.
- b) Net tonne Kms per Wagon day.
- c) Wagon Turn Round.
- d) Train kms per Train engine hour.

- e) Engine Kms per day per engine in use.
- f) Engine Kms per day per engine on line.
- g) Percentage of loaded wagon kms to Total wagon tons.
- h) Net ton Kms per engine hour.
- i) Percentage of Train engine hour to total engine hour.
- j) Percentage of Shunting kms to Train kms.
- k) Percentage of Light engine kms (including A not R) to Train kms.

Wagon utilization statistics.

The three important wagon utilization statistics are

- i. Wagon KM per wagon day
- ii. Net tonne KM per wagon day
- iii. Average starting load and average wagon load during run

I Wagon KM per wagon day

- 1. This is a derived unit from two fundamental units wagon KM and wagon day.
- 2. Source of compiling is VG and wagon way bills
- 3. Formula is

$$\frac{\text{Average No. of wagons over a period} \times \text{KM travelled}}{\text{Average No. of wagons over a period} \times \text{No. of days in KM used}}$$

- 4. This indicates mobility of wagon
- 5. But status (loaded or empty) not mentioned
- 6. All wagons except BV and department wagons including sick are taken for calculation
- 7. If figure is lower, indicates wagons are not smoothly moving and there are hold up.
- 8. Steps to improve
 - i. Increase lead of travel (long distance marshalling)
 - ii. Effective attention to sick wagons and their movements.
 - iii. Increase average speed of goods trains
 - iv. Super intensive train examination skipping intermediate TXR checking points.

II Net Tonne KM per wagon day

1. Derived of two fundamental unit Net tonne km and wagon day.
2. This is best wagon utilization statistics
3. Indicates quantum of goods carried.
4. Source for compilation is wagon way bill, RRs

$$\text{Net Tonne Km per wagon day} = \frac{\text{Net tonnes of freight X distance travelled}}{\text{Number of wagon deployed X period}}$$

Improvements can be done by

- i. Reduction of detention to wagon at yards and terminals.
- ii. Improve average speed of goods trains.
- iii. Increase average load per wagon on run.
- iv. Increasing percentage of loaded wagon KM to total wagon KM
- v. Reduce percentage of wagons under repair.

III Average starting load and average wagon load during run

The average starting wagon load is obtained from the commodity loading statement i.e. tonnage loaded and the number of wagons used.

$$\text{Average starting wagon load} = \frac{\text{Tonnage loaded}}{\text{Number of wagons}}$$

It may be increased by

- Increasing minimum weight condition realistically
- Encouraging clubbing of consignments
- Offering rebates
- Better planning.

Statistics pertaining to Engine Utilisation

ENGINE UTILIZATION

- Engine utilization is one of the important parameter for divisions performance/ efficiency in operation.
- Power plan is made based on engine utilization
- Railway board fixes the target for each zone and in turn zone fixes for individual divisions.
- The engine utilization is derived by

$$\text{Engine Utilization} = \frac{\text{Total KMs earned} \times 24}{\text{Engine Hours}} \quad \text{or} \quad \frac{\text{Total KMs earned}}{\text{Outage}}$$

- For coaching locos the utilization is worked out in links it self.
- In control office flow chart is maintained indicating following.
 - | Loco on run --- in green
 - | Siding / shunting -- in yellow
 - | Loco detention on L/A in Red
 - | Traffic detention in violet
- By monitoring these flow charts engine utilization can be calculated.

OUTAGE

- Outage means a locomotive out from shed for working trains.
- Outage is mainly two types i. e., Owner ship and territorial.
- Outage is calculated on hourly basis.
- Outage is calculated from 00:00hrs to 00:00hrs
- E g., 24:00 hrs working is taken as 1.0 (unit).

ENGINE UTILIZATION

- **The following KMs are taken while calculating engine utilization.**
- **LE Kilometers**
- **Train kilometers**
- **Siding kilometers 16 Kms/ hrs**
- **Shunting kilometers 12 Kms / hrs**

Measuring Efficiency of Engine Utilization(Indices given by RLY BD)

- Engine Kms per Engine day online
- Engine Kms per engine day in use
- NTKM per goods Engine day online
- NTKM per goods Engine day in use
- NTKM per goods Engine hour
- GTKM per goods Engine hour
- Average load per train
- No. of goods locos utilized per moving 1 million ton Kms per day

- Shunting Engine Kms per 1000 Train Kms
- Light Engine Kms per 1000 Train Kms.
- Engine Kms per Engine failure
- Average speeds of a goods Train
(Total train Kms /Total train engine hours)
- Train Engine hours per goods Engine day online

HOW TO IMPROVE ENGINE UTILIZATION

1. Avoid Pre-departure/ En Route Detentions
2. Running more crack specials in fixed path
3. Running goods train on shadow path
4. Optimum utilization lie over power
5. Increasing average speeds of goods trains with proper controlling.
6. Trains to run at maximum permissible speed
7. Efficient train ordering,
8. Reduce detention in yards/terminals,
9. Increase load per train commensurate to that of hauling capacity.
10. Avoid stabling of loads
11. Minimizing the detention at inter change points
12. Availability/ balancing of crew
13. Creating incentive scheme for running staff for fast clearance.
14. Balancing of powers, excess is detrimental
15. Reducing ineffective percentage of locomotives by
 - Timely attention of maintenance schedules
 - Education of drivers to eliminate the cases of failure/mismanagement

Reduce ineffective percentage

- i. Improve facilities in shed;
- ii. Out of course repairs;
- iii. Provide satellite sheds;
- iv. Use multi skilled labour and educate drivers.

b. Increase Average speed of goods trains

- i. Faultless timetable
- ii. Running link/crack specials
- iii. Fixing time tabled movements for goods trains,
- iv. Improving Staff efficiency (better training & motivation).
- v. Proper maintenance of equipment (engines/wagons / S&T gears and track etc)
- vi. Right powering of locomotives

c. Efficient Train ordering

- i. Opportunistic ordering,
- ii. Availability of stock, crew, and path,
- iii. Implementation of 10 hours rules,
- iv. Maintaining the record of the locomotives.

d. Reduce Detentions in yards / terminals

- a. Fixing target time for reducing detention in yards/terminals,
- b. Keep the outgoing formation checked & tested,
- c. Keep the crew ready,
- d. Advance forecasts to the yards about arrival or departure of the train,
- e. Enroute fuelling,
- f. Provision of diesel shunters in yards;
- g. Reducing Pre-departure detention time;
- h. Encourage through running;
- i. Increase load per train.

Efficient ordering and control of locomotives

- Trip schedule attention of locos by nearest sheds
- Adhearing to regional boundaries for locomotives
- Proper fueling arrangements for diesel locomotives
- Provision of diesel shunters in yard
- Provision of air compressors/rake testing facilities on departure lines
- Increasing loads per train (under load running of trains)

Factors effecting Engine performance

- 1. Engine Performance is depending on load factors
- 2. Ensuring of right powering
- 3. Ensuring of banker locos as per WTT load charts
- 4. Monitoring and moving of dead locos to shed
- 5. Monitoring and moving of ODS locos to shed
- 6. Adequate infrastructure
- 7. Adequate trained staff
- 8. Attention of repairs
- 9. Schedule maintenance
- 10. Operational factors
- 11. Mismanagement of crew

a) Engine Kms per day per engine in use.

It is worked out on each individual service such as Passenger, mixed & Goods, and for all services combined together.

1. This figure is calculated by dividing the total engine kms (train, shgtg., siding, & departmental E. k ms) during the month by the average number of engines used on each services daily multiplied by the number of days in the month.
2. This unit indicates the kilometers run daily by an engine in use. Higher the figure better is the engine mobility. This figure can be improved:
3. By making intensive utilization of the engines.
4. By giving extended run to the locos.

b) Engine K ms per day per engine on line.

This unit represents the average daily kilometers performed by all the engines on line including the engines under or awaiting repairs, good repairs stores (engines kept spare for a whole month) and spares.

It indicates whether or not the best use is being made of the engines on the line. This unit should always be used in conjunction with Engine K ms per day per engine in use.

It is calculated by dividing the total E.K ms run during the month by the average number of engines on line daily multiplied by no. of days in the month.

c) Train Kms per Train Engine Hour:

This derived unit gives the speed of the trains. This is an important index of operating efficiency, as average speed of goods trains will have a marked influence on the turn round of locos, wagons and utilization of section capacity.

It is calculated by dividing the Train KMs earned during a particular period by Total Train Engine Hrs. during the same period.

d) Net Tone KM per Engine hours:

It is obtained by dividing the net tone kilometer moved by goods train by the total goods engine hours. It shows the quantum or useful work done in relation to engine hours spent which is a measure of the expenditure involved in during the work. With more net tone km move and less engine hours spent the result obtained will be indicative of operating efficiency.

e) Percentage of Train engine hours to Total engine hours:

It is reflected in more composite derived units like tonne km per engine hours, it is useful to calculate this figure separately to give an idea as to the extent to which the availability of an engine is actually utilized in train hauling.

f) Percentage of shunting km to Train km:

Train kilometrage is the fruitful portion of engine utilization, where as shunting is a necessary but unproductive work. To keep control over the amount of shunting this figure is watched.

g) Percentage of total engine km to train km:

This is a figure that keeps control over another unproductive aspect of engine km.

Coaching stock utilization

Indian Railways have nearly 44, 000 units of coaching stock. As per the efficiency bureau, the coaching stock utilization is comparatively lower in Indian Railways. Hence there is a scope for much improvement.

Increasing loads per train & optimum utilization of hauling capacity of locomotive

- 1) 10% of the holdings of diesel locos in any shed will be for heavy repairs.
- 2) Passenger carrying trains links are made in such a manner that the idle time of the loco is very minimum.
- 3) Total number of Locos required for this service will be drafted in a link covering around 3000 kms.
- 4) The Locos will touch a satellite depot or home depot for trip schedule once a week.
- 5) The links are so drafted that enough time is allowed for completion of trip schedule and pick the link.
- 6) Out of the balance number of locos after providing for link service, 10% of this balance will be for minor repairs. The other locos are offered for goods service.
- 7) The important terminal yards for the goods trains are identified and the turn round for carrying goods is provided as less as possible so that the idling of engines are minimized and only fueling and crew checking is done.
- 8) In some major yards trouble shooting gangs attend any minor repairs during turn round.
- 9) The express trains working on links will be utilised for goods services at terminal points during the lie over time.
- 10) Normally monthly schedules are only done apart from heavy repairs in the home depot upto fortnightly trip, schedules are done at satellite depots.
- 11) Note: Diesel engines with 16 to 18 coaches consumes 3 litres per KM.
- 12) while hauling loads 1300-1400 tonnes consumes 5 litres per KM.
- 13) While working super fast trains 2.25 litre per KM (in MG)

14) The tank capacity of YDM4 is 3000 litres, minimum balance of 850 litres is required to be maintained.

15) WDG-4 - 5000 litres Minimum balance - 1000 litres

Factors affecting coaching stock utilization:

1. The pattern of Train services: Running both slow moving & fast moving passenger carrying trains in the same system;
2. Rake links: If lie over period becomes more or excessive holding;
3. Inefficient controlling: Not adopting latest computer monitoring;
2. Percentage of ineffective stock: Any holding in excess of 8% leads to congestion consequently under utilization.

Steps to improve better utilization of coaches:

1. Do not keep coaching stock in excess of actual requirement
The requirements of coaching stock must be worked keeping in view the following factors
 - i. Bare requirements for formation of rakes of regular train services.
 - ii. Adequate provision for sending of coaches for repairs or POH etc.,
 - iii. Spare stock for meeting sudden and sporadic spurts in traffic including seasonal demands.
3. Form proper rake links
4. Reduce detention at Depots for primary/secondary examination
Excessive lie over of rakes at primary and secondary maintenance depots should be avoided as far as possible. Overlapping rakes must be provided only when it is practically impossible to do without them.
5. Efficient control over movement of coaching stock
A very efficient control of zonal head quarters level is necessary to ensure that coaches are utilized properly.
6. Introduction of computers for monitoring
7. Reduce the ineffective stock by affecting in Satellite TXR Depots / or by deputing roving gang.
 - i] POH coaches should move expeditiously by coaching trains.
 - ii] The time taken in shops should be reduced to the prescribed minimum.
 - iii] Delays in placement of sick coaches on sick lines should be eliminated.
7. Running trains with 24 coaches on selected routes
8. If proper timetable can be prepared to effectively run the trains.

Parameters to judge the efficiency of railways

In a giant organization like Indian Railways, it becomes very difficult to judge the healthy functioning. Hence, there are certain factors identified to help assess the performance of this mammoth organization. They are as follows:

- 1) OPERATING RATIO
- 2) THROUGHPUT
- 3) WAGON TURN ROUND
- 3) AVERAGE SPEED OF TRAINS
- 4) DIVISIONAL WAGON BALANCE

1. Operating Ratio

Means the Percentage Ratio of Total Working Expenses to that of Total Earnings

Or

$$\text{Operating Ratio} = \frac{\text{Total working Expenses}}{\text{Total Earning}} \times 100$$

It reads the pulse of an Organization at a glance. If the percentage is less, the performance of the organization is considered to be better. To achieve better percentage, the working expenses shall be reduced and earnings of the Railways to be increased. Various suggestions are given to reduce working expenses.

To Reduce Working Expenses:

The area of Expenditures are to be identified and minimize them. For e.g.:

- (1) Staff size reduction.
- (2) Reduce fuel consumption by avoiding wastage, avoiding detentions.
- (3) Closure of uneconomical branch lines.
- (4) Closure of unproductive marshalling yards;
- (5) Closure of TXR Depots (after introduction of Airbrake and Super intensive examinations)
- (6) Steam Loco sheds closure.
- (7) Catering Depots handed over to IRCTC
- (8) Privatization of sidings;
- (9) Not producing vacuum braked stock and complete introduction of Airbrake systems.
- (10) Computerization in all Depots (FOIS, COIS etc.)

- (11) Introduction of own your wagon scheme, BOLT& BOT etc.
- (12) Phasing out DSL Locomotives and inducting complete Electric Traction.
- (13) As per Khanna, Rakesh Mohan Committee's reports, introduction of Multi skilled labour in all areas.
- (14) Decentralization of powers;

To increase the total earnings:

The Earnings in Railways can be kept in 3 main groups. They are
 (i) Freight Earnings; (ii) Coaching Earnings; (iii) Sundry Earnings.

(i) Freight Earnings: Methods to increase freight Earnings:

- a. Keep the targets and try to achieve it.
- b. Vigorous marketing strategy.
- c. Attract the customers by Guaranteed supply and disposal of wagons,
- d. Multi modal Transport (Container operation)
- e. Roll on-Roll off as in the case of Konkan Railway
- f. Recapture the lost piece-meal high rated traffic by offering special rates,
- g. Decentralization of powers and relaxing the rigidity in rules,
- h. Route-Rationalization Scheme, station to Station Rates offers;
- i. Making use of the idling wagons for movement of cement, containers etc in BKM, BOXK wagons,
- j. Running the mini rakes.

(ii) Coaching Earnings: Steps to improve:

- a. A Good customer care. Vigorous marketing strategy,
- b. Running Passenger carrying trains with an increased capacity. Reduction of I class coaches and making them into AC 2 tier.
- c. 24 Bogie Trains run with a long lead (S.C.Railway is the pioneer Railway in running 24 bogie trains concept)
- d. Identify the seasons, Running holiday & Mela specials etc.
- e. Identify a Station hub and run shorter distance trains in the vicinity of 300 Kms. range.
- f. EMU/DMU, MEMU on Suburban networks.
- g. MMTS arrangement as in the case of S-C.Railway,
- h. Running Double Decker Trains,
- i. Computerization,

In case of Luggages and parcels:

- a. SLRs can be leased out to a freight forwarder,
- b. On a nominated Day, run a complete parcel specials like "Millennium Specials" after having a linkage with companies like "GATI Roadways"
- c. Seasonal concession can be offered (E.g.: Mango Specials).

(iii) Sundry Earnings: The following are some of the sundry earnings and steps to improve them:

1. Leasing out Railway land,
2. Construction of multiplexes/shopping complexes/theatres/eateries on Railway land and leasing them
3. Advertisements on Coaches, Station buildings;
4. Technology Transfer through RITES, IRCON
5. Projects in Foreign land,
6. Leasing out Optic fiber connection through Rail-Tel Corporation,
7. Consultancy charges in case of own your wagon scheme, BOLT, BOT etc.
8. Maintenance of other organization wagons and locomotives (NTPC / RDM at RYPS & KZJ),
9. 'Rail Neer' - Setting up water treatment plant and supplying pure drinking water to passengers.
10. Utilisation of railway land besides the track in cultivation of fruit trees, vegetables etc. or planting Jatopha trees for producing Organic fuel .

The operating ratio is markedly affected owing to the factors such as topography i.e. gradients, climate, agricultural and industrial development of the region, and type of commodity, the smaller the operating ratio, the more economical and efficient working, other things being equal.

'Throughput'

Definition:- The 'Throughput' of a section is the total quantum of traffic which can be transported over the section in a period of 24 hours.

1. The passenger throughput could be measured in terms of number of passengers or passenger kms which are carried over the section in 24 hours.
2. The goods throughput may be expressed in terms of
 - a. Number of wagons. Or
 - b. Gross tonne-kms or
 - c. Net tonne kms
 Carried over the section in 24 hours.
3. In Railways, generally throughput refers to 'goods throughput'
4. For day to day control operations, it is generally expressed in terms of number of wagons.

5. For commercial transactions it is expressed in terms of 'Net tonne kilometers'

Latest trends adopted to improve throughput

1. Throughput can be improved by two ways
 - a) Running more number of trains
 - b) Increasing load per trains.
2. Increasing 'Throughput' of given section by heavier trains is generally more economical rather than running more number of trains.
3. Improvement of ratio of NTKM to GTKM can be done by increasing the payload and reducing the tare weight of trains, running trains loaded in both direction and minimizing empty running of trains for maintenance and examination.
4. Provision of Heavier rails, long welded rails(LWR), Continuous welded rails (CWR), Elastic fastenings, PSC sleepers, mechanized maintenance, ultrasonic flaw detection (USFD) testing of rails, Self propelled ultra sonic testing cars (SPURT)
5. Provision of Track circuiting, Panel and Route Relay Interlocking, Solid State Interlocking, Block Proving Axle counters, automatic Block signalling, Auxiliary warning System (AWS), Optic fibre cables (OFC), Mobile radio communication.
6. Provision of composite Brake Blocks, Air Brake system, Electronic in Motion weigh bridges, Wheel flat detection device (WFDD).
7. Introduction of Modern heavier diesel GM locomotives, Modern Electronic ABB locos.
8. Containerization, Roll on roll off (RORO) scheme.
9. Increasing load per trains.
10. Increasing loop line capacity enhanced from standard CSR of 686M to 720M
11. Provision of High capacity wagons
12. Enhanced Axle load restrictions
13. Improvement of track
14. Running heavy and long haul trains.
15. Terminal improvement for loading and unloading
16. Distances between stations reduced
17. Removal of LC of Unmanned LC gates.

‘Wagon turn round’ .

Wagon Turn Round (WTR) is defined as

1. Total time interval between successive loading (utilization) of wagons.

2. Measured in term of days.
3. For all wagons as system for a particular period known as average WTR.
4. The formula is given for calculation of WTR is

$$T = \frac{B}{L + R}$$

T= WTR in days

B= effective wagon balance

L= Average daily loading (in wagons)

R= average daily loaded receipts (in wagons)

5. Effective wagons does not include sick, departmental and coaching wagons.
6. WTR theoretically is given as

$$T = \frac{L}{24 V} + \frac{L}{I} + \frac{d}{24} + K \frac{t}{24}$$

L= Avg lead of wagon between two consecutive loading

V = Average speed of goods train

I = Average distance between two yards

d = Average detention per yard in hours

t= Average time per wagon handling operation at terminals including detention for clearance

k= Average No. of times a wagon is handled in the process of turn round.

7. Wagon turn round is one of the most commonly used index to measure of operating efficiency
8. Steps to improve WTR
 - i. Reducing average lead of traffic(L);- reduce distance between loading points
 - ii. Increasing average speed of goods trains.
 - iii. Reducing average detention to wagon in yards
 - iv. Increasing distances between consecutive yards
 - v. Reducing time taken in terminal handling and clearance.
 - vi. By avoiding the empty haulage of wagons.
 - vii. Introduction of Unit trains, CC rakes etc.

- viii. Mechanized Loading and Unloading.
- ix. Improving efficiency of staff.
- 9. WTR depends on lead and number of times wagon are handled which is not controllable.
- 10. Calculation of wagon requirements and fixing targets of wagons holding is based on WTR figures.

Average speed of Goods trains

To achieve greater throughput and to make use of the existing section capacity train should run at the permissible speed. Since passenger trains have a time table and a link they get priority. But it is not the case with goods train. Eventhough the engines and wagons are designed to run with higher speeds they are not getting priority to use the asset to maximum. Hence average speed of goods trains is very much essential to get more freight throughput and better utilization of assets.

There are nearly 7421 goods trains running a day carrying nearly 1010 million tones in 2012-13. Each train carry freight 1327 tonnes on BG. Average speed is 25kmph. Eventhough the goods train run at maximum speed of 75 kmph ours average speed is remarkably low as 25 kmph ie 1/3rd.

Focus on improving average speed

- i) Less utilization of section capacity
- ii) Less throughput
- iii) Poor wagon/engine utilization
- iv) Increase in cost of transport
- v) Dissatisfaction of the customer
- vi) Congestion in yards/sections.

Methods to calculate average speed of good trains;-

To find out the average speed of goods train on a given section, its entire run from the time it leaves the dispatching yard to the time it reaches the destination at the other end of the section is taken into account. This includes detentions enroute on account of crossing, precedences, shunting etc. The total distance covered during the journey divided by the total time taken will be the average speed of a particular train.

$$\text{Average speed of goods train} = \frac{\text{Total train KMs}}{\text{Total train engine hours}}$$

This can be done by either chart method or statistical method.

Statistical method-

Calculated month wise and correct method of calculation using the document combined train report CTR submitted by the Guard and LP for each trip they run.

Steps to improve the average speed of goods train

1. Long term measures
2. Organizational measures

Long Term Measure requires considerable investments:

- a). Motive Power Improvements
- b). Rolling stock improvements
- c). Track improvements
- d). Signaling & Interlocking improvements
- e). Increasing section capacity of saturated section.
- a) Motive power requirements :**
 - 1) Inducting Heavy haul. High Speed locomotives.
 - 2) Provision of Satellite sheds for attending locomotives enroute.
 - 3) WAG 9H 6000-HP - NAV SHAKTHI, WAG 9 - 6000 HP State of Art - NAVYUG, WAGH - 4000 HP. Such Heavy duty locomotive shall inducted as the movements of coal, iron, POL, cement.
 - 4) Fresh from loco shed shall be deployed to work a train for a longer distance, which will avoid power interceptions and enhance the lead of the train.
 - 5) Induction of only dual locomotives, so that enroute problem are solved.
 - 6) Provision of ACD, Auxiliary warning system in the Locos.
- b) Rolling stock improvements**
 - 1) Phasing out vacuum braked stock.
 - 2) Introduction of Air brake system wagons in the dedicated circuit.
 - 3) Introduction of BLC rakes for movements of container in the dedicated circuits like Mumbai - Howrah, Delhi - Howrah, Mumbai - Delhi & Delhi - Chennai.
 - 4) The above will enable to run the goods trains at 100 kmph. (EX.: CONTRAK trains already running, CONRAJ trains to be introduced).
 - 5) Provision of composite brake blocks.
 - 6) Strengthening to Draw bar and center buffer coupling to draw a payload of 6000 tones at 75 Kmph.

c) Track improvements:

- 1) Provision of High pounded rails in Golden quadrilaterals & diagonals and in grand cord lines.
- 2) Provision of LWR panels.
- 3) Using mechanized maintenance of track
- 4) Easing the gradients, reducing to curves and cuttings.
- 5) Provision of concrete sleepers (PSC) replacing the old and wooden one.
- 6) Replacing the worn out rails (presently 12000 RKM Rails requires replacement. Already the work has been commenced spending a non-lapsable special safety fund of Rs.1700 crores granted by the Prime Minister).
- 7) Provision of fan shaped layouts.

d) Signaling & interlocking improvements

1. Conversion of TAS to MACLS
2. Conversion of token block instruments in to token less block instruments.
3. Route relay /panel interlocking.
4. Provision of two Distant signals
5. Provision of IB signals
6. Provision of automatic block system wherever required.

e) Increasing section capacity

1. Computer simulated charts to be prepared and the path available are identified
2. Best path shall be selected to running the trains.
3. A study about the "Section Capacity" indicated beyond the saturated capacity if the trains are run, the Average speed may be reduced.
4. Provision of Bypass lines, common loops, simultaneous reception facilities will pave way for running more trains.
5. Adopting the best "System of Trains Working"

Organisation measure

- i) By making time table movements and efficient preparation of master charts.
- ii) Bunching of similar speedier trains.
- iii) Reducing dissimilarity in speed to minimum
- iv) Short single line section maintaining one way traffic avoiding time for crossing
- v) Review of running time periodically as and when there is upgradation of technology.
- vi) Running goods trains to time table wherever possible.
- vii) Running link, crack, CC rakes.
- viii) Improving staff efficiency by

1. Controller-

- efficient ordering
- constant monitoring
- judiciously arranging crossing/precedences
- giving timely forecasts to SM about trains
- Avoid stabling loads enroute

2. Station staff

- Efficient reception/dispatch of trains
- Keeping formation ready
- Avoid cross movements
- Swift operation of points and signals
- Do not stable on main line.

3. LPs-

- Good enginemanship
- Running trains to allotted time
- Exchanging all right signals
- Following caution order meticulously

4. Guards-

- Ensure trains intact with air pressure before start
- Exchanging all right signals
- Supervise shunting efficiently

5. Carriage & wagons-

- Efficient maintenance
- Proper rolling in examination
- Testing the formation with exhaustor/compressor before start
- Timely correct issue of BPC

6. Signal & telecommunications-

- Good maintenance of points and signals
- Provisions of effective communication system
- Regular maintenance at slack period

7. Engineering-

- Efficient maintenance of track, bridges, etc.
- Correct imposition of caution order and time cancellation

➤ No bursting of blocks

8. Electrical- ensure prompt supply of power

9. Loco- effective maintenance & attending repairs at satellite sheds

Apart from above reducing cases of accidents in yards & block section

Average speed of goods trains. Role of section controller in improving the same

1. Average speed of goods trains has marked influence on the turn round of locomotive, stock, crews and usage of section capacities effectively.
2. Lesser the average speed, lesser will be the utilization of assets.
3. Lesser average speed leads to yard/sectional congestion.
4. Hence efforts are to be taken to improve average speed of goods trains.
5. Average speed of goods is calculated by dividing trains kms by train engine hours.
6. So better average speed of goods train means better movement of rolling stock, better utilization of power and economic utilization of running staff.
7. Hence, a watch over the average speed of goods train is very much essential so as to get more freight throughput and for better utilization of assets.
8. The maximum permissible speed of goods train is 75 kmph. The average speed is not even one third of this.
9. To find out the average speed of a goods train on a given section, its entire run from the time it leaves the dispatching yard to the time it reaches the destination at the other end of the section is taken into account.
10. This time includes detention enroute on account of crossing, precedence's, shunting, etc.
11. The total distance covered during the journey divided by the total time taken will be the average speed of that particular trains.

DIVISIONAL WAGON BALANCE (DWB)

1. The DWB of a Division is the total of all wagons on wheels in the division, including the ineffective and departmental.
2. An analysis on DWB can be done under two heads.
3. Wagons on move by trains.
4. Wagons stationery at stations, yards and sidings.
5. The availability of wagons are tabulated individually for major and important stations and separately for various sections. These are arranged in the vertical row of the table and in the horizontal row the items are mentioned under the following heads.
 - a. Brake Van

- b. Rejected wagons
 - c. POH due
 - d. Traffic to other Divisions/Zones (separately for each (via) Junction)
 - e. Traffic for Transshipment points and zones (separately for every unit)
 - f. Empties type wise
 - g. Ineffective Stock
 - i. Departmental Wagon
 - j. Stock in various sidings (like coal, steel, cement etc)
6. Stock at important stations and sections is noted down from the particulars given in the stock report. The wagons as moved by trains are accounted from the trains available at 0000Hrs.
 7. The particulars are to be gathered from various control boards.
 8. For accurate positions the section controller should take great care between 2200 hrs to 2400 Hrs to see the stock is disturbed at a station only after inclusion in the stock report. In such cases adjustments have to be made.
 9. For non controlled sections, where stock report may not reach in time, the figures of the previous day DWB is taken for transaction. Adjustments will be done after getting the correct report.

Factors affecting D W B:

- - Increased inward receipts
- - Stagnation of wagons at goods yards and goods sheds due to more receipts and
- poor releases.
- - Non acceptance of traffic by the adjoining divisions/railways. Failure of inter change transactions.
- - Shortage of matching empties at transshipment sheds.
- - shortage/failure of locomotives.

Analysis of D W B

- The difference between two consecutive days wagon balances is taken into consideration. An increase or decrease in DWB reflects the mobility and performance of the division.
- The following key areas are to be watched and action is to be initiated in case of increase of DWB.
 - Loads received from different divisions/Railways indicates the pattern of traffic.
 - Availability of empties position against the demand and the supply made.
 - Release of inwards which reveals unloading capacity
 - Position of Ineffective stock (sick, POH etc)
 - Yard balances, transshipment sheds performances.

X. Crew Scheduling and 10 hour run:

- d) Engine crew and train crew schedule.**
- e) Rules regarding outstation and home station rest etc.**
- f) Supervision at station/shed level and in control office to ensure observance of 10 hour rules.**

Combined Crew Lobby

2. 'Combined Crew Lobby is a centralized, co-ordinated loco and traffic crew booking organization.
3. The intimation given Loco Pilots, Assistant Loco Pilots, Guards and Brakesman as to what trains they are required to work the trains is through this lobby.
4. LP and ALP booking is looked after the Crew Controller and Guard booking is looked after the Station Manager.
5. Combined crew lobby is generally located at the passenger station yard or at a central point in the goods yard.
6. The main intention of forming the lobby is avoiding detention and coordination between the operating and mechanical departments.
7. Train ordering will be done by this lobby.
8. It is headed by Chief Crew Controller(CCC)
9. It is the responsibility of the CCC to ensure
 - i. Sufficient staff is posted to the station.
 - ii. Sufficient staff is available for working of the trains.
 - iii. He must ensure that no staff is overdue for Refresher Courses, Technical courses and PME.
 - iv. He must book the staff for Promotional courses whenever they are due.
 - v. He must keep sufficient stock of safety literatures in order for the staff to read whenever they are waiting for the train.
 - vi. The sign On and sign Off register must be available in the lobby. Now computer machines are available for signing on and off.
 - vii. Register must be kept available for the crew to write any deficiency in Track and S&T gear/signals noticed during their journey.
 - viii. This defect noticed by the crew must be repeated to the control office and feedback regarding the action taken given to the crew who reported.
 - ix. Sufficient stock of safety equipments must be kept available in order to issue/renew to all the crew available in case missing or damaged.
 - x. To check the crew booked for working trains whether they are not in sober condition by taking breathlyser test.

- xi. They must closely coordinate with the SCOR regarding the trains that are expected and whether the incoming crew is to be kept or returned back to their HQ.
- xii. Update the Clock with the SCOR/SM and display the latest and current CO indication boards.
- xiii. They must maintain Standing Order Book SOB wherein they mention the latest changes and any rules to be observed in particular and take acknowledgement of all the staff.
- xiv. CCC should keep in mind the HOER rules and implement the 10 hours rules correctly.
- xv. Ensure the running staff are getting the requisite home and outstation rests.
- xvi. Passenger crew links formed by CCC are in accordance with HOER rule.
- xvii. Whenever any lack or sudden shortage of staff is there, immediately it must be intimated to the control office.

Features of 10Hrs. Duty Rule

Based on recommendations of Miya Bhai Tribunal for safety considerations this rule is framed.

Normally running staff should not be put to duty continuous at a stretch for more than 10 Hrs. from sign on to sign off.

The following are exceptions-

1. The duty hours of the running staff may be extended from 10 hrs. to 12 hrs. subject to condition that pre notice be given to control by the running staff for relief .
2. The maximum duty hrs. at a stretch may be extended to 12 Hrs. from sign on but in no case it should exceed 10 hrs. from wheel movement i.e. departure of the train.
3. If the crew has completed the prescribed duty limit at a stretch and the destination/crew changing point of the train is nearing after one or two block sections the crew is supposed to take the train upto destination / crew changing point even if completed 12 hrs. duty.
4. In case of late running of train, agitation, any unusual occurrence and accident etc. crew is supposed to take the train upto next crew changing point even if completed prescribed duty limit at a stretch.

Maximum duty period

Running staff like Driver Asst. Driver & Guard are classified in continuous category for which prescribed maximum duty period is 54 hrs. per week .

Maximum rest period at HQ Station

- 12 Hrs rest if duty done is less than 8 hrs. in trip
- 16 hrs rest if duty done 8 hrs. or more in trip

Rest at Outstation

- 06 hrs. rest if duty done is less than 8 hrs. in trip.
- 08 hrs. rest if duty done is 8 hrs. or more in trip.

Other Conditions for providing rest

The running staff should be provided rest in a month as under –

- Four rests each 30 hrs. period OR
- Five rests each 22 hrs. period with at least one night on bed. Night means period from 22 hrs. to 06 hrs. in morning.
- Crew should come back HQ at least once after 96 hrs.
- Crew should be given at least one rest in 10 days time as far as possible.
- For some reasons, if the train arrives destination behind the scheduled time the crew working the train should not be booked for their pairing train without proper rest and fresh crew to be arranged on the point of safety.
- As regards to running of goods trains, there is no separate link framed as goods trains are run according to the train notices given by the operating branch.
- The LP who is working of goods trains from his home station, on arrival at destination should be given 12 hours of rest to work next train.

Safety Considerations

Due safety considerations be given . BOR links should not be prepared. Regular late running be considered while deciding trip hrs. in link.

General Considerations

To achieve optimum utilization of running staff following steps be adopted-

- Trip wkg. hrs. should be extended but within 10 hrs. limit.
- Cross HQ and cross Division working be adopted freely and if feasible cross railway working be not hesitated
- Efforts be made to maintain uniformity of same HQ for crew and Guard to work the train to facilitate same time availability of both at out station & better co-ordination.
- At out station availability of running room and adequate capacity must be kept in mind.
- 30 minutes. for sign on and 30 minutes time for sign off be included in counting of 10hrs. Duty.

- On any account, the LPs are not to be allowed to work trains for more than 4 consecutive nights.
- In preparation involvement at Officer level be ensured.

Information in links

Prepared for time tabled passenger carrying trains only and contains –

1. Link No.
2. HQ
3. Train Nos. involved in links
4. Train arrival & Departure time.
5. Out Station rest.
6. Total no. of days in link.

Links are prepared separately for crew and Guards.

Monitoring

Closed monitoring of observance 10 hrs. duty rule and cases of its violation is being monitored regularly not only at Divisional level but at HQ and Railway Board level also and are taken up seriously.

In Divisions 10 days periodical statements are prepared section wise for freight trains and monthly MCDO is sent by HQ to CRB clearly indicating total trains run, total trains within 10 hrs. duty, total trains exceeding 10hrs. Duty and percentage of violation alongwith time factor.

Salient points for implementation of 10 hr duty rules for running staff:

1. Crew control calls may be set up at major crew changing points or in control offices to monitor train and crew ordering.
2. In the sections where due to density of traffic, it is not possible for majority of the crews to complete the runs within 10 hours, possibility of splitting the section may be tried.
3. Train and crew ordering should be analyzed to see that crew is not ordered excessively in advance, resulting in abnormal pre-departure detention.
4. Introduction of 'two call system' at crew booking cells. The first call is given to alert the crew and the second call for confirmation.
5. Utilization of more shunters at major yards ' crew booking points to keep the outgoing train ready in all aspects including fueling.
6. Train ordering shall be reviewed jointly at two hours interval by section controller, power controller and crew controller (local) to minimize pre-departure detentions.
7. Booking of crew shall be done strictly on the basis of first come first serve in the first week and staff completing lesser hours shall be booked first. Simultaneously

driver who has completed or about to complete rostered hours shall be given less preference to book on line. In order to manage this computerization of crew booking points is to be planned.

8. Endorsing drivers name along with signing on time on the control chart and thereby improving co ordination between sectional control and power control for change of crew at the crew changing point.
9. The overall duty at a stretch of running staff from signing on should not ordinarily exceed 12 hrs and they should be entitled to claim relief thereafter.
10. The running duty at a stretch should not ordinarily exceed 10 hrs from the departure of the train and the staff should be entitled to claim relief thereafter.
11. In operation exigencies, the running duty may be extended beyond 10 hrs within overall limit of 12 hrs provided a due notice has been given to the staff by the controller before the completion of 8 hrs of running duty.
12. If a train does not reach, within the overall limit of 12 hrs, its normal crew changing point/destination of the train/or the place where a relief has been arranged and such point is approximately one hour journey away, the staff shall be required to work to that point.
13. In exceptional exigencies of accidents, floods, agitations, equipment failure etc., the staff may be required to work beyond limits prescribed above. In such cases, the controller should suitably advise the staff.
14. To reduce pre-departure/post arrival detentions to crews, if the train has to be detained for long time at a particular station for any reason like crossing/precedence/unusual incidents LP & ALP may be given relief after securing the engine and train. If it is likely to extend more than 10 hours relief may be arranged at that station.
15. There shall be strict vigil on staff working short trips, reporting sick frequently, absenteeism etc.
16. The modern communications shall be used effectively like pagers, telephones Mobsi links etc to alert and book the staff.
17. Targets for PDD for crew change / fuelling are under finalization which are likely to be issued to all concerned shortly for implementation.
18. Review has been done for location of running - rooms as per the density of the train running in the section duly closing down some RRS suggested after review.
19. Coordination meetings have to be being held between inter-divisional / inter - zonal officers for extending the crew run at junction / inter -change points to avoid detention to crew / short - fall and follow up action ensured.
20. Performance on handicapped sections and pilot running has to be reviewed regularly by DRM every week.
21. Vide GM's DO letter dated 15-09-1999 to all DRMs control Organization is expected to maintain a register giving individual instances of drivers exceeding 10 / 12 hours at a stretch on day to day basis. This has to be checked on weekly basis at DRM / ADRM level. These instructions were issued based on Board's directive, which is consequent to court's Judgment.

22. The implementation of 10 hr duty rule should also form a part of DRMs PCDO to HQ, where in DRM should indicate the analysis of the performance of bad sections and the remedial action taken by them.
23. This will reduce the turn round time of crew which will improve the availability of crew for train services

General Knowledge

This paper contains questions on subjects of interest as well as importance. The questions shall be so based as to test the knowledge of candidates which they would acquire by general observation/reading without specific study or detailed knowledge of text books. The paper shall also contain questions on topics of national importance, achievements of Railways as also questions which will test the awareness of candidates to developments which are taking place.

Paper – II Professional Subject

- VI. Working of trains generally and general & Subsidiary Rules
- j) Responsibility and functions of engine crew before starting and while on run
 - k) Responsibility and functions of Guard/Asst. Guard before starting and while on run
 - l) Responsibility and functions of station staff in working of trains.
 - m) Various systems of working of trains
 - n) Classification of stations, standard of signaling.
 - o) Station working instructions and block working instructions.
 - p) Line capacity and measures for augmenting it, signaling and train controlling improvements namely MAUQ, Tokenless working, CTC, Doubling, Automatic block, AFB etc.
 - q) Uses of combined train report, guards rough journal book. Vehicle guidance, Drives ticket, brake power certificate etc.
 - r) Rules regarding marshalling of vehicles on passenger, mixed and goods trains rules regarding AVB piped and non AVB vehicles on trains and Brake power rules, Ghat section Brake power rules.

Duties of Engine crew from sign ON to sign OFF (G.R/S.R 4.30 to 4.61)

Sign on duty

1. Read all safety and technical circulars.
2. Read CO on day for train.
3. Undergo breathalyzer test.
4. Ensure all personal equipment available.
5. Check walkie-talkie, PT Phone.
6. Ensure spare spectacle available.
7. Ensure competency certificate filled.
8. Ensure latest correction slips.
9. Sign ON in register.

On taking charge of the Loco

1. Check log book for previous remarks.
2. Check Flasher light, head light, marker lights, horns and wipers.
3. Ensure fire extinguisher and wooden wedges.
4. Check any abnormality in under gear.
5. Check availability of dry sand & working of sanders.
6. Check validity of BPC.
7. BPC is invalid GLP check shall be conducted.
8. Check correct caution order duly signed by SM is given.
9. Ensure engine in proper working order.
10. Ensure proper locking of CBC with safety pin.
11. Ensure hose pipes connected between engine and last vehicle.
12. Ensure correct vacuum/airpressure in loco.

13. In case engine/Vehicle attached/detached at station, brake continuity test will conducted.

Starting a train from station

1. LP not start without ATP from station.
2. LP satisfy all signals taken off for him.
3. Guard exchange all right signals with LP.
4. LP acknowledge by giving a long whistle and exchange all right signals.

On the run in the block section

1. LP and ALP keep good look out in motion.
2. Identify each signal and call out aspects to each other.
3. Call out engineering indicators and display boards in electrified section.
4. Look back frequently during journey to see whether train is following in safe and proper manner,
5. Give intermittent long whistle when passes LC gates etc,
6. Exchange all right signals with Guard and LP with train proceeding on adjacent line.
7. LP exhibit danger hand signals, if noticed danger on that train.
8. When doubt stop ensure and proceed.
9. LP/ALP see P-Way gangs and manned LC gateman if they are showing any danger signal.
10. Passing through station, give long whistle and exchange of all right signals.
11. Stopped at FSS without reason, LP give continuous whistle and after five minutes send ALP to station.
12. Whenever a train stopped on gradient for any reason apply A9 and SA9.

On Arrival

1. LP avoid overshooting stop boards or platforms or starters.
2. LP stop his engine as close as possible to starter/fouling mark.
3. Passenger Train once stopped at station, LP not move without orders of guard and SM
4. LP not leave engine when on Duty or properly handed over.

Sign off

1. Sign off duty in registers.
2. Under go breathalyzer test.
3. Record observations in signal/track/other failure registers.

Duties of Guard from sign ON to sign OFF

Sign on duty

1. Read safety circulars and sign.
2. Read caution orders for your train.
3. Undergo breathalyzer test.

4. Ensure equipment are there in line box.
5. Check walkie-talkie, Field Phone.
6. Ensure spare spectacle is there.
7. Ensure competency certificate is there.
8. Ensure latest correction slips in G&SR is there.
9. Sign ON at correct time .

On taking over charge

1. Guard see
 - i. Train is coupled correctly.
 - ii. Train has correct brake power.
 - iii. Train fixed with LV board or Flashing red light in rear.
 - iv. Walkie talkie is working or not with LP
2. Ensure correct marshalling rules.
3. Ensure side and end doors properly closed and locked.
4. Ensure Guards compartment and luggage portion locked when not leased or loaded.
5. Sign in BPC only after TXR signed in it.
6. Check validity of BPC.
7. Conduct GLP check when required.
8. Check SM given correct caution order.
9. Ensure correct vaccum/airpressure in BV.
10. Ensure BV Equipment is there,
11. OTL is locked and seal intact.

Starting a train from station

1. Guard ensure no person travelling in wagon or BV of goods train
2. Guard give starting signal after SM permits by bell or PA.
3. LP give whistle to start.
4. Guard exchange all right signals with LP
5. LP start the train.

On the run in the block section

1. On run, Guard keep a good look-out
2. Guard ensure LV indicator whenever train stops.
3. Guard ensure train proceed with safe and proper manner.
4. Conduct continuity test when Engine/Vehicle, attached/detached.
5. Train stopped at FSS more than 15 minutes, Guard protect in rear as per GR 6.03
6. If Guard see danger in train, try to inform LP.
7. In emergency not able to inform LP, apply brake to stop train.
8. Exchange all right signals with LP and SM & PM when required.
9. Guard show danger hand signals, if he sees any danger.
10. When passing a M/LC gate, look back to see if any danger signal is shown by gateman.
11. When LP gives three short whistles, Guard immediately apply hand brake.
12. Guard see drop in pressure in gauge when LP has to reduce or stop train

13. Before leaving BV apply hand brakes of BV
14. Before starting ensure release of hand brakes.

On Arrival

1. Guard see train stopped within fouling mark.
2. Exchange PN with SM where required.
3. If fouling not cleared tell SM and show stop signals in rear.
4. Before detaching engine Guard put hand brakes of BV and wagons.
5. Guard not leave BV till handed over.
6. Hand over BV equipment, train papers, luggage and parcels.

Sign off

1. Sign off duty in registers.
2. Under go breathalyzer test.

Responsibility and functions of station staff in working of trains.

Before taking over charge

1. Take adequate rest and report to office in time as per the roster in neat uniform and badge.
2. Ensure valid Competency certificate and updated G&SR is possessed with you and produce on demand by any higher officials
3. Ensure acknowledgement in the assurance register is available.
4. Ensure that Periodical medical examination is not due.
5. Cross check various counters with the concerned registers/TSR.
6. Check the columns of station diary to see that the outgoing SM on duty has entered correctly.
7. Note the position of various S&T gears/equipments whether they are in working order and their seals intact.
8. SM who granted line clear or obtained line clear shall remain on duty till train out of block section is received/given and acknowledged.
9. Condition of the block section whether occupied or not, if occupied, remarks to be passed in TSR/station diary to that effect.
10. Note the number of Caution orders in force in all the directions.
11. Take position of various lines in the yard, if occupied whether securing as per SR 5.23 has been done or not and remarks passed in TSR/diary.
12. Whether all the essential equipments are available as per SWR or not.
13. Condition of the weather and if patrolling is in force name and time of departure /arrival of the patrolmen at the station.
14. Entry of name and time to be made in the beat book as per the patrol chart.
15. If patrolman does not turn up beyond 15 after his schedule arrival, issuing Caution order to observe 40 kmph.
16. Whether any specific orders are given by the officers/SCOR to be followed.
17. Acquaint thoroughly with the working of the station and SWR.
18. Acquaint thoroughly with the latest amendment slips/JPOs and safety literature.
19. Note the staff available in the shift and whether they are in sober condition.
20. Take over charge by signing in TSR/Station diary and attendance register.

While on duty

1. Be courteous and helpful to the passengers.
2. Ensure that the station and its surroundings are kept neat and tidy.
3. Properly responding to the SM of both ends and SCOR when called and obey the orders issued by the SCOR/Officers.
4. Test the block Instrument and record the results in TSR.
5. Satisfying all the conditions for granting line clear when asked.
6. Before granting line clear closure of non interlocked gates has to be ensured
7. After line clear is asked nominating the line of reception and setting the point correctly.
8. If it is not setting correctly, deputing pointsman to ensure no obstruction is available between the stock and tongue rail.
9. Further if is not setting, receiving the train on other free lines available for which points are set correctly.
10. Further no line is vacant, setting the points using crank handle and padlocking and issue of paper authorities for reception.
11. Whenever any failure in S&T gear to be intimated to S&T officials immediately and made entries in the failure register.
12. Inform the gateman of interlocked gates in the station to close and transmit key.
13. After receiving train entering block section signal, informing the interlocked gates.
14. Seeking permission from the SCOR as to send the train further or to receive and keep for crossing/precedence.
15. If train is going further inform the non interlocked gates and obtain line clear.
16. On arrival of ensure the train has arrived complete as per SR 14.10.
17. Put back the reception signal and immediately alter the points in rear on double and single line and in front on single line as per GR 3.38.
18. Close the block section and transmit key to gateman of interlocked gate at station..
19. If route is held up cancel the route normally and if not adopt calling on cancellation procedure.
20. If it is runthrough train, depute Pointman to show all right signal from offside and SM exhibit from station side as per GR &SR 4.42.
21. If any danger is seen in the train take suitable action as per SR 4.29 and JPOs.
22. For dispatching the train set the points on the route correctly, take off advance starter and then starter.
23. After train enters the block section intimate the other SM by signal and if any interlocked gates available in section intimate them.
24. On reaching the next station receive train out of block section and ensure block instrument has been brought to line closed position.
25. Normally all the points shall be set for straight line.
26. In case while granting line clear, the points must be set to vacant line, and if all lines are occupied –set to line occupied by goods train and if all the lines are occupied by passenger trains then set the point to line where engine is facing.
27. Receive Caution order messages given by the Engineering/S&T/Mechanical/ Electrical Inspectors note the same in caution order register and paste the message in the message book duly giving the serial number.

28. It is the responsibility of SM to ensure all the LP/Guards of the trains entering that block section are advised of the caution order.
29. Inform the message to notice stations and SCOR and obtain their PN and acknowledgement.
30. Arrange to advise LP/Guard until the Notice station issues the caution order.
31. Arrange to brought forward all the existing Caution Order in geographical order every Monday at 00.00 hrs.
32. If any shunting has to take place ensure all the stipulated rules are observed correctly SR 5.13 to SR5.19.
33. If patrolling is in force, arrange to see that patrolman are following the patrol chart and patrolman having all the equipments with him and thoroughly acquaint with the rules.
34. If any unusual is occurring immediately inform of SS/SCOR/TI and take necessary action before their arrival.
35. Whenever S&T/Electrical/Engineering staff are attending the failure suitable disconnection notice has to be ensured and before accepting reconnection test the disconnected gear.
36. If any train has to be passed during disconnection/Reconnection it has to be done by piloting.
37. In case of line block ensure all the rules stipulated in SR 15.06 are carried out.
38. In case of accidents take proper action as per the situation tactfully and inform all the officials and doctors available in the disaster management board.
39. In case any message received from the LP/Guard convey those to the SCOR immediately and take necessary action.
40. In case LP/Guard requests for pushing back his train due to emergency, act as per the provision given in GR&SR 4.12
41. In case LP/Guard requests for Relief Engine follow the procedure laid down in GR&SR 6.02.6.
42. Entries pertaining to trains to be written in the TSR.
43. Any cancellation is done suitable entries to be done in registers.
44. Perform all the commercial duties if no commercial staff posted.
45. Test the points and signals whether working or not.
46. If it is required to form trains, shunting/ marshalling and precautions for them taken as laid down in SWR.
47. Maintain all the registers available at the station.

Handing over charge

1. Complete all the entries in the station diary/TSR.
2. Wait till the SM takes over charge.
3. After SM takes over charge the SM shall hand over charge and sign off.
4. SM has to continue his duty till his reliever comes and takes over charge.
5. Be available and report for duty whenever required in case of emergency apart from the roster.

I. What is system of working how many systems are there in Indian railway and SC Railway? (G.R/S.R.7.01)

1. System of working means system adopted for the time being for working for trains on any portion of railway. (G.R/S.R.7.01)
2. On Indian railway all trains working between stations shall be worked on the one of the following systems namely
 - a. The absolute block system
 - b. The Automatic Block System
 - c. The Following Trains System
 - d. The Pilot Guard System
 - e. The Train-Staff And Ticket System,
 - f. The One Train Only System

The systems used on the south central railway are

- The automatic block system used on the this Railway are, LPI - SC - MLY, HSJ – HYB(SC Division), SC – KCG –FM, SC –BMO(HYB division), BZA –KCC(BZA division)n double line and on BZA-KCC(BZA division) on single line.
- The absolute block system on all other sections of SC Rly.

Essentials of the Absolute Block System (G.R.8.01)

1. Where trains are worked on absolute block system:
 - a. No train shall be allowed to leave a block station unless line clear has been received from the block station in advance, and
 - b. On double lines such line clear shall not be given unless line is clear, not only up to first stop signal at the block station at which such Line Clear is given but also for an adequate distance beyond it;
 - c. On single lines such Line Clear shall not be given unless line is clear of trains running in the same direction ,not only up to the first stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it, and is clear of trains running in the direction towards the block section to which such line clear is given,
2. Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (b)and (c) of sub-rule (1) shall not be less than
 - a. 400mts in case of TALQ signalling or TACLS, and
 - b. 180mts in case of MAS or Modified Lower Quadrant Signalling.

Classification of stations (G.R/S.R.1.03)

- Stations are broadly classified into Block Stations and Non-Block stations.
- Block stations are those at which the Loco Pilot must obtain an authority to proceed under the system of working to enter the block section with his train.
- Under the Absolute Block System consist of four classes of Block Stations.

Class 'A' stations: - where Line Clear may not be given for a train unless the line on which it is intended to receive the train is clear for at least 400 meters beyond the Home signal, or up to the starter.

Class 'B' stations: - where Line Clear may be given for a train before the line has been cleared for the reception of the train within the station section.

Class 'C' stations: - Block huts; where line clear may not be given for a train unless the whole of the last preceding train has passed complete at least 400 meters beyond the Home signal, and is continuing its journey. This will also include an Intermediate Block Post.

- Any block station which can not be worked as class 'A' or; 'B' or 'C' is classified as **"Special Class"**
- Non Block stations or Class 'D' stations are stopping places which are situated between two consecutive block stations, and do not form the boundary of any block section
- S.R. 1.03 the classification of a station shall be mentioned in the SWR of that station and also in the Working Time Table (WTT)

Interlocking (Appendix XII –I)

Interlocking means an arrangement between points, signals and other appliances operated from a panel or lever frame either electrical locking or mechanical locking or both so that their operation must take place in proper sequence to ensure safety.

Objectives:

- Setting of route,
 - Locking,
 - Holding, and
 - Prevention of conflicting movements.
1. It shall not be possible to take 'OFF' signals for a route unless all the points are correctly set and the facing points are locked for that route.
 2. Once the signals are cleared it shall not be possible to alter the points on the route unless the signals are put back to 'ON'.

3. Even though the signals are put back to 'ON', it shall not be possible to alter the points unless the intended movement over such points is completed.
4. It shall not be possible to operate signals leading to conflicting movements.
5. The points and signals can be operated only in a sequence to ensure safety.
6. Where signals are connected to any device the signal shall not obey until the conditions for working such devices are fulfilled.

Standards of interlocking:

There were three old standards of interlocking viz., Standard I, II, III

There are four revised Standards of interlocking viz., Std –IR, IIR, IIIR and IVR

The equipment of signals mode of locking and operation of points, signals etc. vary in these different standard and they are:-

STANDARDS OF INTERLOCKING AND THEIR FEATURES

Std	Maximum Speed On Main Line	Minimum equipment of signals at class B stations		Mode of locking	Type	Isolation
		TAS	MAS			
I	50	Outer, bracketed home	Distant Home	Key	In direct Direct	Not Necessary
II	75	Warner, Outer, bracketed home	Distant Home, starter	Plunger	Indirect Direct	Necessary
III	MPS	Warner, Outer, bracketed home, starter	Distant Home, starter	Plunger	Direct	Necessary

REVISED STANDARDS OF INTERLOCKING AND THEIR FEATURES

Sl.No	Item	Std I (R)	Std II (R)	Std III (R)	Std IV (R)
	Allowable speed (KMPH)	Up to 50	Up to 110	Up to 140	Up to 160

1	Isolation	Not compulsory	Compulsory	Compulsory	Compulsory
2	TAS/MAS	TAS/MAS	TAS/MAS	MAS	MAS
3	Double Distant	Not compulsory	Desirable	Compulsory	Compulsory
4	Point operation	Mechanical	Mechanical/electrical	Mechanical/electrical	Electrical
5	Point locking	Key/Facing point/hand plunger	Facing point locking with point machine	Facing point locking with point machine	Clamp type Direct desirable
6	Interlocking	Key/mechanical	Mechanical/electrical/electronic	Mechanical/electrical/electronic	electrical/electronic

I. Station Working Rules (G.R.5.06 and Appendix XIV)

1. Station Working Rules applicable to each station shall be provided under special instructions.
2. A copy of SWR or relevant copies of extracts shall be kept at cabins.
3. Relevant Rules for working of LC gates shall be made available at gates in Regional languages also..
4. SWR shall be read in conjunction with G & SR and Block Working manual and language shall be simple and brief.
5. SWR shall be prepared carefully keeping in view the conditions prevailing at the station.
6. Only relevant rule numbers of GR / SR shall be mentioned in the brackets against relevant Para.
7. The SWR pages shall be numbered, station name, code shall be written on every page and on every page it shall be signed by Sr. DOM / DOM, Sr. DSTE / DSTE at Interlocked station and at Non Interlocked station by Sr.DOM/DOM and Sr.DEN/DEN.
8. Temporary working instruction for non interlock working shall be signed by Sr. DOM / DOM, Sr. DSTE / DSTE and Sr.DEN/DEN.
9. Station diagram in the SWR shall be signed by Sr. DOM / DOM, Sr. DSTE / DSTE and DEN.

10. The SWR's of all stations including stations to be newly opened and amendment slips shall be issued by the Sr.DOM / DOM and Sr. DSTE / DSTE who shall be responsible to ensure that these are correct, complete and current.
11. Rules for working of trains in electrified section will be given in Appendix 'G' and it shall be jointly signed by Sr. DOM / DOM, Sr. DSTE / DSTE and Sr. DEE / DEE [TRD].
12. The working rules for the level crossing gates situated out side the stop signals and also the procedure to be followed by the gateman shall be issued by the Engineering branch and kept at the gate lodge.
13. A copy of working rules shall be kept at each level crossing gate in regional language.
14. In case of a level crossing gate provided with gate stop signal, a copy of a signalling and inter locking shall also be made available at such gate.
15. Approval of CRS shall also be obtained where required before issuing SWR.
16. SWR shall be issued fresh once in FIVE years or after issue of FIVE amendment slips and reviewed as and when required.
17. The information in SWR shall be as per the format and working rules for cabins working independently shall be issued separately.
18. The staff before taking up independent duty shall read, understand the SWR and sign in the declaration / assurance register.
19. In case of Illiterate staff the SM shall explain the rules in vernacular language and take their acknowledgement in the register duly certifying that they understood the rules.
20. Fresh declaration shall also be taken from the staff when a member joins or when there is a change in the SWR or staff resumes duty at a station after an absence of 15 consecutive days or more.
21. TI / SWR before preparing the draft instructions for SWR shall compare the Station diagram with actual lay out and discuss with the SMR / SS / SM of the concerned station.
22. One copy of the SWR along with signalling plan shall be sent to the CRS for approval and Two copies of each station to the COM.
23. The SWR contains 12 chapters and 7 appendices and they are,

LIST OF CHAPTERS (D² S² T² B SAVE F)

- I. Station working diagram
- II. Description of station
- III. System and means of working
- IV. System of signalling and interlocking.

- V. Telecommunications
- VI. System of train working
- VII. Blocking of lines
- VIII. Shunting (various precautions and authorities)
- IX. Abnormal conditions
- X. Visibility test object
- XI. Essential equipment at stations
- XII. Fog signal men nominated to be called in case of fog

LIST OF APPENDICIES

- 1. Appendix 'A'- Working of Level crossing Gates
- 2. Appendix 'B'- System of signalling and Interlocking and Communication Arrangements at the station
- 3. Appendix 'C'- Anti collision Device [Raksha Kavach]
- 4. Appendix 'D'- Duties of train passing staff and staff in each shift.
- 5. Appendix 'E'- List of Essential Equipments provided at stations.
- 6. Appendix 'F'- Rules for working of DK station, Halts, IBH, IBS and Out Lying sidings.
- 7. Appendix 'G'- Rules for working of trains in Electrified sections.

Line capacity or section capacity.

Section Capacity or Line Capacity is defined as

“The number of trains which can be run on the section in 24 Hours”

- 1. Expressed in three ways viz:-
 - (1) Maximum Line Capacity
 - (2) Practical Line Capacity
 - (3) Economic Line Capacity
- 2. MAXIMUM LINE CAPACITY:-
 - i. Maximum number of trains entered in master chart so that it is impossible to introduce even single more train on the section concerned.
- 3. PRACTICAL LINE CAPACITY:-
 - i. After giving allowances for Permanent Way and Operational constraints Practical number of trains run in the section is found.
 - ii. This method also known as “Effective Line Capacity”

1. ECONOMIC LINE CAPACITY:-

Optimum number of Trains run on the Section economically is Economic Line Capacity.

5. CALCULATION OF LINE CAPACITY:

There are two ways to determine the Line Capacity.

(1) Charting Method

(2) Formula Method

6. Charting Method :

- i. This method is most reliable and practical way of assessing Line Capacity, adopted by most railways.
- ii. The train paths on time and Distance graph are plotted for 24 Hours time.
- iii. Passenger trains paths are first plotted on the Master Chart.
- iv. Then as many goods trains are inserted as possible so that it becomes impossible to accommodate even one more train.
- v. This method gives us maximum line capacity.
- vi. This method is primarily intended to get a realistic figure on the basis of the actual conditions that prevail on a particular section.
- vii. Now a days, computers are installed.
- viii. If data are properly fed, number of paths will be identified more efficiently.

7. **Formula Method** : This method offers practical Line Capacity.

(A) Scott's Formula

To calculate Line Capacity,

$$C = \frac{1440}{(t + T)} \times E$$

Where 'C' = The Line Capacity

T = Running time of the slowest train over a critical Block section.

t = Block Operation time

E = Efficiency Factor.

- i. Critical block section can be lengthiest block section with unfavorable geographical and other conditions.
- ii. The formula will give total number of trains in Up and Down directions taken together on single line section.

- iii. On Double line sections this will give total number of trains separately for Up & Down directions because the running time on Up line and Down line will be different.
- iv. Formula to determine the number of trains in each direction on a single line is as follows:

$$C = \frac{1}{2} \times \frac{E \times 1440}{(t + T)}$$

The Scott's formula is further supplemented by giving Values for 't' & 'E' factors.

t = Block Operation time = 5"

E = Efficiency Factor = 7/10

STEPS TO IMPROVE THE LINE CAPACITY OF A SECTION:

I. To Reduce the Running time[T] :

1. Reduction of length of the Block Section
2. Provision of Class 'C' station, IB signals on Double Line wherever required.
3. Easing the Gradient.
4. Convert TAS to MAS
5. Provision of simultaneous reception facility on Single Line.
6. Provision of Common loop lines on Double Line.
7. Provide bypass lines short of Junction Stations, Major yards eg:- SNF - AMQ - MLY
8. Provision of Two Distant Signals, Fan shaped Lay Outs.
9. Twin Single lines where unidirection traffic is more.
10. Induct High Speed Locomotives, wagons (Air Brake Wagons)
11. Adopting better system of trains working (Absolute Block System in to Automatic)
12. Provision of Panel/Route Relay Interlocking at Station.
13. Better communication system between LP / Guard / Station Master /Control.

II. To Reduce the Block Operation time[t] :

- a) Convert token Block Instrument in to tokenless block instrument.
- b) Provision Block Proven axle counter / Track Circuit.
- e) Phasing out the Block Instrument by provision of Automatic Block System.

- f) Provision of L V C D (last Vehicle Check Device) to know complete arrival of train.
- g) Automatic Route Relay Interlocking

Increasing efficiency factor 'E'

1. Time table improvements
2. Reducing disparity in intersectional running time
3. Improving efficiency of staff
4. Improved maintenance of loco, wagon, coaches, points and signal, telecommunication, electric energy distribution system etc.
5. Provision of adequate number of loop lines with simultaneous reception.
6. Effective train ordering
7. Run similar speed train in one bunch
8. Advance forecast to yard, Interchange points, adjoining divisions/Railways.
9. Constant monitoring
10. Making use of all traffic facilities'
11. Implementing 10 Hrs rule strictly for running staff.
12. Goods time tabling
13. Providing bankers/relief engine in time
14. Reducing cases of accidents.

Working Time Table (WTT)

- a. Printed for each division separately.
- b. Printed on orders of COM every year in JULY.
- c. Copy given to LP, Guard, ALP, stations and Inspectors.
- d. Important items in Time Tables are :
 1. Sectionwise Timings of trains at each station
 2. Arrival, departure, skip timing, even for stations where trains not stop.
 3. MPS for trains on each section.
 4. Type of loco permitted to run on each section.
 5. Normal running time for goods, passenger, express trains.
 6. Engg /Traffic allowance on each Section.
 7. System of working on each section.
 8. No. of Running lines at each station.
 9. Gradients, section capacity, critical block section
 10. LC gates numbers with KM and TVUs.
 11. Maximum loads permitted by train and locos.
 12. Permanent Speed restrictions on each Section.
 13. Station where ART/MRT available.

14. Emergency Sockets location
15. Important Rules about safety
16. JPO's and other safety material.
17. Disaster Management Telephone Nos ,

CTR (Combined train report)

1. It is Guard's Journal (Form No T/720)
2. Prepared by Guard
3. On top name of LP,ALP, Loco No. and Type, load of train is written.
4. In the Bottom Guard to write
 - a) Time as per SCOR,
 - b) Vacuum/Air pressure in B/V,
 - c) Weather condition,
 - d) Condition of coach/wagons,
 - e) Condition of lighting (Tail Lamp/Side Lamp)
 - f) Brake van equipment.
5. Guard will write WTT timing and actual timing at each station
6. Guard to write late running reason
7. Guard to write time lost or gained due to Engg, Loco, S&T, Optg, Commercial.
8. Guard to write any problem faced like
 - i. Defective signals,
 - ii. Staff not working correctly,
 - iii. Public complaints,
 - iv. accidents,
 - v. LP is following correct CO or not
9. Guard give one copy to SM with all authorities received at the end.
10. One copy kept by SM and others sent to DRM daily.
11. For passenger copy of CTR sent to COM

JOINT PROCEDURE ORDER ON FREIGHT TRAIN EXAMINATION

C&W JPO No. 07/2014.

Division	CC+ Premium base depot	Premium Examination Point	End to End examination
SC	RDM , BPA & SNF Container Depot	RDM, BPA, SNF	BPA, SNF, RDM & DKJ
BZA	BZA	BZA, COA	BZA, COA & BTTR
GTL	GY	GY	GY

NED	-	PAU	-
GNT	-	-	NLPD **

TYPE OF EXAMINATIONS:

Cc rake

Premium rake

End to end

Closed circuit rakes (CC rakes) periodical monitoring examination (PME)

1. Airbrake stock only at RDM, BPA, BZA and GY and in SNF container depot (only for BLC, BLL)
2. 100% brake power at PME depot
3. Valid for 7500 kms or 35 days whichever is earlier.
4. Container rake BPC is valid for 6000 kms or 30 days whichever is earlier
5. Names of zones on which it is run mentioned in BPC
6. Rake moves within these zones only and mentioned in JPO
7. LP record kms run in BPC and sign with name, base and date.
8. If found kms not recorded effort to be made through FOIS
9. When it cannot be found valid for only 20 days
10. After loading and unloading revalidated on GLP check
11. When unloaded with tippler revalidation done by JE/SE (C&W)
12. Over due CC rake in empty condition
 - Pushed to nearest train examination point on GLP check
 - Safe to run examination conducted and endorse in BPC by JE/SE (C&W)
 - When required for one cycle of loading/unloading rake pushed to nearest train examination with GLP check for intensive examination and endorsement by JE/SE (C&W)
13. Overdue cc rake in loaded condition:-
 - Subjected to GLP check upto nearest train examination point In direction of movement
 - Intensive examination and endorsement on BPC to be made "BPC revalidated for movement upto its destination and after unloading further moved to original base depot _____ of PME"
 - Unsafe rakes from point of detection to nearest TXR point on GLP check
14. Periodical joint inspection to be carried out by Sr.DME/DME (C&W) once in 6 months in case mechanised loading/unloading (tipplers)
15. Integrity of rakes maintained and any changes even in case of ROH and POH to be done during PME at base depot only
16. Colour of BPC is yellow
17. Rake to come back for PME, no other depot utilize as premium/ end to end rakes
18. Monitoring of CC rakes
 - YM/SM ensure details are fed in FOIS when given for examination to C&W,
 - Optg/mech. Officer in divisions monitor movement through FOIS

- It should be ensured rake returns to base depot before expiry and on arrival BPC handedover to JE/SE(C&W) last loading should be before 28 days from date of issue
- At loading/unloading points YM/SM should be custody to BPC and repeat cumulative km logged, detachment of wagons to SCOR/C&W control
- GY,RDM,BPA,SNF,BZA & COA repeat to JE/SE(C&W) to repeat to C&W control directly
- If cumulative km exceeds 6500 kms/25days SM intimate to CHC
- CHC and zonal HQ maintain arrival and departure timing of ldg/unldg/stabling/crewchanging/interchange for all rakes to monitor detention.
- As an exception CFTM can permit them to run on routes/circuits not covered in specified region.
- Loss/dissolve of BPC viewed seriously and initiate disciplinary action against staff by Sr.DOM/Sr.DME

Premium end to end rake

1. Formed only with air brake open stock (BOXN, BOXNHA, BOXNHS) and covered stock (BCN, BCNA, BCNAHS, BOBR & BOBRN) on SC Rly
2. Examined at BPA, RDM,GY,COA,SNF and PAU stations
3. Valid for 12 days from date of issue
4. Any number of loading/unloading allowed within this period
5. After loading/unloading rake examined by GLP before commencement and record observations in relevant columns of BPC.
6. Minimum brake power 95 %
7. After 12 days rake offered for next intensive examination at first examination point in direction of movement.
8. To avoid examination in loaded condition 3 days grace period is given
9. After expiry of 15 days even in loaded condition rake offered for examination at first train examination point in direction of movement.
10. Premium rakes after examination should be entered in FOIS.
11. Monitored through FOIS
12. Overdue rakes running with GLP check monitored by Sr.DOM/Sr.DME/C&W

End to end examination

1. All trains which are not checked in cc or premium rake examination come under this category.
2. All stocks permitted
3. Empty rake offered for examination and BPC issued.
4. Empty rake moved to loading station as per requirement of traffic.
5. To ensure integrity wagon numbers written on back side of BPC.
6. Validity of BPC 'up to loading point and further upto unloading point'.
7. After loading, optg staff(comm'l if no optg staff) ensure destination of loaded train mentioned on BPC and valid upto destination.
8. LP shall not move loaded train unless destination is mentioned
9. Empty rake must reach loading point within 4 days from issue of BPC including day of issue.

10. At destination after unloading rake examined in empty condition if it is train examination point and cycle repeats.
11. If unloading point is not train examination point, rake will be cleared with GLP check to next examination point in direction of movement.
12. It should not exceed more than 400 km
13. Rake not be moved by-passing next examination point in direction of movement.
14. Green colour BPC used for these rakes.
15. Minimum brake power 90 %
 - a. Avoiding skipping of train examination point
16. Before accepting train from adjacent Dvn/Rly SCOR obtain BPC particulars
17. In case found with invalid BPC, it is responsibility of forwardig Dvn/Rly to get train examined and issued with proper valid BPC.
18. If train run on GLP check, train accepted informing Sr.DOM/Sr.DME/Sr.DEE of Dvn and arrange checking at next train examination points

Intensive examination for material trains

1. All wagons of material train must have a nominated base depot and stenciled on wagon.
2. These must touch once in a month where it is checked thoroughly.
3. Originating brake power would be 90%
4. Validity of BPC for wagons having CASNUB bogies with air braked stock for 30 days without weekly revalidation.
5. Validity of BPC for wagons having UIC bogies with air braked stock for 30 days with fortnightly revalidation.
6. After ldg/unldg GLP check should be conducted in view of safety.

Examination of trains in loaded condition (other than cc rakes)

1. Trains received from adjoining Rly zones with invalid BPC.
2. Ldg is required to be done without examination in exigencies.
3. Trains formed out of loaded wagons at different stations when all wagons should be examined in empty condition
4. In above cases special report/message indicating reasons for examination in loaded condition sent to CRSE/CFTM by dvn in each case.
5. In all such cases train in loaded condition end to end BPC issued after examination at train examination point.

Backloading of trains/ movement of stabled loads.

1. When back loading is done at station where freight train examination facilities exists, loaded rake examined at that station only and end to end BPC issued upto destination.
2. In case where back loading is done at non TXR station, such trains moved on GLP check upto first nominated train examination yard in direction of movement and issued end to end BPC upto destination.
3. Movement of unexamined 'empty rakes/back loaded rake/stabled load/missing BPC' from respective point to TXR point permitted on GLP check.
4. Running of trains on GLP check permitted only upto first TXR point and does not exceed max. 400 kms.

BPC becomes invalid

S.no	Cc	Premium	End to end
1	Rake integrity disturbed by more than 4 wagons within the validity of the BPC. Only up to 4	Rake integrity disturbed by more than 4 wagons within the validity of the BPC.	Rake integrity disturbed by more than 4 wagons within the validity of the BPC.
2	Stabled for more than 24 hours except ldg/unldg stations	Stabled for more than 24 hours except ldg/unldg stations	Stabled for more than 24 hours except ldg/unldg stations
3	CC rakes moved to any other Zone not mentioned in the circuit.	--	--
4	Overdue CC rake is not moved in the direction of PME depot.	Premium rake moves for loading after 12 days from the date of issue of BPC.	
5	CC Rake running more than 35days/7500kms.	Empty rake running after the 12 th day of issue of BPC.	Destination stations not mentioned or unsigned corrections of destination name in the BPC of loaded rakes.

VII. Passenger train operation

- k) General Principles and methodology of time tabling of passenger trains.
- l) Consultative machinery for revision of time table at divisional, Zonal and Railway Board level.
- m) Publication of working time tables, Public time tables and sheet time tables.
- n) Punctuality of passenger carrying trains.
- o) Factors effecting punctuality of passenger carrying trains and methods of improving the punctuality.
- p) Augmentation of train loads for meeting traffic requirements.
- q) Running of Tourist coaches, Special Carriages and Special trains.
- r) Planning and running of Holiday specials, Mela Specials and Tourist Specials. Etc.
- s) Introduction of new trains, extension of train runs, introduction of through and sectional coaches.
- t) Preparation of engine links and driver/guard links

TIME TABLING OF PASSENGER TRAIN

Need for a passenger timetable

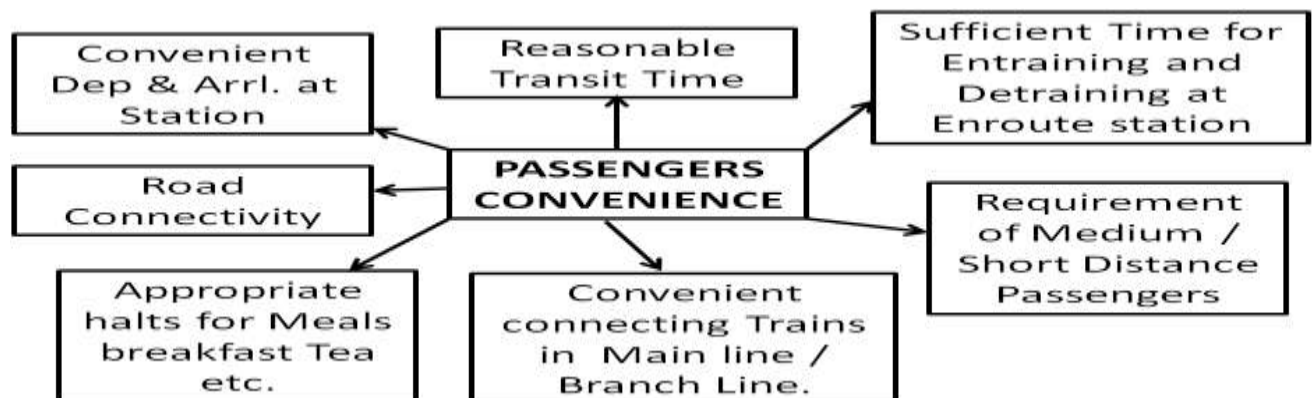
Preparation of passenger time tabling is much essential as these trains occupy the Pre-determined paths, unlike freight trains which have not been running on time tabled paths. The preparation of time table is basically Arrived at serving (a) For passenger requirements with regard to Arrl./Dep./Stoppage of trains etc. (b) For departmental activities like train examination, reservation, attaching Engine detaching Engine, Loading / Unloading etc.

Factors leading to scheduling of passenger carrying trains

These can be divided into two main headings

(a) Passenger's Convenience (b) Service requirements.

A) Passengers convenience



1. **Convenient departure and arrivals at station:**
Passengers would normally prefer to start their journey in the evening preferably after dinner and reach their destination in the morning.
2. **Speed and reasonable transit time:**
It will be a great convenience for long distance passengers if their journey could be covered over night without waste of a working day. Speeding up long distance passenger trains and reducing the transit time is an important consideration for long distance passengers.
3. **Appropriate halt for meals/breakfast**
Meal/breakfast halts are necessary because a number of passengers may like to use catering facilities provided at stations.
4. **Sufficient time for entraining and detraining of passenger:**
The length of the train and the quantum of traffic at the station must be duly taken into account while deciding upon the halt.
5. **Convenient connecting trains:**
Scheduling of trains has to be so adjusted that the passengers are not required to wait unduly for long, at junction station for connecting train.
6. **Requirement for short/medium distance passengers:**
Short distance passengers-It is desirable to provide suburban trains halting at every station to reach the big cities in the morning and to leave the city frequently till evening.
Medium distance passengers- These group of passengers are not very particular about speed. Need of such passenger could be fulfilled by running slow passenger trains halting at every station. When two pairs of cities are connected with each other in trade or other factors part from slow passenger trains, faster train will also have to put in - Ex. Intercity express – Sathavahana, Ratnachal, Pinakini.
7. **Road connectivity:**
Any proposal for introduction of additional short distance passenger trains should, therefore be scrutinized with utmost care taking into account, the road transportation facilities provided in that area.

(b) Service Requirements

Every department has its requirements

(1) Operating Department :

- (a) Berthing facilities at originating, terminating and intermediate stations,
- (b) Running time
- (c) Time for crossing and precedence
- (d) Time for shunting
- (e) Time for changing the crew.
- (f) Recovery time.

a. Facilities at Terminal/Junction stations:

The main limitation at the terminal is the platform availability. To check whether platform and pit lines for C&W examination would be available for introduction of new train or for adjustment of timings of existing trains, platform occupation diagram [chart] are prepared which give graphically the occupation of each platform throughout the twenty-four hours. Platform occupation charts are prepared not only for terminal stations but also for busy junctions. The occupation charts should not be so tight that the displacement or even one train may cause detention to a large number of trains.

b. Running times:

The fundamental basis for preparation of timetables of trains is the running times from station to station. The running times are depending on maximum permissible speed, booked speed, permanent and temporary speed restrictions, type of loco and vehicles, type of signalling and Interlocking, stoppage of a train.

Minimum running time: It is a running time required for each train between station on the basis of MPS plus time required for permanent speed restrictions and time for acceleration/deceleration.

Normal running time: It is a running time required for each train between stations on the basis of booked speed plus time required for permanent speed restrictions and time for acceleration deceleration. The timings for various trains worked out on the basis of NRT.

Make up time = NRT - MRT

It can be determined by calculation or by actual trials or by computer simulation programme. RDSO has evolved a "Train Prediction Programme [TPP] which is a very powerful tool and non expensive tool not only for time tabling of new trains but also to evaluate the effect on the train timings.

Speed restrictions

Speed restrictions may be imposed by the engineering branch for the purpose of maintenance of track, condition of the track/bridges, curves etc.,

These are of two types

1. Permanent speed restriction

- a. These restrictions are the ones which are supposed to be for sufficiently long duration.
- b. These are mentioned in the working time table.
- c. These restrictions are exist for a period of one year
- d. These shall be reviewed at the time of revision of time table.
- e. These are imposed on account of sharp curves, weak formation, bad banking, in-adequate super elevation, un-manned LCs, Metal sleepers etc,

2. Temporary speed restrictions:

- a. These restrictions are imposed for a short duration.

- b. These are imposed on account of defect in the track or to facilitate repairs in the track.
 - c. These are intimated to the Drivers in the form of Caution order.
 - d. Requirements of time for such repairs are assessed and are separately provided as engineering allowance.
- c. **Crossing and Precedence:**
 Provision has to be made in the timetable for trains waiting at stations for crossing and precedence. The time required is found out charting the movement of all the passenger trains on a control chart.
 The time required for crossing will depend on the reception/platform facilities at the station.
- d. **Shunting at station:**
 Adequate time should be provided at station for changing the traction or for attaching/detaching of slip coaches.
- e. **Crew changing:**
 Adequate halt must be given at the Guard/Driver changing station, so that handing over and taking over could be done properly. The time required for Guards to hand over is depending on the loading/no. of packages.
- f. **Recovery time:**
 A train may loose time due to a number of unforeseen circumstances. Extra time is, therefore provided between appropriate stations as cushion.
- (2) **Comm. Department:**
 (a) Pasting reservation charts, at least half an hour before the scheduled departure of the train (b) Halts for meals, (c) Loading / Unloading luggage/ Parcels.
- (3) **Mechanical Department:**
 - I. Loco Department**
 (a) Power interception time (b) fuelling (c) Crew changing
 - II. C & W Department**
 (a) Primary and Secondary examination (b) Carriage watering and cleaning,
- (4) **Electrical Department:**
 (a) Time for train lighting, (b) Air Conditioners for pre-cooling
- (5) **Civil Engineering Department:**
 (a) Permanent speed restriction - loss or making up time (gain) (Engg. Allowances) (b) Time for Engg. Block as mentioned in WTT.

PROCEDURE FOR REVISION OF TIMETABLE

REVISION OF TIME TABLE

Need for revision of timetable

The Time -Tables is revised once in a year effective from July 1st of every year. It is due to the following factors,

- (a) **Industrial, Economic Growth:** It is necessary to revise timetable periodically to suit the growing needs of population and industry.
- (b) **Population explosion:** To take into consideration the various public demands about halts, because of ever increasing population.
- (c) **Technology up gradation:** Improvements in track / signaling / traction / rolling stock required revision of timetable.
- (d) **Gaining experience:** After gaining the experience from the previous timetables changes may be proposed.
- (e) **Seasonal changes:** With the change in the seasons, adjustments may also be made with regard to the departure/arrivals of trains.
- (f) **Customer friendly:** To make the Passenger to easily read and understand.

It is revised once in a year the preparatory work for revision of timetable starts 6-10 months in advance. The schedule for revision is mentioned below. The timetables are issued with effective from 1st July every year.

Recommended schedule for revision

	Activity	Date
1.	Divisional time table meeting, DRM – Chairman Sr. DOM Secretary, All divisional Officers, DRUCC members take part. All the officers come forward with various suggestions. Supdt of RMS is also invited to attend. Suggestions from public received in DRUCC or station consultative committee are also examined	September
2.	Minutes of Divisional time table meeting sent to CPTM	October
3.	CPTM's Meeting with Dy. CE, Dy CSTE, CE / C.	November
4.	CPTM'S Meeting with RMS authorities	November
5.	CPTM's Meeting with Sr. DOMS. The suggestions of DRUCCs and ZRUCC are duly consider in this meeting.	December
6.	Inter Railway timetable meeting. This meeting is presided by the ED [coaching] , Director [coaching] is secretary and all CPTMS are members.	February/March
7.	Orders to print time table to press	15th of May
8.	Publishing time table to public	1st June

Published time table is effective from 1s July.

Kinds of timetables:

Timetables are prepared both for public use and for the use of the departmental staff.

Public timetables are book timetable and sheet timetable.

Book timetable: Besides giving timing of trains, it contains a lot of other information useful to the public about reservation, luggage, cancellation, refund facilities available.

[Book] Public Timetables are two types

1. **Trains at a Glance-** In this timetable timings of trains are given for all India Railway.
2. **Timetable for zonal Railway** – It is issued for individual Railways. More information is given for trains running in the zone. Information about the trains running on the other zonal Railways also given.

Working Time Table (WTT)

Is published and supplied to staff as a guidelines to staff on line. A copy of WTT is issued to all the staff who are involved in the train passing duties. A copy is supplied to C.R.S. also. Staff are required to be conversant with the instructions given the WTT and put them in to practice.

2. What are the factors affecting the rake composition?

Rake Composition

Rake composition means group of carriages arranged in an orderly manner. Rake composition depends on the following factors.

(1) Length of the train (2) Type of Coaches provided (3) Marshalling of coaches as trains (4) hauling capacity of locos.

(1) Length of Train

The following factors are to be taken in to consideration for deciding optimum length of the train.

- (a) **Passenger's Convenience** Convenient to Board, Security to the lady Passengers nearer to SLR, Display of indication boards on the platforms, provision of water, refreshment stalls on platform, length of platform with covered sheds, intermediate stations having similar facilities.
- (b) **Operational Convenience** : Facilities to exchange 'All right signals' between Guard and Driver, provision of luggage portion for loading / unloading convenient provision for attaching / detaching slip coaches, to take action in case of alarm chain pull.

- (c) Length of platform:** As the requirement increased trains and sections are identified where a lengthier train be run (24 Bogied trains) S.C. Rly is in leading front in running maximum number of 24 bogied trains in Indian Rlys. Due consideration has to be given in case, the length of the train is more. Because enroute stations, originating station and at Destination station the length of the platform has to be increased for convenient occupation of bogies.
- In S.C. Rly some of the 24 bogied trains are Godavari Exp, charminar Exp, A.P. Exp, Gautami Exp, Pinakini Exp etc.

2. Type of coaches provided:

A detailed analysis of passenger traffic must be carried out to decide how many AC, First, Second class coaches should be provided in the rake of a particular train. A periodic survey of the occupation ratios for the various classes should be conducted and the train composition reviewed accordingly.

- For short distance [day time] fast trains chair cars are ideally suited.
- For long distance fast trains sleeper accommodation is required.
- Providing ladies accommodation.
- For suburban trains, more accommodation for passengers is stand and travel, because travel time may be less

3. MARSHALLING OF COACHES

Marshalling of coaches depends on 3 factors (1) Safety consideration (2) Shunting requirements (3) Passengers convenience.

(I) Safety Consideration

(a) Provision of SLRs in front & rear with luggage portion shall be so arranged to absorb the shock of collision if there is an accident. (h) Marshalling of two anti telescopic coaches in side of SLR. (c) Limitation to attaching of coaches in rear of rear SLR. (d) As far as possible grouping similar classes in one bunch and connect them. Provision of vestibule connection, (f) Communication links.

(II) Shunting Requirements

(a) Attaching of slip coaches, (b) Geographical arrangement of coaches for shunting. (c) Attaching of extra coaches in rear of rear SLR.

(III) Passengers Convenience

(a) For passengers to easily identify the coaches and board the trains, (b) Convenient to detrain, (c) Keeping the coaches well within the platform (d) Provision of coach number indicators.

(4) Hauling capacity of the locomotives:

The loading of a train will be limited by the hauling capacity of the locomotive. When the speed increases the load has to be reduced. WAP4[Rajadhani] working 11 coaches with 120 kmph. WAP4 working 24 coaches with 110 kmph. WAM4 working 22 coaches with 110 kmph.

Conditions to run 24 coaches:

- 1] MPS 110 kmph.
- 2] Coaches with all coil ICF bogies are permitted.
- 3] All locos should be provided with Audio visual system.
- 4] At station where these train stops length of the platform shall be of 24 bogie length.
- 5] Air brake coaches to run at higher speed with efficient brakes.

Factors affecting the punctuality of passenger trains and measures taken to improve punctuality.

Punctual running of Passenger carrying trains is utmost important, as millions of passengers are using the rail mode daily. Because, there is no separate corridor for running passenger carrying trains, a keen monitoring of such trains is very much essential. It is a 3 tier monitoring agency. 1. At Railway Board Level. 2. Zonal Level. 3. Divisional Level. The type of monitoring the punctuality, keeps on changing depending upon the performance.

Some of the factors affecting punctuality of passenger carrying trains and methods to over-come this problem. It can be analyzed as follows:

CONTROL ORGANIZATION

CAUSES		REMEDIAL MEASURES
1.	Faulty preparation of Master Chart.	Clear preparation of chart.
2.	Poor Engine / Rake Links	Effective engine / Rake links reducing the idling time.
3.	Running Goods train ahead of passenger carrying train	All the passenger carrying train shall be given a path in "Express Block".
4.	Constant monitoring about running of passenger carrying train.	If train loses time, driver, guard can be cautioned to maintain the right time running.
5.	Offering the train engine for yard shunting.	If the train engine is offered for yard shunting, it shall be brought back timely.
6.	Not making use of simultaneous reception / common loop line facility.	Making use of all the traffic facilities for reducing the detention for reception.
7.	Not arranging crossing and precedence judiciously.	Arranging crossing and precedence judiciously.

8	No information to station about unloading	Take the particulars of unloading from Guard and warn the station in advance.
9	Meals message not received in time	Ensuring that message for meals are communicated to stations concerned in time.
10	Stabling of goods trains on main line	As far as possible stabling may not be done on main line.

AT ORIGINATING STATION

CAUSES		REMEDIAL MEASURES
1.	Late berthing of rakes.	Timely placement of rakes
2.	Late attaching of outgoing power	Timely attachment of Loco
3.	Late arrival of crew	Effective crew link to be made
4.	Poor maintenance of rake	Rakes to be examined & tested to avoid sick on platform.
5.	Failure of signals / communication	Goods maintenance of S & T.
6.	Performing shunting ahead of start of the train	All the cross movements are to be stopped
7.	Late take off signals	Departure signals are to be taken off on time
8.	Failure of shunting loco	Alternative arrangements must be made.
9.	Late loading, pasting of reservation charts	Loading shall be done quickly & reservation charts shall be pasted well in advance
10.	Yard derailments	Safe working will eliminate yard accidents.
11	SM is taking excess time for granting line clear or for clearing block section.	Prompt clearance of block section or granting line clear

WHILE ON RUN

CAUSES		REMEDIAL MEASURES	
1.	Not exchanging "All Right Signals".	1.	Staff to inculcate the habit of exchange "All Right Signals".
2.	Bad running of trains. Loosing time.	2.	Good Engine man ship.
3.	Excess caution orders	3.	Whenever a speed restriction is not required immediately to be cancelled.
4	Alarm chain pulling	4	Prompt action by Guard and checks to be conducted to prevent misuse of alarm chain.
5	Taking excess time for service of meals	5	Service of meals must be organized within the schedule halt.
6	Time loss for CD and bursting of engineering blocks	6	Ensure that the time loss does not exceed engineering allowance

AT DESTINATION

CAUSES		REMEDIAL MEASURES	
1.	Non-availability of platform line.	1.	Keeping platform line clear swiftly.
2.	Failure of signals / communication	2.	Good maintenance.
3.	Accidents in yards.	3.	Averting accidents by safe working.

In addition to above remedial measures Railway Admn. Should take following steps:

1. Punctuality registers in the control office must be maintained.
2. Daily punctuality meeting by the DRM.
3. Checking of control charts.
4. Checking of Guard's LTM report.
5. Monthly punctuality meeting by the DRM.
6. Daily watch at Zonal HQ and Railway Board level.
7. CPTM must undertake analysis of course wise and train wise detention.
8. Giving punctuality award.
9. Footplate inspection.
10. Punctuality drives

BOOKING OF SPECIAL TRAIN**Registration charges:**

1. Rs.50,000/- collected as registration charge cum security deposit per coach.
2. Payable at the station where proposed journey will commence.
3. Half retained as security deposit and balance adjusted towards fare payable at the time of booking.
4. Application submitted to Station Manager and Chief Passenger Traffic Manager of the Railways, giving details of destination, route to be followed and halts enroute.
5. Application to be submitted at least 30 days in advance and not more than 6 months prior to commencement of the journey,
6. In case any party requests for a special train at short notice, specific permission must be obtained from CPTM.
7. It will be sole discretion of the railway administration to allot special trains and programme its movement depending upon the availability of coaches/engines/path and other operational considerations.
8. If Railway administration is not in a position to arrange the running of special train due to the paucity of coaching stock or any other reason whatsoever, the amount of deposit fee will be refunded on application being made to the Chief Commercial Manager and after surrendering the original money receipt.
9. The CPTM of the railway will sanction the movement if found feasible and issue a programme for the entire tour in consultation with the CPTM of the other concerned railways, endorsing copies of the same to the concerned Station Managers and Divisional Control Officers.

10. Security deposit of Rs. 50,000/- will be valid for booking of a special coach for a period up to 7 days only and in cases where period of booking extends beyond 7 days an enhanced security deposit cum registration fee @ Rs.10,000/-per coach for every additional day will be collected from the party.
11. The Station Master of the originating station will also keep identification of person and legally permissible record of address proof of the party at the time of depositing security money for booking of special coaches/special trains. The address proof may be anyone of the documents issued by any State/Central Government or Nationalised banks.

Punctuality of Special Trains:

1. Railways do not guarantee the arrival or departure of special trains at the exact times specified nor will they be accountable for any loss or inconvenience which may arise to occupants from delays or detention to themselves or their luggage.
2. The Railways on which the tour originates will handover to the Organizers/Conductor of the tour or the person reserving the Carriage, Special Train etc. a folder in the form shown in Annexure 'f' of IRCA Coaching Tariff No.26 Part I, Volume 1 .
3. It is the duty of the Station Manager to fill up in the details in the folder presented by the party and initial and affix station seal.
4. It is the responsibility of the organizer/Conductor or the person reserving the carriage, special train etc to ensure that all the relevant particulars of this folder are obtained from the concerned Station Manager/Guard duly signed and affixed with station seal at each halt.
5. The folder will be required to be filled up only in respect of halts given at the request of the party either in the original programme or subsequently, and not at operational halts for railway convenience.
6. No special train or reserved carriage etc will be detained at a station at the instance of the party for a longer duration than that specified in the programme, approved by the Zonal Railway, unless such a request is received in writing.
7. Neither the Station Manger nor the guard of the train will start the train unless or the relevant halt particulars are filled up.
8. At the destination station, the guard of the train will be allowed to sign off by Station Manager unless folder entries for that station are filled up and station seal affixed,
9. On completion of the tour, the folder shall be submitted to the Station Manager of the Originating Station from which the tour originated, within 15 days of completion of the tour.
10. All applications received will be dealt as per order of priority according to their receipt in office

Minimum distance of charge: The minimum distance of charge for Special Trains/Coaches will be 500 kms separately for outward and return journey. In case of hill stations, minimum distance for charge will be the chargeable distance (inflated) of the whole section subject to a minimum distance of 200 kms. However, the minimum

distance for charge for special chartered AC Coaches attached to regular Rajdhani/Shatabdi type trains will be from end to end.

Minimum Composition of Trains: Fares for booking of Special Trains including Rajdhani/Shatabdi Express type trains will be for a minimum composition of 18 coaches. However, for the hill sections, the minimum number of coaches will be the maximum permissible load for the concerned section. The charging should be done for not less than the aforesaid composition. For instance, if the composition is 16 coaches, charges shall be realized for 18 coaches. However, if the composition is of 20 coaches, charges shall be realized for 20 coaches. The number of coaches falling short of minimum composition shall be charged at fares for **second** class coach. For example, if only 16 coaches in the special train are run, fares for second class coach shall also be charged for 2 coaches falling short of minimum composition.

Fare: The fares will be computed on point to point basis at full adult Mail/Express fare of the concerned Class for actual number of persons traveling or the marked carrying capacity of the coaches whichever is more, on round-trip basis, which means the fares shall be levied in the return direction up to the point from where the train originates. Fares shall be levied for the actual Class of the Coach subject to minimum fares for second Class. If extra passengers are carried, charges are levied on pro-rata per additional passenger declared before or at the time of commencement of journey at the starting station. Extra passengers carried without payment at the starting stations are charged pro-rata with penalty charges as per existing rules.

For reckoning carrying capacity, AC tourist cars and AC Saloons will be equated with AC first class and non- AC Saloons and First Class, Tourist Cars will be equated with first class coached and II class tourists cars with class II coaches.

Concession: No concessions are allowed to anybody including children and Sr.Citizens.

Service Charge: A service charge of 20% will be levied only on the base fare and not on any other charge /surcharge including safety, super-fast and reservation surcharge.

Payment of charges: All charges should be paid in full at the journey originating station, 48 hours in advance of the departure of the train, failing which it will be deemed that the running of the special trains has been countermanded by the organizers. The entire registration charge cum security deposit will be forfeited in this case.

Development Surcharge: Two development charges for outward and return journey will be levied as per existing rates as per class of travel.

Identity cards: At the time of booking, only the number of passengers will be required to be indicated while the names of the members of the party will be required to be submitted to the Station Manager before the commencement of the journey. The organizers must provide each member of the party with an Identity Token, duly stamped and countersigned by the Station Manager of the booking Station. These identity tokens will be treated as authority for moving in and out of the platform at the intermediate stations. There should be a time of 24 hours for submission of list of passengers to Station Manager before commencement of journey by a special train, Station Managers are however, permitted to allow last minute changes due to illness or any other exigencies upto 10% of the total number of passengers just before the departure of the special trains.

Empty Haulage Charge: Empty haulage charges will be levied at actual distance of empty haul at 50% of Full Tariff Rate (FTR) for the carrying capacity of the coaches subject to minimum haul for 200 kms. FTR will be calculated at fare including safety surcharge and reservation charge but excluding Service Charge. Empty haulage charge will be levied as above irrespective of whether the coaches are available at the station or brought from other base station.

Charges for SLR & Luggage Van : SLR Coach will be charged at carrying capacity of the Sleeper Class coach with Sleeper Class Fare. However, the utilization of luggage portion to the extent of carrying capacity of SLR coach may be allowed without levying any extra charge (luggage charges).

Detention Charge:

1. Detention Charges will be levied for detention of Special Train/Coaches at the request of the party at the starting, intermediate or destination stations.
2. Detention charges will be levied @ Rs.600/ per hour or part of an hour per coach uniformly for BG, MG and NG systems subject to a minimum charge of Rs. 1500/- per coach without giving any free time.
3. Whenever there is extra detention at any station on party's request beyond approved detention hours *and/or* alteration in the route after commencement of journey, charges arising due to such extra detention *and/or* alteration in the route should be collected by SM at the station itself where extra detention/ route alternation occurs.
4. In case extra detention/route alteration is done, it is SM's responsibility to ensure due detention and additional charges paid by the party before commencement from his station.
5. SM to keep a copy of updated tour programme completed till the departure of the coach/train from his station for six months.

6. An Excess fare receipt with suitable remarks, to the reason *for* the realization of the amount will be issued by the station where extra detention or alteration in the route has been approved giving due endorsement in the changed programme which will have to be produced by the party during remaining tour proof.
7. The Station Master should clearly advise the party not to indicate a specific train for further movement from a station in case they do not wish to detain the coach at that station and it is for the operating department to nominate next feasible train as per operating convenience of Railway.
8. Party, should be clearly advised that in case they indicate 'a 'specific train for further movement from a station the time duration for the connecting train will be treated as halt and they will have to pay detention charges in "full as per rules and will also forfeit the telescopic benefit due to treatment of such a station as break point.

Engine Detention Charges: These charges shall be applicable as notified by Board from time to time.

Ticket Checking: The number of passengers boarding from each of the points should be advised before start of the train The names of the passengers boarded should be finalized within three hours after departure of the train from each of the boarding stations. Names are essential primarily to identify bonafide passengers in case of need. Ticket checking in Special train/Special coaches booked on full tariff rate should be restricted only to head count.

These instructions are necessary to ensure that party coaches are not misused by the organizers and only genuine numbers are carried by these coaches.

Refund: SM of the journey originating station will refund the security deposit and over charges, if any, provided that the party has deposited the folder within 6 months of completion of the tour. If the folder is submitted after the normal time limit of 6 months and up to a maximum of 3 years of completion of tour, the General Manager, in consultation with FA & CAO will have full power to settle that case.

If the entries in the folder are not correctly obtained, or are with overwriting or not signed by the Station Master concerned, the application for refund of over charges /security deposit will be rejected

Cancellation Charges: If the requisition for special is cancelled 24 hours before the scheduled date of journey or earlier, 10% of the registration fee will be forfeited. If the cancellation is done 24 hours in advance and up to 4 hours before the scheduled departure of the train, cancellation charges shall be 25% of the chargeable fare and if the journey is cancelled within 4 hours before the scheduled departure of the train or after wards, the cancellation charges will be 50% of the chargeable fare.

Other

The Commercial Officers dealing with subject and Station Masters will keep a record of the parties booking special trains/special coaches who have not submitted folders within the prescribed period. Such parties who have not submitted the earlier folders should not be permitted to book special coaches/special trains till the earlier dues are settled with the journey originating railway after submission of the earlier folders.

In case any party fails to submit the folder on completion of the journey within the 'prescribed period' and fails to settle the dues with the journey originating Railway this fact may be communicated to all zonal railways by the originating railway so that further booking by the party on other railways may be barred.

ENGINE LINK & UTILIZATION

OBJECT OF ENGINE LINK

- Optimum utilization of locomotive.
- Reduction in additional requirement of locomotive.
- Timely & proper maintenance schedule of locomotive.

ENGINE LINK

- It is prepared by mechanical department in the zonal HQ in coordination with operating department. Dy.CME(R) is nominated mechanical officer whereas CPTM is approving authority in operating department.
- It is prepared at the time of revision in Time table & in mid-session if any new train is introduced, it is revised accordingly.

DETAILS AVAILABLE IN ENGINE LINK

- 1) Link no. with locomotive shed
- 2) Total locos required in link.
- 3) Common brake or Air/Vacuum
- 4) Total days in link with the name of train & timings
- 5) Total kms covered daily trip wise
- 6) Lie over period at individual Jn. stations
- 7) Total lie over period in the link
- 8) Kms per day per engine in use excluding shunting kms per day.
- 9) Schedule hours in shed
- 10) Indicative shut down hours per day & place
- 11) Fuelling stations over Rly. where fuelling is scheduled

- 12) Regular late running of any link train to be taken care of
- 13) Loco in return home shed for due schedule/ maintenance

The following precautions are to be taken to work out Engine Links:-

1. Engine links are prepared to work out the requirement of engines for Mail & Exp., Passenger and Sub-urban trains.
2. These links will be drawn as per Working Time Table Timings.
3. Follow the rake links as far as possible.
4. Diesel loco need to be given schedule after every 4000/5000 Kms.
5. At least minimum of 8 hrs to be given for schedule attention.
6. If the link locos more than 30, one additional loco to be provided in link to cater higher schedules.
7. Indicate wherever fueling is necessary.
8. Similarly, for electric loco trip inspection need to be provided after every 3000 kms.
9. Electric locomotives need shed attention of at least 10 hrs after every 40 days.
10. For every 40 link locos one locomotive to be inducted in link.
11. Links to be drawn separately for Mail/Exp and Passenger trains.
12. During long lie-over at terminals, Engine may be planned for short trips.
13. For a long distance coaching trains as far as possible, avoid cutting off engines at intermediate junction points.
14. On each link workout for scheduled Kms, Total Kms and Kms per Day per Engine in use.
15. Out stations scheduled to be avoided for Diesel locos, whenever necessary, one out station scheduled is given with 6 to 8 Hrs. time for schedule.
16. As far as possible plan for day schedule, do not bunch locos for schedule attention.
17. Sufficient time at terminating stations is to be given for picking up another train.
18. Generally there is a heavy lie over of link locos at change of traction points.
19. As a thumb rule, if the lie over of each of the two locomotives cannot be brought below six hrs, then the Diesel loco may be extended under wire, so as to economize the over all links.
20. While drawing Diesel loco links ensure lie over locos where ARMVs and ARTs are stationed.

OBJECT OF ENGINE UTILIZATION

1 To achieve economy

- Being costliest asset
- Additional carrying tonnage

2 To achieve efficiency in operation

- Better availability of powers
- Quick clearance from yard/station
- Fluidity of reception/sorting lines
- Reception without detention short of terminal
- Improved average speed

ALLOTMENT OF LOCOMOTIVES

It is based on prescribed target for engine utilization.

BASIS OF PRESCRIBING TARGETS

It is prescribed Rly/Div wise on the basis of –

- Target turn round of locomotive
- Target engine kms per engine day on line or in use
- Target net tonne kms per engine day on line or in use

NOTE : Excessive holding over outage without traffic increase in Rly. and divisions are closely watched by Rly. Bd and by COM/CFTM in zonal HQ respectively which indicates deterioration in engine utilization.

PER DAY TARGET UTILIZATION

- For engine trip inspection/maintenance.. 03 hrs.
- In traffic use .. 21 hrs.
 - A) Train engine hrs .. 17 hrs.
 - B) Detention in yard/terminal .. 04 hrs.

MONITORING

- Overall efficiency indices for operating performance by top management-

Crew and Guard link**Human Asset**

- Important Asset in Organization
- Most Expensive Asset in Organization
- Only Wages forms approx. 46.9% of ordinary working expense on open line staff
- Wages and pensionary expenditure is about 56% of total working expense.

Running Staff

Crew (Driver & Asst.) & Guard are running staff who are most costly man power asset because-

- 30% pay element is considered even during payment of leave salary.
- 55% pay element is considered for all retirement benefits including pension.
- 150/120 Kms. per day running allowance is admissible even for static duty.
- Kms. allowance is admissible even during casual leave.
- Breach of rest (BOR) allowance is admissible if called to work the train or booked for duty during their rest period
- No. of other allowances are also admissible to running allowance.

Objects of Link

- Better planning for optimum utilization of running staff.
- To increase crew and Guard productivity .
- Reduction in crew and Guard requirement .
- Reduction in staff cost expenditure.
- To improve financial health of the Railways.

Factors Considered in link Preparation

- Mandatory provisions –
 1. 10 Hrs. duty rule.
 2. HOER
 - ❖ Maximum duty period.
 - ❖ Maximum rest at HQ station
 - ❖ Rest at out stations
 - ❖ Other conditions for providing rest
- Availability and adequacy of running room at out station.

Salient points to be observed while making driving crew links.

1. Coaching links will be drawn as per HOER

2. Coaching links are drawn to the maximum extent within the stipulated 96 hrs laid down by Rly.Board.
3. Senior most crew (Mail/Exp) will be booked to work Rajdhani/Shatabdi/Duronto trains.
4. As per seniority Super-fast/Mail/Exp trains links are drawn.
5. Passenger/Suburban/Local train links are drawn separately.
6. Non-daily links are drawn separately.
7. Crew should cover all directions to avoid LR laps.
8. The duty hours should not exceed 8:00 to 10:00 hrs.
9. Crew should not be away from H.Qrs for more than 3 to 4 days.
10. One time by-passing of H.Qrs is permitted.
11. More than 6 continuous night working is not permitted.
12. Links should not be lengthy, to be divided into 10 to 12 men per link.
13. Mail/Exp casualty will be filled by senior LP/Pass.
14. Pass casualty will be filled by senior Goods crew screened by a Committee.
15. In case of emergency, if screened crew are not available to work the trains, LI should accompany upto destination.
16. Observation of ten-hour rule
17. 16-hours rest at home station normally Or 12-hours rest in case of emergency
18. In case of critical emergency period, like accidents and derailments, driver has to work further irrespective of his number of hours working.
19. In a month driver should be given 4 periodic rests of 30 hours or 5 periodic rests of 22 hours with 1 full night rest during 22 hours / 06 hours.
20. Total working hours should not exceed 96 hours for Passenger crew and 104 hours for goods crew for every 2 weeks.

GOODS CREW

- **Booking of freight crew;**
 - 1st week – 1st in 1st out basis (as per availability)
 - 2nd week as per cumulative hours i.e. less hrs will be given priority.
- Stipulated duty hrs of goods crew is 104 hrs per fortnight.
- If crew burst 104hrs OT will be paid.
- The requirement of Loco Pilots, Assistant Loco Pilots and Guards shall be calculated based on the average duty hours per fortnight for the corresponding period of six months i.e. 12 fortnights of preceding year. It shall be ensured that their duty hours are at least 90 hours in a fortnight from signing on to signing off.
- Also the Staff retiring on Superannuation and Voluntary will be considered at the time of calculating the requirement.
- Method of providing LR, Traffic fluctuation (TF), and Total Requirement (TR) on bare requirement is as follows

S.No	Particulats	LP (GOODS)	ALP (GOODS)	Guards
(i)	Bare requirement	R	S	T
(ii)	Leave Reserve	R x 30%	S x 30%	T x 30%
(iii)	Traffic fluctuation	R x 10%	S x 10%	T x 10%
(iv)	Total	(i)+(ii)+(iii)	(i)+(ii)+(iii)	(i)+(ii)+(iii)
(v)	Trainee Reserve	(iv) x 10%	(iv) x 10%	(iv) x 10%
(vi)	Total requirement	(iv) + (v)	(iv) + (v)	(iv) + (v)

Calculation of Coaching Crew

- Bare requirement of LP, ALP and Guard should be worked out based on certified crew links.
- Percentage to be applied on bare requirement for leave
- Reserve (LR) and Trainee Reserve (TR) is as under:

S. No	Particulats	LP (as per crew link)	ALP (as per crew link)	Guards (as per crew link)
(i)	Bare requirement	R	S	T
(ii)	Leave Reserve	R x 30%	S x 30%	T x 30%
(iii)	Trainee Reserve	R x 10%	S x 10%	T x 10%
(iv)	Total requirement	(i) + (ii) + (iii)	(i) + (ii) + (iii)	(i) + (ii) + (iii)

- 30% Leave Reserve and 10% Trainee Reserve should be provided for LP (Mail/Exp/Pass) in the category of LP (Pass) only.
- 12.5% Leave Reserve on Loco Inspectors (LIs) also to be added in the category of LP (Pass) only.

Preparation Of Coaching Links

- (1) Section on which a new train has to run
- (2) Type of stock working in section (AB or VB)
- (3) Type of loco to suit No. (2) is AB or DB
- (4) Nearest shed from where loco to be taken out
- (5) Outlet & inlet from / to where for the loco
- (6) Connecting train at outstations as per link minimum time that should be provided is 2 hours but if rake link & engine link are same, follow the arrival and departure of that train.
- (7) Avoid outstation schedules as far as possible
- (8) at home stations, day schedule is a must for better performance of locos.
- (9) Avoid LE movements from shed and to shed
- (10) Proximity of RCDs for fuelling of locos.

RAKE COMPOSITION AND UTILISATION OF COACHING STOCK

1. There has been a phenomenal growth of 3% every year in passengers traffic.
2. The facilities in rail travel should also improve to the satisfaction of the passengers.
3. Normally passengers look forward for a comfortable, safe, punctual and cost efficient travel.
4. There has been a considerable development over providing the above needs of a traveller composition of Rakes and their linkages would definitely help in offering the comfortable, safe and punctual travel.

RAKE COMPOSITION

While deciding the composition of the rake the following aspects are to be kept in mind.

- (i) Length of the train.
 - (ii) Types of coaches to be provided
 - (iii) The marshalling of coaches on trains.
- (i) The length of the Train: This depends on two main factors
- (a) Quantum and nature of Passenger Traffic.
 - (b) Technical considerations.
1. The population and further the awareness level on travel has increased enormously.
 2. There by eventhough there is a slump in the market share on passenger business, a steady progress will bring back the railways on the driver's seat.
 3. The average lead of travel also has been increased to 200% over 50 years.
 4. Almost every class of travel whether it is suburban or non suburban there is an increase in passenger traffic.
 5. If we analyze non suburban traffic upper class travel has been increased to nearly 2 times, Second class has been increased to 10 times. Second ordinary non suburban traffic has increased to nearly 2 times.

6. Hence while deciding the rake composition, it should be able to accommodate the above class passengers more. (Upper Class, M/Exp. Second and Ordinary).
7. In overcrowded areas and during seasons generally there is a demand for additional trains.
8. This has been taken into consideration every time whenever time tables are revised.
9. Every year in the budget new trains are announced and run or the frequency is enhanced.
10. All the above may cause a strain on section capacities, terminal capacities.
11. With the increasing availability of powerful locomotives, the rakes of important trains can be progressively augmented.
12. The following factors, however put a limitation to the extent of loads of passenger rakes to be augmented.
 - Passengers Convenience
 - Operational Convenience
 - Length of Loop Lines
 - Hauling capacity of locomotives.

(a) Passenger's Convenience:

As the number of bogies per train has been increased on certain train passenger have to be made to board the train and travel comfortably. Some of the factors to be kept in mind

for passenger convenience are

- i. Same class of bogies to be grouped and placed at ends.
- ii. Indication boards bearing the number of bogies to be provided on platform.
- iii. Adequate water taps, water coolers, refreshment stalls on platforms are to be kept.
- iv. Length of platform to be extended in order to accommodate all the bogies and also a circulating area for passenger.
- v. Halting time at intermediate stations are convenient for passengers to locate and board the train.

(b) Operational Convenience:

- i. To initiate action in case of stoppage of train in mid section like ACP
- ii. To exchange of all right signals.
- iii. To supervise loading/unloading
- iv. To have a check up by guard, whether passengers have boarded the train.

c) Length of Platforms:

Railway Board letter dated. 05.12.1986, directed all the General Managers to plan for 26 coaches per train on various sections.

RAKE LINKS

There are nearly 39,853 coaching vehicles deployed to run 9000 passenger carrying trains, daily in Indian Railways. The coaching vehicles are grouped together suiting to the requirements (like passenger convenience and operational consideration) form rakes. In recent times these rakes are planned for the best utilisation by forming their linkages,. Called **"Rake Links"**.

Consequently rake links are nothing but planning the movements of rakes to various

destinations in order to reduce idling hours before or after their regular maintenance schedule.

Advantages of Rake Links:

- (a) More service to the required/needed area.
- (b) Idling hours of coaches reduced before or after the maintenance schedule.
- (c) Coaching yard congestion is reduced
- (d) Utilisation of coaches increases.
- (e) More Passenger throughput thereby more revenue to railways.
- (f) More availability of platforms, pit lines and maintenance lines.

- 2. Time and station where primary and secondary maintenance of rakes are undertaken
- 3. Time for shunting placements and removal of coaches at various checking points
- 4. Optimum utilisation of coaching stock.

The schedule of the train is drawn by the respective Zonal Railway so as to run to the maximum before taken for the regular maintenance. This is published through a booklet by COM and CPTM.

Primary Maintenance:

Rakes are allotted to be placed for primary maintenance at the nominated C & W depots and it is stenciled on the body of the coaches. It is also published that where a rake has to be despatched for primary maintenance.

During the primary maintenance all the scheduled repairing like replacing of axle boxes, overhauling of cylinders, clappet valves testing, water tank washouts etc., are Undertaken.

Other necessary repairs and normal safe to run examination are also carried out on a periodic basis. Defences in various internal links, fittings and train lighting

OPTIMUM UTILISATION OF COACHES

Indian Railways has nearly 38,000 coaches deployed to carry 147 Million Passengers in more than 9000 trains. The better utilisation of one of the costliest assets coaching stock utilisation is gauged on its PKM (Passenger Kilometer Performance).

Every coach has a useful life of 25 - 30 years since its deployment. Within its life span, the maximum utilisation has to be achieved. Which gives better service to the passengers and also maximum revenue to railways.

A survey conducted by the efficiency bureau suggested that vehicular usage can still be improved. There is a scope for further improvement. If we look into following factors and steps are taken to improvement, coaching stock utilisation can well be improved.

1. Pattern of Train Services: Instead of slow moving short/medium range passenger trains, run fast moving long distance trains.

2. Rake Links: Provide the best links for the rakes in order to reduce idling time in maintenance depots.

3. Excessive Holding Stock: This leads to coaching yard congestion and stock lie unused and spare. Normally 8% is spare in excess of the total holding is considered ideal. From time to time this is reviewed.

4. Percentage of Ineffective Stock: The 8% excess in total holding of coaches has to replace the sick coaches. The ineffective coach position has to be watched and attended to.

5. Monitoring the movement of Coaches: A watch over the movement of coaches has to be done at divisional level and zonal level. Previously a system called “Cardex System” was in practice to record the movement of all coaches. After installation of computers, the monitoring is done still effectively. After full implementation of COIS (Coaching Stock Information System) it will be able to know where exactly a particular coach is available.

VIII. Accidents and Safety Organization:

- n) Accidents, type and their classification, causes and their prevention.
- o) Functioning of the Railway Safety Organization
- p) Chief Commissioner of Railway Safety and his functions.
- q) Rules for reporting accidents.
- r) Action to be taken in case of accidents.
- s) Functioning of the various officials and departments during accidents.
- t) Responsibilities of the control organization and of Stations Masters and Traffic staff on the affected section.
- u) Accident enquiries and DAR action against staff held responsible for the accidents.
- v) Review and analysis of accidents
- w) Accidents statistics – Returns
- x) Scientific analysis through psychometry and the accident proneness of staff connected with train/station or yard operations.
- y) Improved Mechanised aids to prevent human error.
 - i. Improved signaling and inter-locking arrangement.]
 - ii. SM's Control and inter cabin control over routes.
 - iii. Track circuit and axle counters
 - iv. Route Relay Inter locking
 - v. Automatic cab warning system and automatic braking system.
- z) Safety camps and safety campaigns.

CRS ORGANISATION

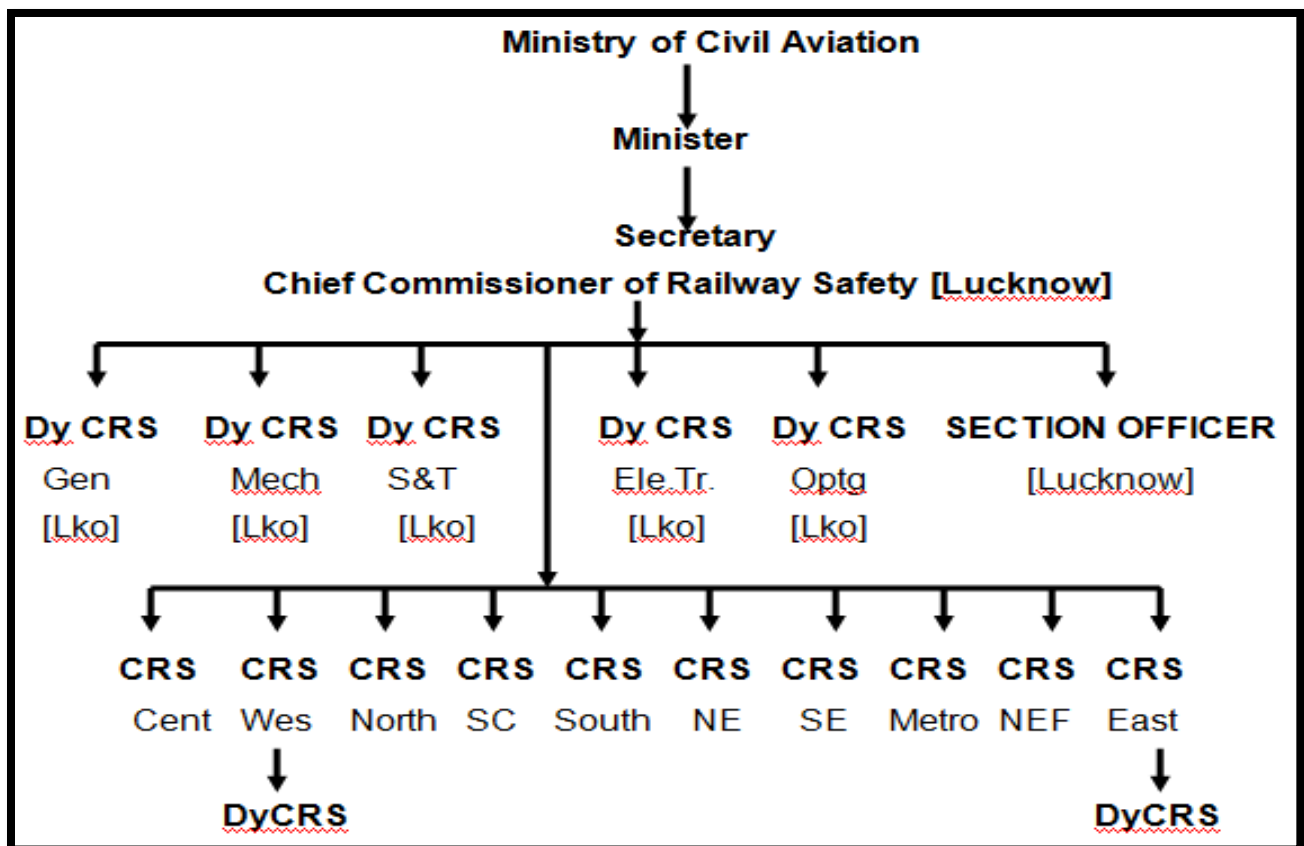
Commissioner of Railway Safety means an Inspector appoint to exercise any functions under the Act.

Approved special instructions means special instructions approved or prescribed by the CCRS/CRS.

History: When Railway was first opened in India consulting engineers were appointed by the Govt as Inspecting Officers. After 1905 the consulting engineers were abolished and replaced by Govt. Inspectors who are under the Control of Railway board. On 12th May 1941, Government of India agreed to the separation for Railway and a railway inspectorate was formed under the Dept of posts and Air. After wards the designation of Government inspectors of Railway was revised to that of CRS.

Head of the organization is CCRS. All these officers are senior civil engineers chosen from the IRSE. He is the rank of PHOD.

ORGANISATION CHART OF CRS



Circle offices and their Head quarters

Name of the Circle	Head quarter
---------------------------	---------------------

1. Central circle	Mumbai
2. Western circle	Mumbai
3. Northern circle	New Delhi
4. South Central circle	Secunderabad
5. Southern Circle	Bangalore
6. North eastern circle	Lucknow
7. South Eastern circle	Calcutta
8. Metro circle	Calcutta
9. North east frontier circle	Calcutta
10. Eastern circle	Calcutta.

1. **Sec 5 of Railway Act 1989** provide for appointment of CCRS and CRS by the Central Government.
2. **Section 6** provides duties of CCRS/CRS
 - a. Inspect any railway with a view to determine whether it is fit to be opened for the public carriage of passengers and report thereon to the central government.
 - b. To make periodical and other inspection of any railway or any rolling stock.
Sanction for introduction of electrified line and new types of locomotives. Before sanctioning he may conduct field inspection of all newly electrified lines, trial runs of new loco, rolling stock.

Sanction of new minor works : No work on a line open to passenger likely to affect the safety of the passengers shall be undertaken without the sanction of CRS.

Annual inspections : CRS also accompany the GM during the inspection of open lines. During inspection, the CRS considers it necessary that any particular work be carried out in the interest of public safety he makes a special report to CCRS

Sanction for movement of ODC : To move C class ODC sanction should be obtained from the CRS. Detailed instructions for the safe transport of such consignments are framed and issued under the sanction of CRS

- C. To make inquiry Under the Act into the causes of any accident on railways Sec 116 empowers the CRS with powers of Civil Court under the Cr.PC in respect of

Summoning attendance or persons

Requiring production of document.

During the inquiry he determines the cause of the accident, fixes the responsibility and suggest remedial measures to avoid similar accidents in future.

CRS will forward a brief preliminary report to CCRS and GM by D + 10 days.

CRS will submit his detailed report to CCRS and authorities by D + 60 days.

By D + 180 days railway shall finalise DAR inquiry and send details of staff and punishment imposed.

d. To perform such other duties as are imposed on him

Recommendations made by the CRS regarding improvements in the standards of recruitment, maintenance procedure, safety rules etc., may be accepted by the railway administration.

It is a statutory authority. His recommendations/suggestions are recommendatory but not mandatory. Had it been a constitutional authority like CAG, its recommendations/suggestions would carry more weight than at present.

In the SWR to be issued involves any matter in which GR requires issue of approved special instructions, necessary sanction from the CRS should be obtained.

3. **Sec 7** provide powers of CCRS/CRS

- He may enter upon and inspect any Railway or any rolling stock.
 - He may order Railway administration for attendance of any railway servant and to require answers or returns to inquiries.
 - He may require the production of any book, document or material object to inspect.
4. **Sec 8** lays down that commissioner shall be deemed to be a public servant.
5. **Sec 9** lays down that railway administration shall afford all reasonable facilities to the commissioner in the discharge of his duties.
6. **Sec 9** deals with the responsibility of CCRS to prepare annual report and forward to the central government.
7. **Sec 113** sub section[2] imposes an obligation on the railway administration to give a notice of accident to CRS
8. **Sec 114** empowers the CRS to hold inquiry into any railway accident mention in the Sec 113.
9. **Sec 115** provides that in cases where CRS not able to hold an inquiry, the same may be held by the railway administration.

COMMISSIONER OF RAILWAY SAFETY**1001 'All concerned' telephonic message to the Commissioner of Railway**

Safety: The Commissioner of Railway Safety shall be included in the 'All Concerned' telephonic messages in case of the following accident classes.—
A1 to A4; B1, B2 & B3; C1, C2 & C4; D1 to D3; K3; N1 & N2.

1006 Statutory investigation into Railway Accidents - under Section 122 of the Railways Act, 1989 (24 Of 1989): Inquiry into a serious accident by the Commissioner of Railway Safety:

1. Under Section 113 of Railways Act 1989 all serious accidents to be reported to CRS
2. If CRS feels to conduct inquiry due to the serious in nature of accident shall notify CCRS, Rly Board and GM of the respective Zones immediately.
3. CRS shall fix a date, time and place of inquiry and communicate.
4. CRS shall also issue press notification calling for witness from public to give evidence and information relating to accident to his office address.
5. CRS shall also inform the District Magistrate and SP of the district concerned.
6. Apart from the serious accidents if in the opinion of CCRS or CRS requires holding of an inquiry shall be deemed to be an accident of serious nature.
7. If CCRS desires to hold inquiry he can do so himself or can direct CRS to conduct the inquiry.

EXPLANATION :

1. The inquiry under this rule shall be obligatory to cases where the passengers travelling in the train, killed or grievously hurt.
2. If a person travelling on the foot-board or roof of a passenger train is killed or grievously hurt or if a person is run over at a level crossing or elsewhere on the railway track, an inquiry under this rule shall not be obligatory.
3. Similarly, if in a collision between a road vehicle and a train carrying passengers at a level crossing, no train passenger is killed or grievously hurt, it shall not be obligatory for CRS enquiry.
4. Workmen's trains or ballast trains carrying workmen shall also be treated as trains carry passengers trains and in the event of a workman being killed or grievously hurt as a result of an accident to the train, an inquiry under this rule shall be obligatory.
5. Where the jurisdiction of two or more Commissioners of Railway Safety meet, the duty shall devolve on the Commissioner of Railway Safety within whose Jurisdiction the Railway working such a station lies.
6. If, for any reason, the Commissioner of Railway Safety is unable to hold an inquiry at an early date after the occurrence of such an accident, he shall inform the Head of the Railway Administration concerned and the Railway Board accordingly and he shall also inform the Chief Commissioner of Railway Safety of the reasons.
7. On receipt of the proceedings of the Joint Inquiry (inquiry made by a Committee of Railway Officers) from the Head of the Railway Administration in accordance with rule 214 of Railway (Notices of and Inquiries into accidents) Rules, 1973, the Commissioner of Railway Safety shall scrutinize the same.

8. In case he agrees with the findings of the Joint Inquiry, he shall forward a copy of the report to the Chief Commissioner of Railway Safety along with his views on the findings and recommendations made.
9. If on the other hand the Commissioner of Railway Safety, after examination of the joint inquiry proceedings, considers that an Inquiry should be held by himself, he shall, as soon as possible, notify the Chief Commissioner of Railway Safety, the Railway Board and the Head of the Administration concerned, of his intention to hold an inquiry.
10. He shall at the same time, fix and communicate the date, time and place for the inquiry.
11. Where Central Government has appointed a Commission of Inquiry to inquire into the accident under the Commissions of Inquiry Act 1952 (60 of 1952) or has appointed any other authority to inquire into it and for that purpose has made all or any of the provisions of the said Act applicable to that authority, the CRS to whom notice of the accident has been given shall not hold his inquiry.
12. If CRS commenced his inquiry, he shall not proceed further with it and shall hand over the evidence, records or other documents, in his possession relating to the inquiry to such authority as may be specified by the Central Government in this behalf.
13. If, as a result of the police investigation, a regular case is lodged in criminal court by the police, the Commissioner of Railway Safety shall discontinue his inquiry.

1007 Attendance of Railway employees to attend Inquiries:

1008 Officers to assist Commissioner of Railway Safety —

1009 A brief Preliminary Narrative Report:

1010 Final Report: Whenever the Commissioner of Railway Safety has made an inquiry under rule 228, he shall submit a report in writing to the Chief Commissioner of Railway Safety and shall forward a copy of the report each to

- a. The Railway Board;
- b. The Railway Administration concerned;
- c. In the case of a Railway under the control of a State Government or Local Administration to such Government or Administration also;
- d. The Magistrate, making the inquiry if a magisterial inquiry is being made; and
- e. The Director, Intelligence Bureau, Ministry of Home Affairs, Government of India, if the commissioner of Railway Safety finds that the accident was caused by sabotage or train wrecking.

1011 Action on the report by Railway Administration: Whenever the Head of the Railway Administration concerned receives a copy of the report of the Commissioner of Railway Safety under rule 230 of the statutory investigation into Railway Accidents Rules, 1973, he shall at once acknowledge its receipt.

If he differs from the views expressed in the report, he shall at the same time submit his remarks thereon, or, if he is not able to do so immediately, he shall, in his acknowledgement of the report, inform the Commissioner of Railway Safety of his intention to submit his remarks later. If the Head of the Railway Administration concerned considers the prosecution of any person or persons desirable, he shall immediately forward a copy of the report together with a statement of such persons to the District Magistrate of the District in which the accident occurred, or to such other Officer as the State Government may appoint in this behalf and to the concerned Police authorities. On receipt of the findings of the Commissioner of Railway Safety, the Police Authorities shall, as soon as possible, intimate the Head of the Railway Administration concerned about their decision regarding launching of any prosecution.

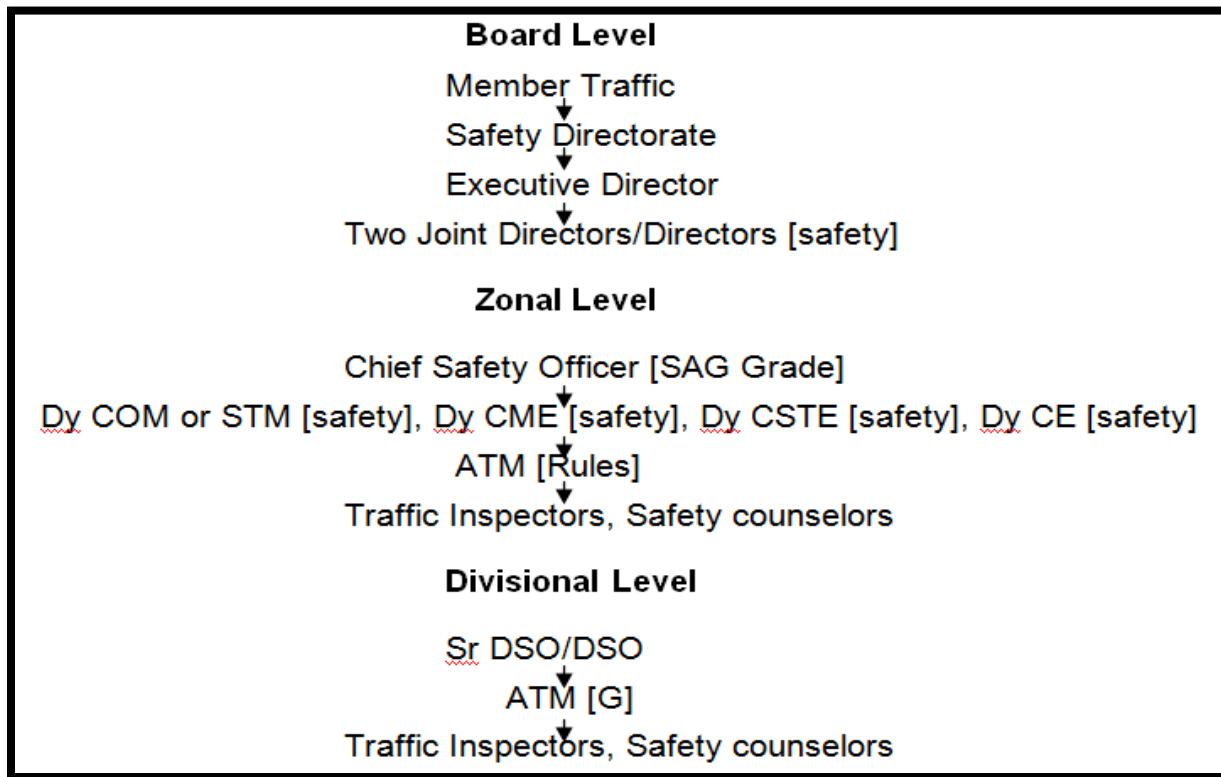
s.No.	Target	Activity
1	D	Day of accident
2	D+3	CRS will commence his inquiry
3	D+10	CRS will forward a brief preliminary report, provisional findings and immediate recommendations to CCRS, GM of Railway concerned, Railway Board and Secretary, Ministry of Civil Aviation. On receipt, Railway Board, will forwarded to Directorates concerned for suitable action on immediate recommendations.
4	D+30	(a) GM of Railway concerned will furnish remarks along with action taken to CRS and Railway Board. (b) Action taken by Directorates will be communicated to Safety Directorate.
5	D+60	CRS will submit his detailed report to CCRS and a copy to each Authorities mentioned above. It will be put up to DRM and PHODs concerned. CSO shall consolidate all these remarks and along with his remarks submit to GM for his final remarks. All these remarks along with GM's remarks shall be sent to CCRS, CRS and Railway Board /Directorate concerned for action on the Inquiry Report. The Directorate concerned shall take suitable action on recommendations and will guide Zonal Railways on important policy matters.
6	D+90	On receipt of the final inquiry report, GM of Railway concerned shall forward his comments on the final inquiry report to CRS with copy to CCRS and Railway Board. On receipt of final inquiry report, Safety Directorate will forward views of Safety Directorate to CCRS.
7	D+110	CCRS will submit his note on inquiry report to Secretary /Ministry of Civil Aviation forwarding simultaneously copies thereof to Railway Board. Comments of CCRS will be forwarded to different Directorates for suitable action.

8	D+140	Directorates concerned will submit action taken report on recommendations of CRS and comments of CCRS, after getting the same approved by the Executive Director concerned. (a) In case, recommendation has been accepted and instruction has been issued, 30 copies of the same should be forwarded to Safety Directorate. (b) In case, any recommendation is not acceptable, approval of the Board (Member concerned) must be obtained and communicated to the Safety Directorate.
9	D+180	Railway Board will communicate their views on the report to CCRS endorsing a copy to Zonal Railway. Railway shall finalise D & AR Inquiry and send details of staff held responsible along with the details of punishment imposed in each individual case.

Organizational setup and functions safety organization

Safety Organisation

The safety organisation of Indian Railways was created in pursuance of the recommendations of the Kunzru committee and was strengthened on the basis of further recommendations made by the Wanchoo committee. A full-fledged safety organization is now functioning on Indian Railways in a three-tier arrangement.



Functions – Railway Board

1. It focuses attention on policies and procedures having bearing on safety.
2. It keeps watch over all the functions relating to safety, monitors and analyses the long term trends of the accidents, examines a various suggestions and recommendations.
3. It follows up the implementations of recommendations and conducts spot checks to see whether safety regulations and measures adopted are being implemented.
4. It also initiates and examines proposals for introduction of new technology as a long-term measure.
5. Standardise good points and procedures in use of any zonal railway for adoption on the others.

Functions - Zonal Railway

1. Thoroughly examine the proceedings in connection with the Railway accidents submitted by the various divisions and to see that inquiries are conducted satisfactorily.
2. Study the irregularities brought to light by the inquiry reports in the context of similar accidents in the past and to evolve the action necessary for their avoidance.
3. Scrutinise the working rules issued from time to time
4. Carry out test checks of the Divisional officers to ensure proper and uniform standards.
5. Carrying out of frequent inspections by the head of safety organization.
6. Under take safety propaganda by issuing posters and distributions of educative literatures, screening of film slides, promoting safety contests, offering prizes and rewards and arranging meeting and inspiring talks.
7. Arrange safety seminars, safety quiz.
8. Be intimately associated with the working of the Zonal Training Centers, which should be regularly visited by the CSO. The attendance of the staff at the various courses and the quality of the training imparted should be watched.

Functions – Division

1. Look to the finalisation of the inquiries into railway accidents, preparation of station working rules, inspections of stations and the follow up action on them.
2. Watch the training of the Operating staff in the division.
3. Under propaganda for the prevention of accidents by arranging lectures and meetings and also by issuing bulletins posters etc.,
4. Ensure the supply of rule books, first aid boxes, forms, uniform etc.,
5. Exercise the check on the observance and rules by all categories of railway staff.

ACCIDENT MANUAL

Accidents: (AM 101) For the purpose of railway working, accident is an occurrence in the course of working of railway which does or may affect the safety of the railway, its engine, rolling stock, permanent way and works, passengers or servant or which affect the safety of others or which does or may cause delay to train or loss to the railway. For statistical purposes accident has been classified in categories from 'A' to 'R' excluding 'I' and 'O'.

Classification of accident: Accident is classified under the following heads: **(AM 101)**

1. Train accidents
2. Yard accidents
3. Indicative accidents
4. Equipment failure
5. Unusual incidents

1. Train accidents:

Train accident is an accident that involves a train. Train accidents further divided as

- a. Consequential train accidents and
 - b. Other train accidents
- a. Consequential train accidents: Having serious repercussions in term of loss of human life, injury, loss to railway property or interruption to rail traffic.
- Collision - A-1 to A-4, Fire - B-1 to B-4, Level crossing - C-1 to C-4
- Derailments - D-1 to D-4, Miscellaneous - E-1
- b. Other train accidents: Not covered under consequential train accidents.
- B-5, B-6, C-5 to C-8, D-5 and E-2.

II. **Yard accidents:** Take place in yard and does not involve train- A-5, B-7, C-9 and D-6.

III. **Indicative accidents:** They are serious potential hazards.

(i) Averted collision – F

(ii) Breach of block rules – G

- Train entering block section without any authority or with improper authority
- Train received on blocked line not constituting an averted collision.
- Train received on/or entering wrong line at a station or catch siding or slip siding or sand hump etc.,

(iii) Train passing signal at danger – H

1. When train passes a fixed stop signal including a banner flag or Engineering stop indicator (other than IB, Automatic & Gate signals) at danger without any authority or with an improper authority.
2. The fact that a Loco Pilot has passed a Stop signal at danger, should be brought to the notice of SM through a written memo by the guard of train.
3. SM / ASM / Pointsman must confront the Loco Pilot and Guard with regard to the position of the signal and the position of the lever / knob concerned.
4. The position of the signal and route should be recorded by the SM and signed by the SM, Loco Pilot, Guard and other witnesses, if available.
5. The distance by which the train has passed the signal should be recorded by the length of engine + coach/wagons and / or telegraph/OHE posts, or by measuring the actual distance in metres.
6. In the night time, the brightness of the signals should be noted. The weather condition such as foggy/tempestuous condition also be recorded.
7. If the Loco Pilot is required to use glasses, it should be checked whether he was in possession of them and using them.
8. Arrangement for testing brake power of the train shall be made by Officers / Sr. Subordinates at the nearest C&W examination point.
9. Breathalyzer test of the Loco Pilot/ALP should be done immediately and blood samples of LP/ALP should be collected.
10. The Loco Pilot /ALP shall be sent for further medical examination.
11. Data logger output in relation to this incident should be obtained from S&T officials.

IV. Equipment failure:

- (J) - Failure of loco, rolling stock,
- (K) - Failure of Permanent way (K),
- (L) - Failure of OHE ,
- (M) - Failure of S &T equipment.

V. Unusual incidents: Related to law and order but not resulted into the train accidents

- (N)-Train wrecking/sabotage, /Bomb blast/Explosion/hijacking
- (P)- Casualties Incident of persons falling out of train or run over,

(Q) - Other incidents- Natural death or murder or suicide or robbery or blockade to train services &

(R) - Misc-vehicle running away, cattle run over or floods, breaches or landslides.

Engine Failure and Time Failure: (AM 113)

- (a) An engine is considered to have failed when it is unable to work its booked train from start to destination. Reduction of the load for a part of the journey would constitute an engine failure, provided this is due to a mechanical defect on the engine or mismanagement on the part of the engine crew.
- (b) When an engine causes a net delay of one hour or more throughout the entire run owing to some mechanical defect or mismanagement on the part of the engine crew, it would constitute a time failure. Trains stalling due to engine trouble or mismanagement by the engine crew necessitating working or the train in two portions would constitute a time failure provided the net loss of time on the entire journey exceeds an hour.

Accident Sirens (AM APPENDIX I -1)

- 1) 2 long - Accident takes place in the loco shed or traffic yard adjoining loco shed.
- 2) 3 long - Accident takes place at out station but main line is clear. Only ART required.
- 3) 3 long one short - Accident takes place at out station but main line is clear and the relief train is to be turned out with medical van.
- 4) 4 long - Accident takes place at out station and main line is blocked and the relief train is to be turned out without medical van.
- 5) 4 long one short - Accident takes place at out stations the main line is blocked and the relief train to be turned out with medical van.

The duration of long given shall be 1/2 minute and 5 seconds for short with 1/2 minute interval between two successive calls.

MRT and ART (Appendix 2 a)

- MRT Stands for medical Relief train
- MRT Comprises of c) Medical van b) Auxiliaxy Van
- ART Stands for Accident relief Train
- ART Comprises of

- i) Crane ii) Hydraulic rerailing equipment (MFD or LUAS)
iii) Power and tool van iv) engineering equipment van
v) Mechanical equipment van
vi) Electrical equipment van vii) Staff kitchen car and brake van

MFD stands for-Maschinen Fabrick Deutschland

- Mock drills shall be conducted once in 3 months
- ART shall be turned out within 30 minutes during day and within 45 minutes during night.
- MRT shall be turned out within 15 mts with a direct despatch facility and within 20mts without direct despatch facility.

a) Serious accidents: (AM 102)

Accidents to a train carrying passengers which is attended with loss of life or with grievous hurt to a passenger or passengers in the train, or with serious damages to railway property of the value exceeding Rs 2 crores. Any other accident which in the opinion of the Chief Commissioner of Railway Safety or Commissioner of Railway Safety requires the holding of a inquiry by the commissioner of Railway Safety shall also be deemed to be a serious accident. However the following shall be excluded.

- a. Cases of trespassers/passengers run over or /and injured or killed through their own carelessness.
- b. Cases of railway servant or other persons holding pass/tickets are killed or grievously injured while travelling outside rolling stock but excluding vestibule or run over at LC or elsewhere on track by a passenger train.
- c. No railway servant/passenger killed at LC gate accident unless CRS is of the opinion to hold an inquiry by him self.

b) Averted collision: (AM 111)

1. It is a circumstance under which, but the vigilance shown by any person or persons, a collision would have occurred.
2. Collision was averted due to the vigilance shown by any person or persons.
3. Averted collision may be in the block section or with in the station limits between the trains or between a train and an obstruction.
4. If, outside the station limits, the distance between the two trains or the train and obstruction is 400 mts or more- it may not be treated as an averted collision.
5. If, within the station limits there is intervening stop signal at danger governing the moving train and that moving train averted the collision by obeying the stop aspect - may not be treated as an averted collision
6. Averted collisions come under indicative accidents.

7. Inside station limits the SM shall immediately reckon the distance between the two trains or between train and obstruction in the presence of Loco Pilot and Guard and enter it in the station Diary. In case of outside station limits the Guard of train shall reckon the distance between two trains or train and obstruction in the presence of Loco Pilot and enter in the CTR.

Section 124: Extent of liability – When in the course of working a railway, an accident occurs, being either a collision between trains of which one is a train carrying passengers or the derailment of or other accident to a train or any part of a train carrying passengers, then whether or not there has been any wrongful act, neglect or default on the part of the railway administration such as would entitle a passenger who has been injured or has suffered a loss to maintain an action and recover damages in respect thereof, the railway administration shall, notwithstanding anything contained in any other law, be liable to pay compensation to such extent as may be prescribed and to that extent only for loss occasioned by the death of a passenger dying as a result of such accident, and for personal injury and loss, destruction, damage or deterioration of goods owned by the passenger and accompanying him in his compartment or on the train, sustained as a result of such accident.

Explanation – For the purpose of this section ‘passenger’ includes a railway servant on duty.

Section 113: Notice of Railway Accident –

1) Where, in the course of working a railway. –

(a) any accident attended with loss of any human life, or with grievous hurt, as defined in the Indian Penal Code (45 of 1860), or with such serious injury to property as may be prescribed; or

(b) any collision between trains of which one is a train carrying passengers; or

(c) the derailment of any train carrying passengers, or of any part of such train; or

(d) any accident of a description usually attended with loss of human life or with such grievous hurt as aforesaid or with serious injury to property; or

(e) any accident of any other description which the Central Government may notify in this behalf in the Official Gazette, occurs, the Station Master of the station nearest to the place at which the accident occurs or where there is no Station Master, the railway servant in charge of the section of the railway on which the accident occurs, shall, without delay give notice of the accident to the District Magistrate and Superintendent of Police, within whose jurisdiction the accident occurs the, Officer-in-charge of the police station within the local limits of which the accident occurs and to such other Magistrate or Police Officer as may be appointed in this behalf by the Central Government.

(2) The railway administration within whose jurisdiction the accident occurs, as also the railway administration to whom the train involved in the accident belongs, shall, without delay, give notice of the accident to the State Government and the Commissioner having jurisdiction over the place of the accident.

DUTIES OF CHIEF CONTROLLER/DEPUTY CONTROLLER IN CASE OF ACCIDENT

The following objectives are to be achieved in dealing with the accidents/ disasters

- i. Save life and alleviate suffering**
- ii. Provide succor and help to the affected/stranded passengers at the site of the accident**
- iii. Quick transmission of information at all levels.**
- iv. Preservation of clues and evidences.**
- v. Ascertain the cause of the accident.**
- vi. Protect property including mails.**
- vii. Restoration of through line of communication at the earliest.**

Chief Controller / Deputy Chief Controller:

Ordering of Medical Relief Vans and Relief Trains:

1. In case of an accident involving a passenger carrying train or an accident involving a road vehicle at a manned/unmanned level crossing, invariably order the Medical Relief Train, irrespective of the information received or other wise about casualties. Subsequently, if found not required this may be cancelled with the permission of the Divisional Railway Manager. Order a second MRV also if needed to work from the other side site.
2. Immediately order Accident Relief Train if required.
3. Record the timings of ordering of the Accident Relief Train and MRV, the actual departure from the concerned stations and arrival at the spot.
4. Ensure a clear path for rushing the Medical Van, Accident Relief Train etc.
5. Arrange to despatch cranes with the Accident Relief Train , if required.

314.2 Collection and Recording of Information.

Open a register in which all items are to be logged indicating time against each.

Collect and record the following information in the register of the following:

- i. Time of accident and time information received about accident.
- ii. Kilometrage, adjacent line affected or not in case of double/ triple/ quadruple lines, number coaches derailed, capsized, canting etc.,
- iii. Train / Trains involved whether Mail / Express / Passenger / Goods / Mixed / Pilot etc.
- iv. Type of goods stock involved, ie, whether tank wagons, BOX, Box N.

- v. Load of the train involved.
- vi. Nature of accident namely collision, derailment, averted collision or Level crossing (manned / Unmanned) fire etc.
- vii. Casualties / Injuries (grievous, simple, etc)
- viii. Progress in regard to the restoration work and other movements for operational requirements with timing should be logged in the register.

314.3 Movement of Trains.

- a) Stop movement of trains in the affected section on double line and in both the directions on single line.
- b) Check from site / station if adjacent line / lines fouled or otherwise.

314.4 Communication.

- a) Inform DRM/ADRM/Sr.DOM/Sr.DSO/DOM/AOM
- b) Inform all the other controls in the control office.
- c) Inform TI/SE(P.Way)/Stations on either side.
- d) Inform Central control.
- e) Call off duty Dy.Chief controllers for manning phones and for gathering and discriminating information.

314.5 Medical Relief

- a) Advise immediately Civil, Military and Private Hospitals and Medical Officers in the area and arrange for doctors, medical equipments and ambulances from nearby stations.
- b) Make arrangements for the transport of Railway doctors to the site immediately, if necessary, by engaging road vehicles as required.

314.6 Regulation and Diversion of Trains.

- a) Arrange to regulate all passenger carrying trains which are nearer to the accident site at convenient stations, preferably junction stations where catering facilities, drinking water etc, are available.
- b) Arrange to draw out the unaffected portion of the train involved in the accident without undue delay to a nearby convenient station where catering / drinking water facilities are available in consultation with DRM or Sr. DOM.
- c) Arrange diversion of long distance trains, if found necessary keeping in view the time required for restoration of the line / lines in consultation with Headquarters.

314.7 Advise civil authorities, Superintendent of Police GRP with in whose jurisdiction the accident has occurred.

314.8 Advise RPF for arranging protection of Railway and public property.

DISASTER MANAGEMENT

102 DEFINITION OF 'DISASTER'

As per DM Act-2005, Disaster is defined as ***“means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of property, or damage to, or degradation of environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area”.***

Further, vide Railway Board letter No. 2003/Safety – (DM)/6/2/Pt. dated 06.01.2009, the definition of Railway Disaster and co-ordination of DM Plan was revised. Accordingly, the Railway Disaster is defined as:

“Railway Disaster is a serious train accident or an untoward event of grave nature, either on the railway premises or arising out of railway activity in that area, due to natural or man-made causes, that may lead to loss of many lives and/or grievous injuries to a large number of people, and/or severe disruption of traffic, necessitating large scale help from other Government / Non-government and Private Organisations.”

701 Phase I – GOLDEN HOUR

In the period immediately after the accident where grievous injuries to passengers takes places, action has to be taken on war-footing by the Railway Authorities to render definite medical care which gives relief to affected passengers and also help them to overcome the trauma.

If a critical trauma patient is not given definite medical care within one hour from the time of accident, chances of his ultimate recovery reduce drastically, even with the best of medical attention thereafter. This initial one hour period is generally known as “The Golden Hour”.

- ✓ Render definite medical care within Golden Hour.
- ✓ Arrest bleeding and restore blood pressure within an hour.
- ✓ Persons under shock shall immediately be relieved of shock.
- ✓ Transport the casualties to the nearest hospital.

During this Golden Hour, following efforts should be made:

1. On-board staff like, LP/ALP/Guard/TTE/GRP/RPF/Pantry Car/AC Coach Attendants, etc., shall pass on the information quickly to the nearest station or to control about the accident. They shall render first-aid and take the help of

other volunteers travelling by train or from the site of accident location to rescue the passengers.

2. Senior-most officer travelling by the train whether 'on' or 'off' duty shall take charge as Officer in-charge (OIC) at site.
3. All Railways officials shall report to the Guard and work as per the directions of the OIC.
4. SMs of the adjoining stations must inform Control about the accident and the nature of assistance required.

NATURAL DISASTERS:

Natural disaster in general like floods, cyclones is forecasted; whereas others like earthquakes, landslides etc. are difficult in nature to forecast. But preparedness for floods & cyclone will help in tackling situation for other natural disasters also.

1. Landslide:

Whenever landslide is expected / experienced due to heavy downpour, all train services to be regulated. Rescue team to be rushed for restoration work.

2. Floods:

Based on the weather forecast warnings regarding impending flood condition, the following steps should be taken:

- i. Watchman at important bridges and at vulnerable points to inform flow of water to be posted..
- ii. Shifting of all movable equipment around the bank.
- iii. If time permits, sandbags, dykes can be constructed to ensure safe passage of trains.
- iv. Regulate the train service till the flood recedes.
- v. Evacuate people on train / at station and move them to a safer place.
- vi. Contact Fire brigade, Naval, Army, Air force, Local boat man and arrange Divers and boats.
- vii. With the co-ordination of local authorities, arrange temporary shelter in nearby schools, marriage halls, community centres etc.
- viii. If necessary, arrange coaches to accommodate the affected.
- ix. Seek assistance from voluntary organisation and arrange safe drinking water, food, medicines, etc.,
- x. RPF and GRP in co-ordination with local Police shall arrange protection.
- xi. Keep constant communication with Divisional Control Office.

- xii. When people are marooned by floods, arrange air dropping of food packets, clothes etc., with the assistance of Civil Administration.
- xiii. Contact SJAB (St. John Ambulance Brigade), local doctors and provide medical care to the affected.

3. Cyclone / Storm:

- i. When a train is caught in a cyclonic storm at mid section/station:
- ii. Stop the train clear of cuttings, bridges and embankments.
- iii. Guard, Loco-Pilot and other Railway servants on train shall keep open windows and doors of all coaches.
- iv. At stations where Anemometer is installed, shall not start trains when the wind velocity exceeds the permitted level of 65 KMPH.
- v. At other stations when the wind velocity exceeds safe limits, SM must consult with Control and GDR of the train before starting.
- vi. Make announcement frequently to warn the public about the storm/cyclone.
- vii. Take all necessary action to provide shelter and other assistance as in the case of floods.

PREPAREDNESS FOR NATURAL DISASTER FROM DEPARTMENTS

Transportation Department

- i. Requirement of essential staff and their deployment shall be assessed by Sr.DOM of respective Divisions.
- ii. SMs of the warned area stations, in co-ordination with assistance respective Departments, shall ensure all station equipments like Generator, Emergency light VHF sets,
- iii. First Aid equipment etc. are in good condition.
- iv. SMs will also ensure proper securing of stabled coaches / wagons as per extant instructions.
- v. COM of the Railway will issue instructions regarding regulation, diversion or cancellation of trains in the warned section with information to CPRO.

Commercial Department

Shall alert arrangements to open enquiry offices at areas likely to be affected.
Shall ensure arrangement for food, water and other requirement at vulnerable places.

Bomb threat/Blast:

Person receiving call regarding bomb threat:

- i. Should attempt to gain as much information as possible from the caller ID devices, time set, location, reason / purpose of the act, dialect mannerism and identity of caller.
- ii. The person receiving call should inform higher ups who in turn shall alert the Disaster Management team (Bomb detection squad).
- iii. Also, alert Police, Fire Brigade and Explosive Department.
- iv. Pass the information to all Departments concerned.
- v. Take initiative for evacuation of all from the premises.
- vi. Person noticing a bomb like object, should bring it to the notice of the nearest available Officer.
- vii. Inform Railway Police, RPF, and Bomb detection squad.
- viii. Ensure all persons are away from the spot and to avoid unnecessary crowding near the area.
- ix. Inform control to take further steps of regulating the train services.
- x. Wait for clearance from the Police Department to restore normal working.

Tampering of Railway fittings causing accidents & Placing of foreign particles on track to cause disruption to traffic

A staunch vigil should be kept by introduction of special patrolling over the area as and when warranted with assistance of RPF personnel.

Specially trained persons shall be drafted for duty over the area if required.

Radiation Emergency/Personal Injury Involving Radioactive Material Contamination

- i. Render first aid immediately for serious injuries.
- ii. As far as possible, without causing harm to the victim, monitor the injured and remove contaminated clothing and gross personal contamination.
- iii. Remove and bag all contaminated clothing.
- iv. Call Fire Station, bomb squad, and police.
- v. Skin contamination should be cleaned using mild soap and warm water.
- vi. Use portable survey meter to monitor for remaining contamination. If not free of contamination, re-wash and re-survey.

What to do upon suspected letter/package receipt

- i. Call Police/Fire Service/ Bomb Squad.
- ii. Handle with care
- iii. Don't shake or bump
- iv. Isolate and look for indicators
- v. Don't open, smell, or taste
- vi. Treat it as suspect

If parcel is Open and/or Threat is identified for a Bomb

Evacuate immediately □ Call Police / Fire Service / Bomb Squad.

703 Phase III – ARRIVAL OF RELIEF TRAIN/S

Phase III begins with the arrival of relief train/s. The senior most officer who reaches the site first becomes the OIC at site. The staff and Officers should work as per the directions of the OIC at site.

Site Organisation:

- Medical relief camp
- Security of luggage
- Preservation of clues
- Relief, rescue and restoration
- Co-ordination with Civil and Media
- Liaison with Control
- Communication network
- Lighting arrangement
- Information booth
- Catering arrangements
- Evacuation of passengers
- Payment of ex-gratia, etc.,

The Medical team reaching the site first shall comprise more doctors and staff including paramedical staff. The senior most doctor and OIC at site should have all details about dead and injured and hospitals where they are being treated.

704 Special Task Teams of different Departments

- I. **Medical** Relief and transportation of the injured to hospitals.
- II. **Commercial** Catering, payment of ex-gratia, information booth, liaison with Civil Administration and Media.
- III. **RPF** Security of luggage, parcels and other Railway property.
- IV. **Operating** Liaison with control and arranging logistics including Shunting operations.
- V. **S&T** Establishment of communication network, free telephones and booth.
- VI. **Mechanical** Rescue, relief and restoration operations including re-railment, measurements, photography/videography of clues and restoration activities and preservation of clues.
- VII. **Electrical** Adequate lighting arrangements at the site of accident.
- VIII. **Civil Engg.** Provision of tents, relief, rescue and restoration activities. Restoration of track, preserving the clues, readings photography/videography of clues and restoration activities.
- IX. **Safety** Preservation of clues, statement of witnesses, photography/videography of clues and restoration activities.
- X. **Personal** Passenger care
 - Armbands:** Rescue team members must wear armbands and luminous jackets. Armbands for medical and paramedical staff shall bear a red cross.
 - Cold-cutting:** Extreme care must be exercised while tackling damaged coaches. Cold cutting equipments should be used on coaches containing passengers so as to avoid burns to passengers.

705 Handling of dead / injured:

- Dead bodies should be handled with care and respect.
- Cover the dead bodies with white shrouds and they should also be numbered.
- Expeditious issue of death certificates.
- List of dead and injured shall be passed on to Divisional Control and DMCR at Zonal Headquarters from time to time.
- A photographer shall take coloured photographs of dead and injured.

706 Free food, drinking water, tea and snacks: Food and clean drinking water must be rushed to the accident site from the nearest source. Free food and beverages shall be arranged.

707 Action to be taken at Divisional-level:

- Opening and continuous manning of enquiry booths at originating, terminating and at en-route major stations.
- Furnishing updated position of dead, injured and evacuated passengers to 'all-concerned'.
- Helpline number shall be relayed through electronic and print media.
- Arrangements for issue of free Railway passes to relatives / friends / dependants of dead and injured.
- Make arrangement for transportation of evacuated passengers to be sent to destinations. Transport vehicles can be hired.
- In case of major disaster, DRM of the Division can requisition for the services of helicopter / aeroplane.
- Media shall be briefed properly and quickly.
- Zonal headquarters should be advised quickly.

708 Phase IV – HANDLING INJURED PASSENGERS:

- Relief trains clearing the injured and stranded passengers must get overriding priority.
- Road vehicles shall be arranged for transporting the injured and stranded to the nearby hospitals and station.
- List of injured, hospital-wise shall be conveyed to all concerned and displayed at prominent locations.
- Ex-gratia payment shall be arranged.

709 Phase V – RESTORATION OF TRAFFIC

Restoration of traffic should be planned and acted upon without affecting the relief operations. Restoration of passenger services gives a sense of normalcy, besides providing means of transport to relatives and friends/dependants of victims to visit them and attend to them.

1207 THREE MAIN METHODS TO BE ADOPTED TO EXTINGUISH FIRE

- STARVATION** - means removing combustible substances away from the Fire.
- SMOTHERING** - means prevention of Oxygen, access of fresh air in fire, using sand, foam etc to cover fire, which cuts Oxygen supply.
- COOLING** - means reducing the degree of the temperature with water

1601 DIVISIONAL CONTROL

DO'S

1. Stop movements of all trains into the affected section.
2. Arrange for despatch of Medical Vans and Accidents Relief Trains to the site. In case casualties are more than fifty, ARMVs of the adjoining Divisions have to be called for. As a rough thumb rule, the scale of such assistance required would be one from a Division for every additional 50 injuries.
3. Inform Divisional Officers, Central Control and controlling SM, Civil Authorities concerned.
4. Collect and record systematically all developments at the site of accident.
5. Advise Civil, Military, Public and Private Hospitals in the nearby areas to rush doctors, medical aid to the site.
6. Arrange for rushing the required Relief & Rescue equipments to the site.
7. Inform NGO's and solicit their help.
8. Arrange for regulating traffic by diverting or canceling trains.
9. Arrange for running duplicate / relief trains for clearing stranded passengers on overriding priority.
10. Advise the stations about the changes in the train timings, train diversions etc. so that timely information is given to the public.
11. Ensure that list of the injured and the dead is obtained as quickly as possible from the site and relayed to the Zonal Headquarters, concerned stations, officer-incharge of publicity, etc.,
12. Liaison with Commercial Department's emergency team and ensure that information counters are opened at the accident site and at important stations enroute for giving up-to-date information to the public.
13. Guide the station staff on the correct method of train working.

DONT'S

☐ Lose patience. ☐ Ignore the safety aspects. ☐ Manipulate the control charts. ☐ Argue with the station staff.

Accidents – Causes – Remedial Measures

The broad causes of accidents which occurred on Indian Railway are given below

1. Human Failure
1. Failure of Equipment
2. Sabotage
3. Providential [incidental]

Human Failure 85.99% (Railway Staff): The cause wise analysis of accidents shows that more than 85% of the accidents occurred on account of human failure of which the railway staff have accounted for 63%.

Failure of Railway Staff [62.93%] - Causes

- In correct setting of points
- Non securing of points
- Faulty driving, excess speed
- Disregard of signals
- Improper loading of wagons
- Wrong marshalling
- Sleeping on duty
- Reception of train on blocked line without knowledge that it is blocked
- Failure of Station Master to ensure complete arrival of a train before granting line clear.
- Gate man not closed the gate even after exchanging private number.
- Not setting points against the occupied line immediately after arrival of train or while granting line clear for the trains.

Preventive Measures

Provision of safety gadgets such as
Track circuits between fouling mark

- Modifications of the signaling.
- LED based electronic flashing lamps to Drivers and Guards.
- Anti collision device
- Axle counter proven block instruments
- Auxiliary Warning System
- Automatic Emergency Brake
- Digital mobile train radio communication between Driver, Guard and Control
- Interlocking LC Gates

Other preventive measures

- Conducting periodic safety audit
- Training the staff (initial and refresher courses)
- Penal action against erring staff.
- Awarding the staff who prevented accidents and whose service is "accident free"
- Inspections
- Counseling the staff.

Other than Railway staff- factors affecting safety

- Theft and vandalism of P.Way, track gear. Telephone wire cables etc.,
- Theft is also a serious impediment to technological up gradation e.g. AWS in E.Rly devices were pilfered- same in the case with audiovisual alarm installed at unmanned LCs.
- Un authorized juggies and hutments adjacent to track.

- Defecation on the track by the public- no solution appears to be in sight in the foreseeable future.
- Water logging and consequent failure of track circuit due to inadequate drainage system in urban area.
- Erection of high intensity lighting and illuminations adjacent to railway track.
- Growth of trees [obstructing night visibility] part of forestation.
- Solitary running staff working on the same section [forcing motormen / Driver to make an unauthorized stoppage.
- Un authorized entry of public in locomotives.
- Hose pipe disconnections.
- Snatching away of gate keys when closed by road users.
- Un authorized level crossings [in urban area]
- Cattle grazing along the track.
- Cutting embankments of track by villagers during monsoon.
- Theft of left over petrol and kerosene from empty tank wagons.
- Failure on the part of road users to observe safety precautions
[Sec 131 of the Motor vehicle Act 1988]
- Passengers are carrying inflammable articles
- Hawkers carrying stoves, sigris.
- Throwing of lighter cigarettes/ bidis, match sticks in the compartment.

Some of the preventive measures

1. Conducting ambush checks at Un manned LCs.
2. Ensuring that Drivers whistle continuously while passing through LCs.
3. Educating road users through posters, cinema slides, etc.,
4. Forming of Instant Action groups comprising staff of commercial department and RPF to prevent carriage of inflammable material like gas cylinders, gas stoves, kerosene etc., in trains other factors affecting safety.
4. Provision of suitable fire extinguishers in the compartment.
5. Material used in the coaches must be fire resistant.
6. Provision of smoke/fire detectors in the coach.
7. Provision of boards at road side at un manned LCs

Equipment failure (6.68 %)

Engineering-

- Failure of formation

- Failure of rails
- Failure of sleepers
- Cross level defects
- Gauge variation
- Defective maintenance practices

Mechanical

*Flange defects

- Wheel defects, axle defects
- Buffer & under frame defects etc.,

Preventive measures

- Renewal of over aged assets
- Carrying out safety enhancement works
[Non - lapsable Fund of Rs 17,000 crores has been set up for this]
- Mechanized track maintenance
- Using sophisticated track recording cars, oscillograph cars and portable accelerometers.

SABOTAGE - CAUSES (4.1 %)

- Tampering with the railway track
- Damaging rolling stock
- Removing of fishplates.
- Causing obstruction on track
- Placing bombs on track of in coaches.

Preventive measures

- Intensive security patrolling of track by GRP
- Augmenting the above by providing assistance by RPF
- Keeping special surveillance to detect any un claimed and suspicious objects.

Providential (incidental) Appx. 3 %

- Flash floods
- Boulders falling on track
- Cyclones, etc.,

Preventive measures

- Posting watchman at vulnerable spots
- Intensive patrolling by gang men during monsoon period.
- Providing anemometer.
- Providing stop signals near hilly area, when landslips are frequent so as to make arrangements for the signals to go to ON whenever such landslips take place also providing wire fencing at such places.

As Area Officer, how you manage the site of the accident
Officer first reaching the site:

1. The Officer first reaching the site of the accident shall check up.
 - a) Whether protection has been done.
 - b) Lines which are clear
 - c) Whether the necessary message supposed to be relayed regarding the details of the accident, casualties etc., have already been relayed.
2. He shall make a quick assessment of the assistance required and relay the same to the control.
3. He shall also examine and make a note of all evidence which may prove useful in ascertaining the cause of accident.
 - i. The condition of the track, with special references to the alignment, gauge, cross-levels, curvature, super elevation and rail headwear:
 - ii. The condition of rolling stock with special reference to Brake power. Marks on sleepers and rails:
 - iii. Position of derailed Vehicles:
 - iv. The position of Block instruments, signals, points, level, indicators, key:
 - v. At station provided with panel interlocking the position of switches and indications of the Signals, points and track circuits should be jointly recorded preferably by two officers (or two senior subordinates) of different branches and the relay room should be sealed by them as soon as possible.
 - vi. Position of important relays and the condition of the block instrument (i.e. whether free or locked) and
 - vii. He should cross check the list of casualties prepared by the Railway Doctor and countersigned by the civil police (if some bodies are yet to be recovered, it should specifically be mentioned that the list is not final and will be conveyed after salvaging bodies from debris).
4. Where possible a rough sketch showing the position of Derailed vehicles, marks on sleepers etc., should be made.
5. If the station staff are prima facie responsible, the train passing records must be seized and if necessary, statements of station staff concerned recorded.
6. All relevant materials, clues, damages and deficiencies on the locomotive and rolling stock as well as position of broken or detached parts of Permanent way and rolling stock must be carefully noted and all such clues etc., carefully preserved so that, if considered necessary, the scene could be reconstructed before the police, the Commissioner of Railway Safety or any other senior officer, or court of law.
7. If, however, sabotage is suspected, in addition to noting and preservation of all such clues, no object must be disturbed unless the police have had an opportunity of making through inspection of the site. If there is delay in the arrival of civil and

police officials at the site of the accident, the senior most Railway Official at site may, at his discretion, jack up any portion of a coach or shift any property to the minimum extent necessary, after noting its original position by sketch to extricate human beings trapped under it, in the shortest possible time to save life and minimize sufferings.

Normal traffic, should, however, not be permitted without consulting the police.

8. Further specific enquiry should also be made from the commissioner of Railway Safety in case of suspected sabotage to ascertain if he would like to inspect the site before the clearance operations commence.
9. Restoration / clearance should not commence (except to the minimum extent necessary to save human lives) unless such permission has been received from police authorities as well as CRS.
10. In the case of serious explosion or fire caused by explosives or dangerous goods, all wreckage and debris must be left untouched, except in so far as its removal may be necessary for the rescue of the trapped / injured persons and recovery of dead bodies, until the Chief inspector of Explosives or his representative has completed his inquiry and intimated that he does not intend to make any investigation.
11. If a passenger carrying train is involved the officer must secure the written evidence of as many witnesses as possible. The witnesses selected should not be railway men, and their names and their names and addresses should be recorded.
12. He should have a complete list of names and addresses of the injured and dead along with the addresses of relatives and ensure messages are sent to the relatives of the injured or dead.
13. He should also ensure that Superintendent of Police and District Magistrate have been advised.
14. He should give the prima-facie cause of the accident with the expected time of restoration.
15. He should ensure that progress report is relayed to control every one hour.

Objectives of Inspections-Station Inspection

Intruduction:

1. Inspection is nothing but a fact finding exercise.
2. Inspections are carried out in every department and organization, in order to observe whether the department or organization is function in a systematic manner or not.
3. Inspections of stations, yard, sheds and level crossings, track and bridges by officers and inspector are an integral part of safety measures on the Indian Railways.
4. Inspections must be carried out according to the prescribed schedules. DRM should personally monitor that officers move out on line and carryout inspections according to the schedules laid down.
5. The utility of inspection lies not only in the detection of faults, lapses and irregularities, but also in the subsequent steps taken for their correction.

Objectives:

1. verify whether every Railway employee is fully convergent with rules, instructions and procedures relating to his duties.
2. Ascertain that the staff is performing their duties according to rules, instructions and the procedure in force.
3. Detect undesirable shortcuts, irregularities or unsafe practices being resorted to by the staff taking remedial action which may be:
 - (a) Educative, in case these are resorted to out of ignorance.
 - (b) Corrective, if there is some thing wrong in working conditions, or there are system deficiencies.
 - (c) Punitive, if resorted to willfully or negligently and persisting even after repeated guidance and counseling.
4. Observe the conditions actually prevailing at the work spots to understand the difficulties experienced by staff including their personal grievances and seeking on the spot redressal.
5. Ensure that full complement of staff and equipment is available and staff has knowledge of its operation.
6. Ascertain that registers, documents and other records are being maintained and preserved according to instructions.
7. Monitor the behavior of staff towards customers, particularly promptness of response and willingness to help.
8. Asses as far as possible that the interest of the public and the Railways are kept in view and safeguard.
9. Inculcate discipline and build up the moral of the workers.
10. Check the compliance of previous inspection reports.
11. Analyze efficiency targets vis- a- vis performance.
 - ❖ Inspections, thus provide the means to achieve efficiency and effectiveness through spot checks and personal contact with the staff on line.
 - ❖ In order to accomplish these objectives, inspections have to be carried out at officer's and supervisor's level .

- ❖ The inspecting official has to command and respect and obedience of staff, for his inspections to be effective and beneficial and as such his conduct should be exemplary.

Types of inspections

1. Regular inspection (6 months)
2. Safety inspections (monthly)
3. Surprise inspections (monthly)
4. Night inspections (fortnightly)
5. Level crossing inspections
6. Surprise inspection by road.
7. Foot plate inspections.
8. Joint foot plate inspections.
9. Running room inspections
10. Surprise speed checks.
11. Ambush checks.
12. Running train inspections.
13. Loco shed inspections (3months)
14. C&W depots inspections (3 months)
15. ARME & ART inspections (3 months)

Station Inspection

1. Station is a place where traffic is dealt with. Hence station inspection attract greater importance.
2. Inspectors shall conduct quarterly inspection of stations and submit inspection reports.
3. Staff on duty shall be mustered and shall be seen whether they have signed the muster daily and SM to take action absenteeism and foregoing of rest by staff.
4. PME of staff shall be current shall be cross checked with the fit certificates and staff required to wear glass on duty shall be checked as to whether they wear them and also have a spare set with them.
5. Declaration of staff shall be cross checked with SWR, muster and leave register.
6. The accident register chart and diagrams shall be cross checked and the finalization of cases, remedial action taken and measures taken to prevent reoccurrence of similar type of accidents shall be checked.
7. To inspect the checks conducted by SM and holding of meeting by SM, record of irregularities noticed and action taken by him.
8. Distribution, storage, testing and renewal of detonators shall be checked.
9. It shall be seen whether staff are in uniform while on duty with proper hand signals as required.
10. It shall be seen whether SM conducts his daily weekly and monthly checks, records of results and action taken on irregularities in the working of the station.
11. It shall be checked whether the supply and use of books and focus particularly for train working is sufficient.

12. The inspection register shall be checked to see that the irregularities pointed out are rectified and follow up action taken and that the staff had noted the inspection reports and action taken.
13. He must check the SWR for its correctness and completeness with layout at site and the signaling diagram.
14. He must check the maintenance of standing order books, general order books, safety bulletins, safety circular files, gazettes, fly leaves etc. to see whether all the staff go through them and acknowledgements obtained.
15. Whether the quarterly check of BV equipment is done and records kept by the SM of train starting station.
16. Whether SM checks the marshalling of trains and keep the records of the same.
17. He must check up the progress of the staff sent for refresher courses, safety camp and record kept for this purpose.
18. Caution order register, message books and forms are correctly maintained, ie CO register is brought forwarded every Monday or not, all the CO messages are pasted and given serial no accordingly and their cancellation messages pasted juxtapose or not.
19. While Inspecting it is to be seen whether the SM is following all the rules laid down for passage of trains, ie conditions for granting line clear, closure of LC gates, on arrival setting the points as per GR 3.38, ensuring the complete arrival as per SR 14.10, exchanging all right signals as per SR 4.42 etc.
20. Whenever loads are stabled whether securing is done in accordance with SR 5.23. and entries in stable load register is maintained or not.
21. Crosscheck the S&T failure registers with the authorities T.369(3b), PLCT etc.
22. Whether the disconnection and reconnection notice is issued and recorded and trains worked in accordance with the rules

INSPECTIONS

Inspection is nothing but a fact-finding exercise. Inspections are carried out in every department and organizations, in order to observe whether the department or organization is functioning-in a systematic manner, or not.

Station is a place where traffic is dealt with. Hence station inspection attracts greater Importance, if the inspections are not carried, station will not function systematically.

Objectives of Station Inspection

1. Whether the railway servants are fully conversant with the rules and instructions
2. Whether staff is functioning in a systematic way as per the existing rules.
3. Whether there is any modification required in the style of functioning.
4. Whether sufficient equipment's are available and staff are using them.
5. Whether there is a scope for improvement of traffic.
6. To suggest better methods for safe and efficient functioning of station.
7. To check any unsafe practices or short cut methods adopted by staff.

The Ill-Effects Of Not Conducting Station Inspections

An inspector is a bridge between the staff and the administrator. He brings out the truth during the inspection and forwards it to the Administrator. Thereby effective action can be initiated. The following are the ill effects of not conducting inspection.

- 1) No chance for the staff to represent their opinion.
- 2) The changes in rules with regard to working at a station will not be done.
- 3) The style of functioning of staff cannot be altered if it requires.
- 4) The requirement of equipment will not be known.
- 5) Efficient staff cannot get appreciation.
- 6) Ignorance of rules, unsafe practices will continue.
- 7) Scope for development cannot be identified and recommended.
- 8) Huge revenue leakage cannot be plugged.

Types of Inspections

- 1) Regular Inspections 2) Casual Inspection 3) Surprise Inspections.
- 4) Foot plate Inspections 5) Inspection of LC Gates

1) Regular Inspections : Regular inspections are carried out periodically as per the schedule. Advance intimation is given to the station staff, so that the staff will be ready with records. The inspector shall plan in such a way that he stays at least a day and observe the complete day's working at the station. These inspections should be comprehensive, deep and probing nature. Every aspect of working at the station should be thoroughly checked, carefully observed and properly examined. This is conducted once in 3 months. The findings of the inspection shall be recorded in the inspectors inspection register. Keeping a record copy of the findings one copy has to be submitted to DRM (T).

The inspector shall preferably travel in the engine of a goods train and reach the station when inspection is to be carried out while travelling in an engine, he can observe the enginemanship of driver, exchange of all rights signals, brightness and position of the signals etc. On reaching the station, the way of conducting the inspection can be divided in to 3 parts.

- a) **Physical observations :** Observe physically the station, practical observation in train passing duties, shunting, dealing with customers
- b) **Verification of Records:** The records of the station can be checked for their correctness and neat maintenance
- c) **Interaction with SMs / Cabin men / Shunting Staff:** Knowledge about the rules can be tested. The person not conversant with rules can be consoled and taught. The persons ignorant of safety rules can be recommended for directing them to refresher courses.

2) Casual Inspections: Are Non- detailed inspections, casual in nature. Any aspect of safe practices can be inspected. For example:- Allright signals exchanging between SM, Gd and Driver. This can be carried out even when the inspector is travelling in engine or standing on the platform. It should be carried out whenever the inspecting official has time or occasion to carry them out.

3) Surprise Inspections: These are to be carried out without any notice there should be an element of surprise in these inspection. These inspection can be carried out at stations, level crossing gates, cabins by road or by trains during day and night also. This will indicate the alertness of staff. To carryout these inspection, the station or area where the inspection is to be carried out shall have to be kept in secret.

4) Foot plate inspections: It can be carried out by traveling in the engines of running train. These afford an opportunity to the inspecting official to observe and check certain aspects of working o n the engine along the track and at station.

The findings of the regular, casual and surprise inspections are to be forwarded to DRM (T) for initiating actions

5) LC Gate inspection: Traffic gate inspection falls under station inspection. Engineering gates shall be inspected separately by trolley/by road. Inspections of all kinds (Surprise, Foot plate, LC gate) should be carried out at night preferably after mid night.

SCHEDULE OF INSPECTIONS

S. No	Name of Inspection	Period	No. of Inspection
1.	Non- detailed inspection (Causal)	Monthly	3
2.	Surprise Inspection by Road	Monthly	2
3.	(i) Traffic Level crossing gates	Monthly	6
	(ii) Engineering level crossing gates	Quarterly	6
4.	Regular inspections of Stations (Detailed)	Quarterly	1
5.	Surprise Night Inspection	Monthly	3
6.	Monitoring of passenger trains and check of trains	Monthly	2
7.	Check of guards equipment	Monthly	6
8.	Check of Staff in Safety Rules		
	(i) Guard	Monthly	6
	(ii) SM / ASM	Monthly	15
	(iii) Driver	Monthly	6
9.	Foot plate inspection – one in day and other in night between 22 Hrs. to 6 Hrs.	Monthly	6
10.	Inspection of Road side station (Non-detailed)	Monthly	3
11.	Signal light inspection	Monthly	1

“ Own your section” scheme.

Under this scheme a total of 4 groups have been carved out starting from A to Group D each group with 25 officers [JAG to PHOD of Head quarters] owning one section each. Each officer has to monitor his nominated section by inspecting section at least once in a month preferably more, for a period of 3 months at a station. Once in 3 months the officers will move literally from one group to the next group.

The thrust areas during the inspection would be broadly

- i] System deficiencies and short falls if any.
- ii] Infrastructure and other inputs required for safety enhancement both short term and long term.
- iii] Any unsafe practices or short cut methods adopted by staff.
- iv] Repeated cases of any type of failures.
- v] Knowledge of rules and their implementations, staff due for refresher course/training etc.,

A consolidated statement bring out the details of inspections conducted and improvements brought out must be sent to AGM by 10th of the following month.

The inspections under this scheme should be over and above the normal inspections, which are to be carried out by the officers as per their schedule of inspections.

Checklist For Station Inspection For General Guidance

1. Compliance of the inspections done by other team of the Own your section scheme.
2. Action taken when the running lines are occupied by stabled stock.
3. Availability and condition of the safety equipment.
4. Action taken in the event of motor operated points failure by SM.
5. Whether the emergency cross over are tested regularly.
6. Check whether the SWR is tallying with the actual layout of the station.
7. Knowledge of the staff in safety rules.
8. Reported failure of signals / Block instruments / Telecommunications and corrective action taken by station staff.
9. Walkie-talkie sets usage and its importance.
10. Gradations of Staff.
11. The detention recorded during equipment failures, whether it is justified or not.
12. Knowledge of staff about the reception and dispatch of trains.
13. Allotment of quarters and actual occupations by staff.
14. During equipment failures like, signal / point / block instruments / panel, etc., the time recorded in the S & T failure register is justified in complying the rule or not.

15. Check for the 1600 hrs. control ring and its records.
16. Check histories of accidents occurred in the stations and follow up action for the implementation of recommendations made.
17. Case histories of accidents occurred in the stations and follow up action for the implementation of recommendations made.
18. Whether the safety equipment available at the station is correct as per the SWR or not.

ACCIDENT INQUIRY

903 Object of Accident Inquiry:

- a) To ascertain the correct cause of accident.
- b) To fix responsibility for the accident. (The responsibility should be fixed at appropriate level and should be specific i.e., primary, secondary and blameworthy. While fixing individual responsibility, extenuating circumstances, if any should be mentioned).
- c) To formulate proposals for preventing recurrence of similar accidents.
- d) To determine whether there was any laxity in working to which the accident could be attributed.
- e) To examine whether there has been any laxity / delay in rendering rescue, relief and restoring through communication.
- f) To suggest improvement in system, practices and procedures.

904 Classification of Accident Enquiries:

The Accident inquiries are classified into two. They are

- a) Non-Railway Enquiries:
 - i. Judicial Commission or Commission of Enquiry as per Enquiries Act of 1952.
 - ii. Commissioner of Railway Safety Enquiry
 - iii. Magisterial Enquiry
 - iv. Police Enquiry
- b) Railway Enquiries:
 - i. Joint Enquiry
 - ii. Inter-departmental Enquiry
 - iii. Departmental Enquiry

904.1 The Judicial Commission or Commission of Inquiry: The Central Government may appoint a Commission of Inquiry under the Commission of Inquiry Act, 1952 (LX of 1952) in a very serious accident. In such an event any other enquiry / investigation or other proceedings in relation to that accident shall be stopped and all records or other documents relating to such enquiry shall be forwarded to such authority as may be specified by the Central Government in this behalf.

904.2 Commissioner of Railway Safety Inquiry: CRS shall hold statutory enquiry into the accidents falling under Section 113 of Railways Act 1989. The CRS may order and personally conduct an inquiry into an accident other than those falling under section 113 of Rly.Act, which he considers to be of sufficiently serious nature to justify such a course being adopted. The CRS shall inform the GM / CSO of his intention to hold an inquiry and shall at the same time, fix and communicate the date, time and place of the inquiry.

904.3 Magisterial Inquiry: It may be judicial or non-judicial and is as appointed by the State Government. In case of reportable train accident, the District Magistrate or any other Magistrate may himself make an inquiry or depute a Subordinate Magistrate or direct the Police for investigation.

904.4 Police Inquiry: The Railway Police may make an investigation into the causes which led to any accident occurring in the course of working a railway. Whenever any such accident is attended with loss of human life or with grievous hurt, with serious damage to railway property of the value exceeding Rs.2 Crore or has prima facie been due to any criminal act or omission. This can be parallel, if required, to any other enquiry.

904.5 Joint inquiry: Whenever an accident, such as mentioned in section 113 of the Act, has occurred in the course of working a railway, the Head of the Railway Administration concerned shall cause an inquiry to be promptly made by a Committee of Railway Officers, to be called a ‘Joint Inquiry’, for the thorough investigation of the cause which led to the accident.

In specific cases, where considered necessary, Inter-departmental Inquires will be ordered by the General Manager. In such cases, the General Manager will specify the Officers or Senior subordinates who shall constitute the Inquiry Committees and also, where necessary, fix the date and the time.

904.6 Inter Departmental Inquiry: For accidents not falling under the purview of CRS, the DRM shall order an enquiry by a committee of officers from the departments concerned. In case the GM considers it is necessary to hold an inquiry by the HODs/PHODs in to such accidents, the same can be ordered. In such cases, there is no need for DRM to order an enquiry.

904.7 Departmental Inquiries: If the cause of the accident is attributable beyond doubt to a particular department in Railways and the Head of the Department accepts the same, the inquiry by the inter-departmental inquiry can be dispensed with. In such cases the inquiry can held by an officer/officers of the department concerned so as to determine the responsibility of staff, if any and to suggest measures to prevent such accidents in future.

905. Ordering of Inquiries: Normally the DRM shall order all departmental and inter-departmental inquiries into accidents. The GM or on his behalf, the CSO may order a joint inquiry into serious accidents, as deemed fit.

a) Whenever a Joint Inquiry is to be made, the Head of the Railway Administration concerned shall issue notice about the date and time at which the Inquiry will commence to the following Officers, namely —

- i. the District Magistrate of the district in which the accident occurred or such other officer as the State Government may appoint in this behalf, and the Superintendent of the Railway Police and District Superintendent of Police;
- ii. the Commissioner of Railway safety.
- iii. the Head of the Railway Police having jurisdiction at the place where the accident occurred or, if there are no Railway Police, the Officer in-charge of the police station having jurisdiction at such place.

- b) The date and time at which the Inquiry will commence shall be fixed so as to give the Officers mentioned, above sufficient time to reach the place where the Inquiry is to be held.
- c) Where a Joint Inquiry is held into an accident on receipt of information about the inability of the Commissioner of Railway Safety to hold an inquiry under Sub-rule (5) of rule 228 (Statutory Investigation into Railway Accidents Rules 1973), the Head of the Railway Administration concerned shall also issue a press note in this behalf inviting the public to tender evidence at the inquiry or to send information relating to the accident to the Joint Inquiry Committee at an address specified in the press note.

906 Minimum Level of Inquiry:

Accident inquiry by the Railways:

- a) All serious accidents shall be inquired into by the Commissioner of Railway Safety.
- i) In case Commissioner of Railway Safety or Chief Commissioner of Railway Safety is not in a position to inquire into serious accident cases, the Inquiry shall be done by JA Grade Inquiry Committee with DRM as the accepting authority subject to the review by CSO.
- ii) All cases of collisions falling under A1 to A4 categories shall be inquired into by a committee of SAG officers with General Manager as the accepting authority unless the same is being inquired into by CRS.
- b) All other consequential train accidents except Unmanned Level Crossing Accidents, shall be inquired into by a committee of JA grade officers or by Branch Officers. DRM shall be the accepting authority for these inquiries subject to review by CSO.
- c) Unmanned Level Crossing accidents and all other train accidents shall be inquired into by a committee of Senior Scale or Junior Scale Officers as decided by respective DRMs, with DRM as the accepting authority.
- d) All yard accidents shall be inquired into by a Committee of Senior Supervisors with Sr. DSO / DSO as accepting authority.
- e) All cases of Indicative Accidents shall be inquired into by a Committee of Senior or Junior Scale Officers with DRM as the accepting authority.
- f) General Manager or DRM can have the inquiry conducted by a committee of higher level of Officers than the above mentioned levels depending upon the seriousness of accident.
- g) Accident Inquiry reports where the responsibility is held on foreign railway staff should be put up to AGM directly, he being the accepting authority in such cases. If the post of AGM is not available, SDGM may be nominated as the accepting authority. In the absence of SDGM post also, the Chief Safety Officer will act as the accepting authority for such Accident inquiry reports.
- h) All cases of equipment failures shall be inquired into by Senior Supervisors/Supervisors of respective departments.
- i) All inquiries will be ordered by the concerned DRM except for inquiries into collisions as per item (ii) as above wherein General Manager will order the inquiries.

907 Schedule for completion of Accident Inquiry inquiries are necessary, they must be held as soon as possible after the accident and the proceedings submitted without delay. The time-table counting ‘D’ as the day of accident will be as under:

S.No.	Target	Schedule/Remarks
1	D	Date of accident
2	D+1	DRM/GM shall order the inquiry if no particular department accepts the responsibility
3	D+3	Committee shall commence the inquiry into the accident
4	D+7	Committee shall submit the inquiry report to DRM/GM
5	D+10	Acceptance of inquiry report by the DRM/GM
6	D+15	Inquiry reports will be finalized by CSO/AGM Note: CSO for review cases only AGM for accident cases in which foreign Railway staff are held responsibility
7	D+20	Submission of inquiry report to CRS with remarks. A copy of finding of the Inquiry report to be sent to Railway Board
8	D+90	DAR action against officials held responsible to be completed.

Note:

- a) DRM/GM may decide to have the inquiry conducted even in cases where a particular department accepts the responsibility for enabling thorough review of associated systems involved in the accident.
- b) Time limits prescribed above are the upper limits. Railway should make efforts to finalise the Inquiry Report and D&AR action as early as possible but not beyond the prescribed time limits.

908 Acceptance of responsibility by Departments concerned:

- a) irrespective of whether a joint or Inter – departmental Inquiry is ordered by the General Manager, the Sr.DSO of the division shall be advised within two days by the other divisional officers whether their department is accepting responsibility or not. If no department accepts responsibility, the Divisional Safety Officer shall at once put up the case to the Divisional Railway Manager who will, if necessary, order an Inter – Departmental inquiry.
- b) No advice regarding acceptance of responsibility need be sent in case of accidents at level crossings resulting in no injury to persons and/or no damage to public property.

909 Special Report: A special report on an accident is a brief narrative report and it shall be submitted in cases indicated in Chapter-II. It shall contain only the facts of the case, relevant particulars from the statements of staff, the conclusions regarding the cause of accident and the responsibility of staff, together with the rules violated.

When a special report contains any detail which is in supersession of what has already been furnished in the accident message, this shall be specifically indicated in the special report. The ‘Matters Brought to Light’ in the course of the investigation of the accident, and ‘suggestions’, if any, regarding the steps to be taken to avoid recurrence of the accident, shall be incorporated in the separate paragraphs. The special report shall not contain any reference to the disciplinary action proposed to be taken against the staff held responsible. Disciplinary action against the staff held responsible shall be initiated only on acceptance of the findings by the appropriate authority. The actual punishments imposed on staff shall be communicated, within the stipulated time limit to the Chief Safety Officer.

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910 Commencing of Joint and Inter-departmental Inquiries: When a Joint or Interdepartmental inquiry is ordered by the General Manager, the Senior Most Officer of the inquiry committee shall fix the date as per the schedule and place, in consultation with other members of the committee but, in all cases, the inquiry shall be held at the station nearest to the site of accident and within three days after the occurrence of accident. The site of accident shall be inspected immediately and such inspection shall not be dispensed with under any circumstances. The date once fixed may not be changed, except in case of absolute necessity. The representative of each department shall be responsible for summoning and arranging for the attendance at the inquiry of the staff of his own department who may be able to give evidence in the case. The Presiding Officer shall arrange for the attendance of any other witness whose presence he considers necessary to examine.

911 Method of conducting Joint / Inter Departmental Inquiries:

1. a Railway Administration shall cause notice of the date and time at which the inquiry will commence to given to the District Magistrate, SP of Railway Police, and District SP.
2. The inquiry shall be held at the station nearest to the site of accident and within 3 delays after the occurrence of accident.
3. Issues shall be framed and the evidence confined to settling these issues as far as possible. Questions shall be asked relevant to the point at issue. After recording evidence, it shall be read and witness shall be asked to add any thing if they have to add. Witness shall be cross-examined.
4. The inquiry officer shall look for eliciting necessary evidence and ascertain the contributory factors if any.
5. A report of the proceedings shall be prepared in Form ACC 9 to 9[o]. The report of the proceedings shall be in the following sequence.
 - i. Form Acc 9 Summary
 - ii. Form Acc 9 [A] List of members of committee.

- iii. Form Acc 9 [B] Descriptive account-It shall be confined to a brief but clear description of the accident.
- iv. Form Acc 9 [C] List of witness examined.
- v. Form Acc 9 [D] and [E] Deposition of witness.
- vi. Form Acc 9 [F] Remarks and reasons for findings

This should embody the following 3 items.

1. Discussion of all conflicting evidences and deductions
2. The contributory factors, if any.
3. The extenuating circumstances, if any

- vii. Form Acc [G] Joint findings.

The findings should be concise and clear and consist of simple statement of the opinion of the committee as to what caused the accident mentioning the person/s responsible and rules/Instructions violated. It should also be mentioned category of accident.

1. Failure of Railway staff.
2. Failure of other than Railway staff.
3. Equipment failure.
4. Sabotage.
5. Accidental or act of God.
6. Could not be established.

- Viii. Form Acc 9 [H] Matters brought to light during the inquiry-the irregularities in working.

- ix. Form Acc 9 [I] Suggestions and recommendations
The committee may suggest any improvements in the rules or practices of working.

- x. Form Acc 9 [J] Relief measures.

- xi. Form Acc 9 [K] Composition of Rolling stock.

- xii. Form Acc 9 [L] Details of photographs.

- xiii. Form Acc 9 [M] Details of damage to Engine and Rolling stock.

- xiv. Form Acc 9 [N] Details of damage to Permanent way.

- xv. Form Acc 9 [O] Details of damage to S&T

- xvi. List of passengers injured or killed.

- xvii. Dimensional sketch.

- xviii. Proforma in case of derailments.

16. Signing of Joint or Inter-Departmental inquiry. The proceedings shall be drawn up and signed. If the members of the committee are not unanimous regarding the

findings or reasons or suggestions, a note of dissent shall be drawn separately and signed.

17. President of the committee shall send the report to the DRM. The DRM shall forward to GM[T] with his remarks.
18. Where there is a prima facie suspicious of sabotage the security commissioner of the Division should be invariably be associated with such inquiry.
19. The findings of inquiries into accident cases should be accepted by CSO/COM or DRM.
20. Schedule of procedure for completion of accident inquiries.

D	:	Day of the accident.
D+3	:	Holding of inquiry
D+7	:	Submission of inquiry report.
D+20	:	Acceptance by DRM.
(D+27	:	Acceptance by GM[T])
D+90	:	Punitive action to be finalized.
21. The head of the Railway administration shall forward with his remarks to the staff responsible. Copy of the report to CRS,

CRS inquiry.

1. Where the CRS receives notice under 113 of Railway Act 1989 of serious accident, he shall as soon as possible notify CCRS, Railway Board, Head of the Railway Admn. Of his intention to hold inquiry by fixing the date, time and place and issue press note also inform DM, SP.
2. In addition, the CRS at his discretion may hold inquiry into any other accident.
3. For any reason, the commission is not able to hold inquiry, it may entrust the Railway administration to do so.
4. Under Sec 116 of Railway Act, the CRS has been vested with the powers of a civil court.
5. Guidelines for finalisation of CRS inquiry.

D	:	Day of accident
D+3	:	Commencement of inquiry.
D+10	:	CRS will forward a brief preliminary report.
D+60	:	CRS will submit detailed report to CCRS, Railway Board, DM, Director Intelligence Bureau/Home affairs [in case of sabotage]
D+90	:	Finalization of case.
6. Recommendations in regard to the publication of reports shall be made by CCRS to the Central Govt.

912 Composition of Inquiry Committee:

- a) The composition of the inquiry committee will depend upon the nature of accident. Normally officers from Safety, Engineering, Operating, Mechanical department will be in the committee. Officers from other departments are nominated based on the nature of accident.
- b) When staff or engine of another division is involved, representative of that division may also be included in the inquiry committee.
- c) In case of fire accident, the representative of Security should also be associated.
- d) No Officer or a Subordinate official whose evidence is required to be recorded before an inquiry committee should be appointed as a Member of that committee except when allowed only under the personal orders of the CSO / DRM.

913 President of Inquiry Committee:

- (1) In a Joint/Inter Departmental Inquiry, the senior most Officer in the highest grade among those nominated for the enquiry will act as president of enquiry committee. Seniority in the same grade among Officers belonging to different departments being reckoned on the total length of service and among officers of the same department, from the date of appointment to the grade.
- (2) At a Senior Supervisors Inquiry, the senior most subordinate in the highest grade among those present at the inquiry will preside, seniority as between Sub-ordinates belonging to different departments in the same grade being reckoned on the total length of service, and as between subordinates belonging to the same department, the respective seniority in the Department.

914 Officers' duties in connection with Inquiry: Whenever an inquiry has been ordered, it will be the duty of the Divisional Officer of each department to advise all persons concerned under his charge or any other witnesses whom the committee may require to give evidence to be present at the place and on the date and time fixed for the inquiry. He will also be responsible for seeing that all documents necessary for conducting the inquiry are available and any other information required is readily given. Inquiry Committee should take care not to call unnecessary witnesses.

915 Failure to attend Inquiry:

If a member of the Inquiry Committee fails to attend the inquiry due to any reason, he shall submit his written explanation to the President of the Inquiry Committee. When an Officer or a Subordinate is unable to attend an inquiry at which his presence is essential on account of the technical knowledge or knowledge of other facts which he possesses and it is not desirable to postpone the inquiry, an Officer or a Subordinate Officer of similar standing should, if possible, represent him and the Divisional Officer or Head of the Department, as the case may be, must be approached in order that

this may be arranged. Witnesses who are summoned to inquiry and fail to appear must similarly explain the absence. In an officer or staff, who has been summoned to depose before the committee absents himself without proper and sufficient reason, should be taken up under D&A rules.

916 Postponing of an Inquiry: An inquiry will not ordinarily be postponed due to the absence of a witness, but if after recording all other evidences, a decision cannot be arrived at, the inquiry may be adjourned till the witness is available. In case of a witness being sick, the President of the inquiry committee will advise the medical authorities to instruct the witness to attend the inquiry and if the witness is unable to attend himself, he may depute a representative to record his evidence, subject to the concurrence of the Medical Officer.

917 Guidelines for the members of Inquiry Committee: Following are a few guidelines for the members of inquiry committee —

- a) Strict impartiality must be observed by all members of the committee.
- b) Findings shall be drawn unanimously and as far as possible dissent note should not be given.
- c) Different technical data as well as evidence bearing on the accident have to be collected and an attempt should be made to reconstruct the sequence of events leading to the accident.
- d) Unless the cause of accident is evident, each of the factors that could result in the accident should be examined and its contribution, if any, assessed.
- e) In case of contradictory evidence, the value of such evidence should be discussed giving reasons why a particular version is given credit, another version is discounted.
- f) The sequence of events prior to and after the accident should be brought out in the proceedings.
- g) To check general laxity in working or ineffective supervision, the relevant records should be examined over some period to check whether the irregularities that have come to light relating to the accident had been repeated previously. The inspection notes of supervisory staff should be perused and it should be determined whether the irregularities could have been detected earlier and set right if effective supervision had been exercised.

919 Description of the Accident: The descriptive account shall be confined to a brief and shall contain no reference to the evidence.

920 Recording of Evidence:

- a) Each witness shall be assigned a number, which, in addition to being entered for the name of the witness at the commencement of the statement, shall be repeated after

the signature / thumb impression at the end as Witness No ... and in the proceedings wherever he is referred to. All particulars required from Form Acc. 9 (D) of the inquiry proceedings shall be filled up in case of each witness. In case of a witness belonging to train or station staff, the hours of duty and rest availed shall also be recorded.

- b) Evidence should be recorded as connected, narrative, subsequent demands brought out in cross question and answers. Care should be taken not to intimidate witnesses. Witnesses who understand english shall read and sign the recorded statement on each page.
- c) While recording the evidence of illiterate witnesses or when witnesses are not conversant with English, their evidence should be read over and explained in vernacular language before their signatures are obtained and the President should certify that this has been done. If the witness is unable to sign his name, his thumb impression should be taken on each page and attested by the President.
- d) For recording the evidence, the President of Inquiry Committee may utilise the services of a stenographer to take down the evidence duly typing on computer for this purpose. If a stenographer is not available, he will nominate a representative of the department concerned. The typed statement shall be read and signed by the witness on each page.

921 Findings: The findings should be concise and should clear and consist of a simple statement of the opinion of the Committee as to what caused the accident. The findings should also mention the name of the persons responsible and the rule/rules or instructions violated by each of the staff held responsible or the offences committed by them. In respect of cases where more than one staff / department is held responsible, the primary responsibility of the staff / department shall be specifically indicated. When the Committee is of the opinion that the evidence given by a witness is willfully false, they shall record this under the heading Matters Brought to Light. It should also be mentioned, under which of the following categories the accident falls:

- a) Failure of Railway Staff.
- b) Failure of other than Railway staff.
 - i. Tampering with the track.
 - ii. Other miscellaneous causes.
- c) Failure of equipment :-
 - i. Mechanical.
 - ii. Track .
 - iii. Electrical.
 - iv. Signalling
- d) Sabotage.
- e) Accidental or Act of God -
 - i. Combination of factors.
 - ii. Other miscellaneous causes.

f) Could not be established.

922 Remarks and Reasons for Findings: This should include the following three items in three separate paragraphs:

- a) Discussion of all conflicting evidences and the Committee's deductions from there;
- b) The contributory factors, if any, and
- c) The extenuating circumstances, if any;

In the absence of conflicting evidence, contributory factors or extenuating circumstances in a particular accident, this should be specifically mentioned. The Committee should state fully the reasons which have led them to arrive at their findings bearing in mind that the proceedings have to be considered by those who have not had the advantage of hearing the evidence and reviewing the circumstances on the spot. The description of the accident and the remarks should, therefore, be comprehensive and self explanatory. The value of evidence of each witness should be noted upon and it should be stated in case of doubtful witnesses, whether the witness is impartial or not.

923 Suggestions: The Committee may suggest any improvements in the rules or practices of working, which in their opinion, would prevent similar accidents in future or improve the working in any way, based not only on the cause or causes of the accident, but also the contributory factors, if any, and the extenuating circumstances, if any. If there are no suggestions to be made, a 'nil' entry should be made in Form Acc. 9.(I).

924 Matters Brought to Light during the Inquiry: In the matters brought to light during the inquiry, the irregularities in working, which might lead to any accident, although not having a direct bearing on the future accident, should be indicated. In the absence of any such matter, a 'nil' entry should be made in Form Acc. 9 (H).

925 Signing of Joint or Inter-Departmental Inquiry Proceedings: The proceedings shall be drawn up and signed before the Committee disperses. If the members of the Committee are not unanimous regarding the findings or remarks and reasons for findings or suggestions, a note of dissent shall be drawn separately and signed. If a member is unable to agree with the findings wholly or any part, he shall record his note of dissent and reasons thereof. The note of dissent shall be drawn up on the spot and signed. This document shall accompany the proceedings together with the remarks of the President of the Inquiry Committee.

929 Acceptance of Findings: The findings of Inquiries into accident cases should be accepted by DRM / GM

- a) If the findings are not accepted by the DRM / GM, a fresh inquiry shall be ordered.
- b) If the findings of Sr. Supervisors of inquiry Committee are not accepted, an inquiry at Officers level should be ordered by the DRM.

- c) In the case of a joint inquiry, if findings are not accepted, the matter may be referred to the same committee or a new committee may be constituted.
- (2) Accident Inquiry Reports with foreign railway staff responsibility should be put to AGM directly being the Accepting Authority in such cases. If the post of AGM is not available, SDGM may be nominated as the Accepting Authority. In the absence of SDGM post also, the Chief Safety Officer will act as the Accepting Authority for such accident inquiry reports, wherein foreign Railway staff is held responsible.

930 Reports of inquiries to Commissioner of Railway Safety :

- a) Whenever any , not of the nature specified in section 113 of the Act, such as averted collisions, breach of block rules or other technical accidents, occur in the course of working a railway, the Railway Administration concerned may cause an inquiry either Jointly or Departmentally to be held into the accident.
- b) Where an inquiry is held as provided above, the Head of the Railway Administration concerned shall forward a copy of the report of the inquiry to the Commissioner of Railway Safety.

931 Submission of Inquiry Reports:

- a) Submission of Inquiry report to DRM by President of the inquiry committee: The President of the Inquiry Committee shall be responsible for the timely preparation and submission of the inquiry report. The inquiry report shall be submitted to the DRM through Sr.DSO / DSO within 7 days from the date of accident. The Sr.DSO / DSO will put up the inquiry report with his observations to the DRM for acceptance.
- b) Submission of the inquiry reports to the CSO by Sr.DSO / DSO : The inquiry report duly accepted by the DRM shall be submitted to CSO within 10 days from the date of accident in all accidents as under:-
- | | |
|--------------------------------|----------|
| All reportable train accidents | 3 copies |
| Other Train accidents | 2 copies |
| Unusual incidences | 1 copy |

933 Norms of Punishments to be imposed:

The norms of punishments prescribed by Railway Board are given in Annexure-V. The norms should be followed rigidly. The Sr.DSO / DSO shall personally monitor the punishment awarded to the officials responsible for the accident & ensure that it is as per the rules in force. If it is inadequate, he will put the case to the DRM for review. A monthly summary of such cases shall be sent by Sr.DSO / DSO to CSO.

934 Magisterial Inquiry:

Whenever an accident, such as is described in section 113 of Railway Act, has occurred in the course of working of a railway, the District Magistrate or any other Magistrate who may be appointed in this behalf by the State Government, may, either –

(a) himself make an inquiry into the causes which led to the accident, or

- (b) depute a Subordinate Magistrate, who, if possible should be a Magistrate of the First Class, to make such an inquiry, or
- (c) direct police to investigation into the causes.

Provided that where, having regard to the nature of the accident, the Central Government has appointed a Commission of Inquiry to inquire into it under the Commissions of inquiry Act, 1952 (60 of 1952) or has appointed any other authority to inquire into it and for that purpose has made all or any of the provisions of the said Act applicable to that authority, a Magistrate or a Police Officer shall not make his inquiry or investigation under this rule and if he has already commenced his inquiry or investigation, shall not proceed further with it. Such Magistrate or Police officer shall hand over the evidence, records or other documents in his possession relating to the inquiry or investigation to such authority as may be specified by the Central Government in this behalf.

935 Judicial Inquiry:

A Magistrate, making an inquiry under rule No.934 may summon any railway servant, and any other person whose presence he may think necessary and, after taking the evidence and completing the inquiry, shall, if he considers that there are sufficient grounds for holding a judicial inquiry, take the requisite steps for bringing to trial any person whom he may consider to be criminally liable for the accident. Whenever technical points are involved, the Magistrate shall call for the opinion of the Commissioner of Railway Safety or other professional persons.

937 Procedure for summoning the Commissioner of Railway safety and Railway servants to assist the Magistrate holding Judicial Inquiry:

- a) If, in the course of any Judicial Inquiry into an accident occurring in the course of working a railway, the Magistrate holding such inquiry desires the assistance of the Commissioner of Railway Safety or of the Head of the Railway Administration concerned or the attendance of any Officer of the railway to explain any matter relating to railway working, he shall issue a requisition to the Commissioner of Railway Safety or the Head of the Railway Administration concerned, as the case may be, for the attendance in the court, (**stating the nature of the assistance required**). In summoning railway employees, the Magistrate shall take care not to summon on the same day so large a number of the employees, especially of one class, as to cause inconvenience to the working of railway. In the case of very serious accidents, it will generally be advisable for the Magistrate to obtain reports from both the Commissioner of Railway Safety and the Head of the Railway Administration concerned in regard to the accident, before finally concluding the Judicial Inquiry

939 Police Investigation:

The Railway Police may make an investigation into the causes which led to any accident occurring in the course of working a railway and shall do so –

- (a) Whenever any such accident is attended with loss of human life or with grievous hurt, with serious damage to railway property of the value exceeding 2 Crore or has prima facie been due to any criminal act or omission; or

(b) Whenever the District Magistrate or the Magistrate appointed under rule 216 of Railway Accidents Rules 1973 has given a direction under clause (c) of that rule: Provided that no such investigation shall be made when an inquiry has been commenced or ordered under clause (a) or clause (b) of rule 216.

Provided further that where, having regard to the nature of the accident, the Central Government has appointed a Commission of Inquiry to inquire into it under the Commissions of Inquiry Act, 1952 (60 of 1952) , or has appointed any other authority to inquire into it and for that purpose has made all or any of the provisions of the said Act applicable to that authority, the Railway Police shall not make an investigation under this rule. If they have already commenced their investigation, they shall not proceed further with it and shall hand over the records or other documents in their possession relating to the investigation to the commission of enquiry.

IX. Planning on the Railways:

- g) Functioning of the Chief Planning Officer and Traffic Planning Officer.**
- h) Perspective Planning and Planning of works to be undertaken under annual works programmes and immediate works under urgency certificate.**
- i) Analysis of Traffic bottle-necks and of traffic trends to forecast future traffic requirements.**
- j) Planning of Line capacity works and their justification.**
- k) Procedure for allocation of Line Capacity works etc. to capital. Revenue and Development fund.**
- l) Annual works programmes, Lumpsum works and powers of DRMs/HODs and GMs for sanctioning works.**

X. Computers on the Railways: Use of computers in

- v. Compilation and analysis of Operating Statistics.**
- vi. Compilation and Analysis of Daily Inter-change of Traffic between Railways.**
- vii. Tracing of Movement of wagons.**
- viii. Potential use of the computers for centralized wagon movement control.**

DEDICATED FREIGHT CORRIDOR (DFC)

1. The DFC project was first proposed in April 2005 to address the needs of the rapidly developing Indian economy.
2. The existing quadrilateral railway network, also known as the Golden quadrilateral, which links the major metropolitan cities of Delhi, Mumbai, Chennai and Kolkata, is unable to support the growing demand due to capacity constraints.
3. Dedicated Freight Corridor is a project for new railway lines exclusively for carrying freight isolated from normal IR traffic and passenger trains.
4. Conceived in 2004-2005, planning began in 2006, and in 2007 initial proposals have been drawn up.
5. In 2006, the Government of India established a dedicated body, the Dedicated Freight Corridor Corporation of India (DFCCIL), to implement the project.
6. The entire DFC project will include 2,700km or so of exclusive freight lines (new construction), and about 5,000km of feeder lines that will include some new construction and many existing lines that will be upgraded.
7. The total cost of the project, which is expected to be completed by 2017, is estimated at \$10bn.
8. In the first phase, the Western Corridor will connect the Jawaharlal Nehru Port to New Delhi via Vadodara, Ahmedabad, Palanpur, Jaipur, and Rewari and further on to Tughlakabad and Dadri. It will be used mainly for carrying Containers.

9. The western DFC will include a 4km-long tunnel, 262 bridges, 33 flyovers, 505 ROBs and 200 RUBs. The western corridor also includes the reconstruction of 24 existing ROBs and lengthening ten existing RUBs.
10. The Eastern Corridor is expected to connect Ludhiana to Sonnagar via Ambala, Saharanpur, Khurja, Shahjahanpur, Lucknow, Allahabad, and Mughalsarai. Total length of 1,805km. The Eastern Corridor is expected to carry more heavy mineral traffic and less container traffic.
11. The eastern DFC will include the construction of 104 bridges, 368 road-over-bridges (ROBs), 189 road-under-bridges (RUBs) and 21 flyovers. It also includes reconstructing nine existing ROBs and extending ten existing RUBs.
12. It is expected that trains running on the DFC lines will be up to 1.5km long (100 wagon rakes) and running at up to 100km/h.
13. Double-stacking of containers is expected to be the rule, especially on the Western Corridor which will be unelectrified.
14. Transit time for freight between Mumbai and New Delhi is expected to drop to about 36 hours from the current 60 hours.
15. In the busiest freight routes such as Ahmedabad - Marwar, the number of freight trains running is expected to rise from 15 each way each day (currently) to 72 each way; between JNP and Vadodara the increase will be from 9 to 49.
16. Expected completion time for the first phase of the DFC project (the routes described above) is around 5-7 years (i.e., completion by 2012-2014).
17. RITES is the agency carrying out the initial feasibility studies for the project.

Procedure to be followed for construction of Private Railway Siding

1. CTPM is the Nodal authority for dealing proposals
2. After deciding the serving station, submit application with non refundable deposit Rs 15000 which includes Name, Description of work, NOC, take off arrangement, any other siding existing, length of lead line in Railway land, gradients, inward and outward traffic projections, proposals for EIMWB on Private land or Railway land, land details, estimated cost, certificates as is necessary for the owing of siding.
3. Grant of "In principle" approval by CTPM within 30 days,
4. Rail transport clearance (RTC) to be taken from the Board level.
5. Submission of detailed Project report (DPR) and PT plan.
6. Distribution of DPR and PT plan to divisions within 30 days.
7. Distribution of DPR and division approval PT plan to HQ within 60 days
8. Signing of siding agreement.

Liberlization of Siding Rules

1. Nodal agency for provision of single window service to customers CTPM at zonal level is nodal officer.
2. Throughout construction stage including activities for approval of Plans and sanctions of estimates Chief General Engineer is nodal officer.
3. After commissioning CCM(FM) is nodal officer.
4. Time frame – 6 months – Survey & works executed by railway.
Plan approval within 2 months and final approval within 4 months of submission of detailed project report if done by empanelled consultants.
5. Overhead charges payable will be in provision of Engineering Code payable by party.
6. Capital cost – Owner shall bear the cost take off point including OHE.
7. Capital cost of Traffic facilities such as ‘Y’ connection, additional lines at serving stations, crossing, stations, patch doubling etc shall be borne by railways.
8. The distance for charging will be inflated/increased 5 kms.
9. In case siding owner desires to borne the traffic facilities cost then he may do so, and the ‘Y’ connection to be used as common user facility and the licence will be done as per extent policy issued from time to time by the Railway Board.
10. Investor will be eligible for concession in lieu of this.
11. Normally connected from serving station.
12. In case party desires from between two stations, a new crossing station expenditure including staff quarters, loop line, signaling electrification and other infrastructure shall be borne by siding owner.
13. Siding owner shall also pay recurring cost towards maintenance & staff for period of 10 years before commencing of siding.
14. Such siding will be known as private siding.
15. Cost of guage conversion is shared by railway and owner.
16. Guidelines for cost sharing for new and existing siding, electrification, maintenance (civil engg.), OHE, C&W examination cost of Railway staff will depend on the rate of returns (ROR)
17. Some freight incentive schemes will be given to such siding owners like engine on load.

Private Freight Terminal (PFT)

Objective

1. Enable rapid development of network of freight handling terminals with the participation of Private Sector.
2. Enhance the presence and share of railways in the overall transport chain.
3. Divert traffic so far predominantly moving by road to rail and attain increased rail freight volumes of offering integrated, efficient and cost effective logistics and warehousing solutions to users.
4. Executive director (Freight marketing) at Ministry of Railways level and CTPM would be nodal officer during construction and planning stage
5. CCM(FM) would be the nodal officer after commissioning of a PFT.

6. Private siding purely operated by the owner and the end user are not the same, they can apply for converting the siding to PFT
7. They require to submit an application fee of one crore.
8. If application for PFT is rejected . 99% of the money will be refunded within 30 days.
9. Security deposit of Rs 1 crore will be deposited by applicant within one month of granting approval for setting up of PFT.
10. Upon successful completion of PFT 99% of security deposit will be refunded within 30 days of notification of PFT.
11. If PFT is not completed within period of 1 year for Brownfield PFT and 3 years for Greenfield PFT proposal will be cancelled and application fee and security deposit will be forfeited.
12. An application will be applied to CCM/FM enclosing the prescribed documents and application fee.
13. There are two types of PFT they are Brownfield PFT and Greenfield PFT.
14. List of authorized rail users will be incorporated I TMS module of FOIS.
15. PFT can book and handle all traffic excluding programmed coal, coke and iron ore.
16. Railway commercial staff will be posted at PFTs to carry out commercial functions.
17. Construction of PFT as per private siding policy.
18. Greenfield PFT revenue sharing will start after 5 full years of notification of PFT.
19. Brownfield PFTs revenue sharing will start after 2 years of notification.
20. Agreement for operation of PFT will be 30 years.
21. DC and Wharfage charges, other charges such as surcharges, taxes cess levies etc. will be levied as per the extant rules.
22. PFT will be required to provide an inmotion electronic weigh bridge as per extant rules,

TRAFFIC SURVEY

It is a detailed study of traffic conditions and prospects of an area with the object of determining the most promising routes for the railways in the area.

For the purpose of construction and financial implications, the railways are divided into three categories

- Strategic lines
- Protective lines
- Commercial lines

Strategic lines are constructed for the defence of the country. Protected lines are constructed to protect a particular part of the country from famine. Commercial lines are constructed keeping in view the idea of profit and loss.

No financial justification is required for strategic and protected lines. It is for the commercial lines that the financial justification is required.

An experienced administrative officer of the traffic (Comml / Operating) department should be entrusted with the work of traffic survey. To ensure that the estimates of anticipated traffic, capital cost and recurring expenses etc. are realistic and the financial appraisal of the project including the phasing of investments and returns at each stage are worked out as correctly as possible and with great deal objectivity, an accounts officer of appropriate status should be associated with the traffic survey officer. The traffic survey team should be supplied with terms of reference containing instructions regarding the scope and nature of the investigation to be carried out.

The traffic survey team should also visit the HQ at various intervals both during the progress of the work in the field and during the period of recess in order to consult the General Manager and where necessary, have the original terms of reference modified by the competent authority. This would enable the main line administration to determine the design of the new line under investigation.

The traffic survey team should also work in close collaboration with the engineering survey party if there is one in the field at the same time, and while collecting information should visit all the trade centers in the area, consult local authorities and prominent citizens freely both on regard to trade and industry and most suitable alignment for the proposed railway line.

Traffic survey is mainly of two types.

- Preliminary survey
- Final survey

Preliminary survey:

Preliminary survey is done to determine how a proposed line will fit in the general development of railway and what return is likely to yield on the estimated total cost. It should be based on the careful study of

- Existing map
- Trade and population
- Financial and statistical data of the railway of similar area
- Modes of transport available in the area

From this investigation, the railway administration decides whether traffic survey should be under taken or not and what would be the standard of

construction. All estimates for traffic survey require the sanction of the railway board and the cost of the survey is included in the budget.

Final survey:

Final survey is done with the sanction of Railway Board. It depends upon the following factors.

- Acquisition of land
- High flood level
- Boundaries of village lands
- State Govt. requirement
- Position of canals, rivers, culverts etc.
- Station site and junctions
- Diversion of traffic
- Protection work required
- Road ways and gradients
- Expected cooperation of local public
- Requirement of military and civil authority
- Demolition of religious places and burial places

Estimation of coaching earnings:

First find out the estimate of II class passenger earnings then add a percentage of upper class and coaching traffic. The following is the formula for II class passenger earnings.

$$X = F \times N \times P$$

X = Earnings from II class passengers

F = Fare per journey

N = Number of journeys per head per year

P = Population diverted

F and N are to be estimated on the basis of the existing line of the same length and type of section.

Estimation of goods earnings:

Such earnings are worked out keeping in view the following points

- Outward traffic
- Inward traffic
- Long distance traffic
- Short distance traffic

- Economic condition of the area
- Agricultural development in the area
- Industrial development in the area
- Existing market in the area
- Merchants and Govt. departments will also be consulted

Estimate of expenditure:

The working expenditures are divided in to the following main heads.

- Maintenance of structural work
- Maintenance of supply of locomotive power
- Maintenance and supply of carriage and wagons
- Expenses on traffic developments
- Expenses on general developments
- Expenses on electrical developments
- Miscellaneous expenses

It is seen what would be the return after 6 years and 11 years which is known as productive test taking the life period of the line as 30 years.

Man Power Planning

Introduction

Manpower planning is a process which aims to have the right number of staff at right places with right type of skills at right times to enable the organisation to achieve its short term and long term goals. In other words, manpower planning is the system, which ensures the manpower availability at a given point of time. Manpower recruitment is related to matching the personal qualities of employees with the job requirements.

Objectives of MPP

- 1) To ensure the human resources currently employed
- 2) To plan future man power needs
- 3) To anticipate redundancies and avoid unnecessary situation
- 4) To determine proper training levels.

Benefits of MPP

- 1) Reducing man power costs
- 2) Getting best contribution from the employees
- 3) Motivating the existing employees
- 4) Developing the existing manpower.

Assessment of Manpower in Railways

- In open line, factors like normal wastage, death, deputation, dismissal, creation of assets and posts, leave reserve, rest givers, yardsticks etc., influences the assessment of manpower.
- In construction projects, performance evaluation and review technique, phasing of work etc., are used to assess the manpower.

There have been dynamic change in the technology and modernisation, electrification, computerisation, mechanisation of track maintenance etc. are taking place at fast rate to meet the challenges of traffic requirements in Indian Railways. To meet the challenges of the changing environment, systematic manpower planning is essential. Therefore a category-wise analysis of staff should be carried out, to identify surplus and to arrange manpower in the areas of need. This adjusts the surplus in one category to other categories, where there is demand. Manpower planning ensures that the existing manpower is utilised to the maximum possible extent.

Manpower planning emphasise on training to different categories of staff to improve the skill and to increase productivity. This step reduces the availability of unskilled staff, increase productivity and maximize manpower utilization. Regular conversion training programmes reduce the wastage of manpower due to changeover. The staff are also deputed for refresher course, conversion course, promotional course etc. with the aim to develop organisationally effective personnel with pride in their work and faith in management.

The primary objective of the manpower planning is to ensure the availability of the required skill and to reduce wastage. When the manpower availability is clearly known arrangements can be easily made to cater to the additional needs of manpower as indicated in the forecasts. Normally, the field officers responsible for executing the job are responsible for the manpower planning.

Benchmarking

Definition:

Benchmarking is “the continuous process of measuring our products, services, processes and practices against the most successful competitors or companies which are established industry leaders, then learning how their excellence was achieved and then setting out to match or even surpass them”. Benchmarking consists of being humble enough to accept that somebody else is better, then being wise enough to learn from them and then match or even surpass them.

Manpower Planning in Indian Railways

Man Power is the biggest component of any industry and the expenditure on staff salary and related items is a perennial in nature. Right sizing of manpower to reduce unit costs in an effective way to increase efficiency. Benchmarking is a method which will enable to scientifically and rationally right size any industry. Indian Railways, the biggest transporting industry in India, has introduced the concept of bench marking as a tool of manpower planning. In simple words, Bench marking is the search for and implementation of best practices. Since Indian Railway has a large number of activity centres performing the same type of work, it was decided to do internal benchmarking of activity centre of Indian Railways. Substantial variations were observed and the activity centers with least manpower ratio (MPR) which means highest productivity were termed as Benchmark centers.

Steps in benchmarking process

The 10 Step Benchmarking process outlined in Robert C. Camp's "Business Process Benchmarking – Finding and Implementing Best Practices" may be used to systematically conduct the Benchmarking Study. The 10 Steps are:

- Decide What to Benchmark
- Identify whom to Benchmark
- Plan and conduct the Investigation
- Determine the current performance gap
- Project future performance levels
- Communicate Benchmark findings and gain acceptance
- Revise performance goals
- Develop Action Plans
- Implement specific actions and monitor progress
- Recalibrate the Benchmarks.

In Indian Railways, the above steps can be followed in the following ways

1. Break the total activity into smaller activities and then compare the manpower availability ratios for each such smaller activity so as to arrive at Benchmarks for such smaller activities that will help in identifying the excess manpower.
2. An analysis should be carried out in respect of the best and the worst Manpower availability ratios for different activities so as to identify the reasons for being the best or the worst. This detailed analysis should then be circulated to all the activity centres to locate their faults and to innovate ideas to rectify the same.
3. The activity centres which have been analysed as worst should, as the first step, stop inducting any more staff in that particular activity.
4. Then the surplus identified should be redistributed rationally to make optimum use of this vital and costly resource in areas where there are well established staff requirement has been assessed. Based on the staff profile, their age, qualification, etc., a need based training to be imparted before they are fit in that particular job, if they were not in the same cadre or category.

Thus benchmarking offers a solution to scientifically right size the Indian Railways. Once the benchmarking of staff deployment is completed, by similar method of benchmarking of energy costs and materials costs can also be taken.

Conclusion

In our railway system, though the system of recruiting, training, placing or posting and promotion are inherited from the system of British Railways, yet manpower planning is given importance only in late 70's, which envisages making of quality human resource towards attaining the goals of the organization duly giving importance as a service organization for transporting of goods and passenger services to all sorts of the people across the country.

South Central Railway

History:

South Central Railway was formed on 02-10-1966 when Hubli and Vijayawada Divisions of Southern Railway and Sholapur and Secunderabad Divisions of Central Railway were carved out and merged into a new Zone. Subsequently, Guntakal Division of Southern Railway was merged with South Central Railway on 02-10-1977 and Sholapur Division was remerged with Central Railway. Secunderabad Division was split into two Divisions viz. Secunderabad and Hyderabad on 17-02-1978. Following re-organisation of zones and Divisions with effect from 01-04-2003, two new Divisions viz., Guntur and Nanded were operationalised duly transferring Hubli Division to newly formed South Western Railway.

Presently S.C. Railway has 6 Divisions, viz, Secunderabad, Hyderabad, Vijayawada, Guntakal, Guntur and Nanded. South Central Railway predominantly serves the states of Andhra Pradesh, Telangana and Maharashtra and to a limited extent, portions of Karnataka, Tamilnadu & Madhya Pradesh states.

Number of Workshops – 5 : LGD- 3 TPTY, Rayanpadu

Number of diesel loco sheds – 5 KZJ, GY, GTL, MLY, BZA

Number of Electric Loco Sheds – 3 SC, KZJ, BZA

Total No. of Traffic Facility Works in progress : 40

(inclusive of remodeling, provision of additional loop lines, new crossing stations)

Total works to be executed by Construction = 21

Total works to be executed by Open line = 19

Planning in SCR (Pink book 2014-15)

1. New Lines	:	416,10,00
2. Gauge Conversion	:	11,00,00
3. Doubling	:	83,00,00
4. Traffic facilities/Yard remodeling	:	46,42,88
5. Rolling Stock	:	22,77,40
6. Computerization	:	12,55,00
7. Road Safety works		
LC gates	:	63,70,04
RUB & ROB	:	147,24,87

8. Track Renewals	:	381,00,00
9. Bridge works	:	16,71,41
10. Signal & Telecommunications	:	73,87,84
11. Traction distribution	:	29,31,53

IT Related Initiatives taken by Railways is :-

1. **Integrated Coach Management System (ICMS)-an online system to track and manage passenger coaches**
2. **Parcel Management System**
3. **Crew Management System**
4. **E-Procurement System**
5. **Control Office Application (COA)**
6. **Payroll Processing System**
7. **Workshop Information System**
8. **Automatic Ticket Vending Machines (ATVMs)**
9. **FOIS**
 - a. **RMS**
 - b. **TMS**
10. **COIS**
11. **PRS**
12. **UTS**
13. **JTBS**
14. **ATVM**
15. **Mushkil Aasan**
16. **NTES**
17. **POET**
18. **IVRS**

Freight Operations Information System (FOIS),

1. Started in the year 1994 under control of CAO/FOIS/NDLS.
2. FOIS Organization in S.C.Railway was launched on December.1999 under the control of COM/SC.
3. FOIS is a computerized data collection system with instant access to real time status of consignments in transit.
4. FOIS is an '**ON-LINE REAL TIME**' system based on absolute current state of Art Technology and efficient Communication system.
5. A management tool to optimize utilization of costly assets and resources by improving the distribution of Rakes / wagon, Scheduling and Routing Traffic.

6. Provides continuous Cargo Visibility and enables the Freight customers to have instant access to information regarding the current status of their consignments in transit for just in time inventory.
7. It captures details of with a friendly customer based system.
 - freight-demand,
 - loading,
 - transit
 - Delivery

Benefits:

1. Rake based consignment tracking and pipeline.
2. Invoice based loading, Originating Tonnage and Revenue.
3. Information on trains on the run, the ETA at next point and the work to be performed.
4. Vehicle guidance of all trains on run.
5. Trains, Stock and Wagon wise interchanges.
6. Optimized Asset utilization.
7. Locomotive utilization by reducing L/E running.
8. Statement of missing or wrongly delivered wagons.
9. Elimination of unconnected wagons.
10. Reduced locomotive power and rolling stock maintenance cost.
11. Savings in Time & Cost of handling in yards, cost of empty haulage.
12. Ensures optimal crew management and monitors statutory limits for running duty and overtime payments.
13. Reduction in staff cost per unit of transportation due to improved productivity of the available manpower.

Improved customer service and satisfaction:

- Quick settlement of Claims.
- Just in time inventory.
- E-commerce.

Goods shed operation:

- Arrival particulars of Wagons.
- Placement and Release Particulars.
- Information on demands registered and pending indents.
- Preparation of RR.
- Information on demurrage and Wharfage.
- Goods shed earnings.
- Information on delayed wagons and wagons awaiting Placement / Release.

Scope of FOIS systems:

The entire gamut of FOIS has been classified into various sub systems for formulating MIS reports and queries and its own information.

RAKE MANAGEMENT SYSTEM RMS

1. RMS has been provided in yards, interchange points and also divisional control offices for proxy reporting and generation of various operating reports.
2. 23 RMS locations are functioning round the clock for real time reporting of freight movement In SCR.
3. In RMS rakes are formed and consist reported
4. The rake is offered for TXR examination.
5. CC and premium rakes are given colour tags to identify the rakes in FOIS system

Important Outputs:-

1. Daily position & Loading performance at a glance.
2. Terminal detention & detention of individual Rakes.
3. Detention at Yard/Crew Booking points.
4. Rake at Odd hours & Forecast /Summary Interchange Forecast.
5. Section wise HOR and Speed for all trains.
6. Commodity wise Outstanding.
7. Y-Day Loading & Interchange of CC Rakes.
8. Pipe line of Terminating loads
9. Equipment failures.
10. Performance of type-wise wagons
11. Availability of Loco-Pilots and Guards.
12. Loco Performance.
13. Shed wise Loco Holding in Foreign Rly.
14. Shed/Service wise loco details.
15. Divisional Loco detentions.
16. Shed & Territorial Outage.
17. Net Outage and Holding of S.C.Railway.
18. It enables accounting of EKM per Engine Day.
19. It has also started to issue Computerised Vehicle Guidance (VGs) from TXR examination points.
20. RMS has been integrated with COA.
21. Web Reports through FOIS and Internet has been made available and provides message sending to all Stations, Divisional and Zonal Headquarters of IR.

TERMINAL MANAGEMENT SYSTEM (TMS)

1. Terminal Management System (TMS) captures freight transactions at individual terminals for computerized preparation of commercial documents such as RRs, ODR etc.,
2. It helps in accounting of Railway freight earnings.

3. Non TMS freight terminals are also captured for FOIS by nearest TMS locations.
4. Terminal Management System (TMS) has been commissioned at 150 field locations.
5. Out of them, 31 TMS locations are V-SAT based locations.

Important features

- Issuing of Computerised RRs for Outward Rakes.
- Train running position and loading details.
- Freight details: Station/Division/Zone Wise.
- Demand and O/S priority wise.
- Consignment delivery book details.
- Vehicle Guidance (VGs) for rakes from Non-RMS locations.
- Commercial circulars and location details in S.C.Railway.
- FOIS Messages with any location in Indian Railways
- Web-enabled Claims Application software accessible to Claim Officers

CREW MANAGEMENT SYSTEM (CMS)

The Crew Management System was introduced in this Railway in the year 2009 at 26 locations that were sanctioned and commissioned

Important Features

- Sign On & Sign Off of Crew and Guards.
- Bio-Data of Crew and Guards.
- Daily, Fortnightly & Monthly analysis of Crew and Guard.
- Calculation of Mileage.
- PME, Refresher Courses done and due. CMS does not allow crew to be booked if they are due for PME and Refresher Course or if not trained in particular Loco.
- CMS reports are also available in Web of FOIS Internet and Internet
- All allowances eligible for Crew and Guards.
- Non-run particulars of Crew and Guard.
- Availability of outstation Crew in different Lobbies.

1. Revenue accounting.
2. Crew Management.
3. Fuel Management.
4. Locomotive repair management.
5. Wagons repair management.
6. Safety management.
7. Statistical Information

CONTROL OFFICE APPLICATION (COA)

Control Office Application started in the year 2008 and commissioned in six divisional controls i.e., SC, BZA, HYB, GTL, GNT & NED.

Control Office Application (COA) is comprehensive software for the automation of Control Charting at a railway divisional control office. COA is intended to replace the tedious manual plotting of running trains on a chart. The core functionality of the control charting with ergonomics is intended to provide the Traffic Controllers a good look-and-feel and user-friendly work environment. The benefits of COA would include- better planning and decision-making in train operations and thus contribute to increased operational efficiency.

COA is designed to form the core application to drive the existing allied systems like FOIS, NTES and COIS. The integration with allied systems will be facilitated through a Central Application Server at CRIS. .

The flow of data on real time basis to adjoining divisions will mark a significant breakthrough in the train operations without dependency on human interference.

COA covers the following core functionalities Control Office Operations. They include: -

- Train Ordering
- Maintain Train Information
- Manage Train Movement (Abnormal Working, Stabling, Banker Movement)
- Report Unusual Occurrences.
- Management of Maintenance Blocks • Caution Orders
- Plot Graph.
- Advance Plotting _ System / Manual
- Maintain referential data
- MIS Reports
- Yard Management Siding
- Miscellaneous Functions
- View Station Layout

The application will have interfacing capability with Data Logger to capture data pertaining to train movements in the final version of the product. .

Intended Audience

- Operations Managers
- Train Controllers
- Key functionaries of sister departments.

Benefits:

- Fully Automated work environment
- As an aid to the controller in terms of efficiency, precision & time management.
- Leverage to Controller's Experience in decision making through manual forecast
- Real time information on train operation without human dependence
- To serve as a backbone system for sharing of data between allied systems

INTEGRATED COACHING MANAGEMENT SYSTEMS - AN OVERVIEW

MODULES IN ICMS

Punctuality Module (PAM): For Post facto analysis of punctuality loss and its causes (not an on-line system), Captures train running at Originating/ Terminating and interchange points and the causes of detention. Data input predominantly at Divisional HQ level. Status: Implemented.

Coaching Operations Information System (COIS): Captures events on Coaches/Rakes, Generates Reports for Management of Coaching Stock. Data input predominantly at Station/Coaching Yard level.

COIS Data Entry Module: Support module of ICMS, to maintain database pertaining to the information of Rake Links, Yard Infrastructure, Coach Master, Train Schedules etc. Data input at Zonal HQ level.

Coaching Maintenance Module: To capture depot activities related to coaching maintenance operations, Utility tool for managers looking after mechanical and electrical maintenance, Includes module for Material Management and Manpower data (gang strength per shifts etc), Data input at CDO level.

Time-tabling Module: For simulating the suitable timings for running of all kinds of trains, simulating the best available path for planning a train keeping in view all variables, simulating optimum utilization of rake link, generating all time-tabling documents. Data input at Zonal HQ level.

ICMS-SYSTEM ARCHITECTURE

User connects through browser interface (like Internet Explorer)

- Separate URL for PAMS ,COIS and DATA modules (for ex: <http://.../cois> , <http://.../pam> , <http://.../data> and so on)
- Users have Thin clients at location
- Back-end: RDBMS (Oracle based)

ICMS-DATA FEEDING

Master Data: Common Master database for PAMs and COIS, includes Infrastructure data: (of more permanent nature like List of Stations, Platforms, washing lines) and Other Master Data: (of less permanent nature like Rake Link Data, Time Table data, Coach Master etc)

Running Data: Separate and independent running database for PAMS and COIS

a) PAM:

- Feeding mostly at divisional level, Interchange owning division controls the data feeding for handing over or taking over, Zonal client does the responsibility fixing(deciding the trains "lost in punctuality")
- Activities include:
- Originating terminating, interchange timings

- Detention Reports,
- Cause wise logging,
- Fixing Responsibility Running Data: Separate and independent running database for PAMS and COIS

b) COIS:

Unlike PAM - no concept of data "feeding" in COIS. Instead working on the system at station/yard level leads to generation of required data (and memos for the operator). This works as input for MIS.

All station/yard activities from arrival to departure of rake are captured:

Yard stock entry	Dispute Resolve
Yard Position	Sick Marking
Rake formation	Sickline PlacementSickline Operation
Modify consist	Shop Marking
Movement	Shop Placement
Movement (Yard to yard)	Remove fit available coaches
Rake Examination	Search Feedbacks
Departure Reporting	Send Feedbacks
En route Attachments/Detachments	Generate memo
Arrival Reporting	Dispute Resolve

ICMS-MIS-REPORTS

- a) PAM : Reports for Management at Divisional Level, HQ level, Board level like:
- Railway Punctuality Performance for a date for a Division
 - Movement of Trains (Division wise) in a Zone
 - Punctuality percentage of Mail/Express
 - Cause wise/Gauge Wise breakup of Lost Trains between dates
 - Division wise analysis of Cause of Lost Trains on Date in a Zone
 - Railway Punctuality performance for a date in a Zone
 - Cause wise breakup of Trains lost in a period
 - Summary of Monitored trains daily Run and Lost
 - Section wise/Cause wise analysis for all trains on a date
 - Zone wise/Cause wise analysis for all trains on a date, etc
- b) COIS: Reports for Management at Station Level, Divisional Level, HQ, RB level like :
- Yard Stock Position (Line position)
 - Vehicle Guidance
 - Zonal Stock Balance sheet (type wise details of Bare Requirement, allotment, running in service, ineffective etc)
 - Coaches on way from/to shop
 - Foreign Railway Coaches
 - Ineffective Coaches
 - Coach History
 - Rake Link Information Zonal/Divisional Coaching Stock allotment/availability, etc.

ENTERPRISE MANAGEMENT SYSTEM (EMS) This is Monitoring System software based at Zonal Communication Centre, Secunderabad. It furnished Odd hours to Odd hours reports on daily, weekly and monthly basis in a customized manner for all FOIS locations in this Railway.

1. PRS

- Transaction is fast.
- More information is given on the ticket.
- More data can be stored hence less space required
- Certain type of information is easily accessible in all terminals with updated information, such as
 - Accommodation availability
 - Stations of passenger
 - Fare
 - Time Table
- Cancellations, Current day reservations are done at same efficiency level.
- Shift closing is made easy and time is also saved
- Charting and printing is done by the system with minimum effort.
- Accountal is accurate and complete.
- Pre-printed ticket stock is avoided
- Reports are generated timely, accurately and are more elaborate.
- Reservation can be done from any place to any place from any counter
- Information can be had on telephone since IVRS is connected to PRS
- On line enquiry display system is implemented
- Ticket is printed with updated information
- Reservation counters can be opened at any place not necessarily at a railway station
- Tickets can be modified/cancelled at any counter
- Coach directory facility is available for automatic confirmation of extra accommodation
- Unutilised quotas are automatically released to RAC / WL
- Updation of data base, new additions, change in rules/fares can be done from one place for entire Indian Railways

2. UTS

- Is a centralized server based system similar to PRS
- Based on client server technology with Central Server at SC.
- Dumb terminals are provided at locations/stations connected to server at SC.
- Dedicated Data Channel is used for connection.
- All transactions are recorded at central server.
- Changes in Data/Fares/Concessions etc. can be done at central server and becomes effective at all terminals.
- Provides centralized accounting and reports.
- At any given time any kind of report can be generated.

- Is very effective during pushkarams, Jataras etc as tickets can be issued very quickly and easily.
- Quick reports / Statistics help in planning of extra coaches / trains during rush periods.
- Tickets can be issued from any place to any place within cluster of station
- Normal, Advance & Reverse tickets can be issued
- Ticket can be given to a maximum of 4 passengers (A+Ch)
- Tickets can be cancelled from any counter except on the day of journey
- An unique 10 character Alphanumeric number is generated by the system known as UTS Number
- A 4 digit random number is generated for verification of tickets
- UNIFICATION OF PRS AND UTS

1. JTBS

Purpose: Introduced in various cities for issue of unreserved tickets through UTS

- Cash only
- Only unreserved tickets
- Concession tickets to Sr.Citizens only
- Not permitted to grant refunds

2. Automatic Ticket Vending Machines ATVMs

To reduce rush at counters (especially suburban stations) To reduce transaction time

- Smart Card based
- Currency operated
- Debit/Credit card based
- ATVMs are linked to UTS online for sharing data.
- Automatic Ticket Vending Machines ATVMs

3. Mushkil Aasan

- In order to make ticketing a more convenient experience, Mobile Counters deployed in Vans were introduced.
- One van each in Delhi & Kolkatta are functioning.
- The mode uses GPRS / CDMA technology for connecting to the server

4. *Passenger Operated Enquiry Terminal (POET)*

- is an amenity provided at all important stations / places.
- It is user friendly
- Public can access to the system easily for getting information.

5. *Interactive Voice Responsive System (IVRS)*

This system facilitates enquiries such as

1. availability of accommodation
2. current reservation status
3. arrivals and departures of trains.
4. Telephone is connected to computer which processes the data and information is conveyed to passengers

6. *National Train Enquiry System (NTES)*

The main goal and objective in NTES is to provide timely and reliable information to general public through user friendly interface.

- Expected Arrivals & Departures at each stopping station
- Train Schedule
- Cancelled Trains
- Diverted Trains
- Platform Berthing

Establishment Rules:-**I PAY AND ALLOWANCES:**

Pay—pay means the amount drawn monthly by a government servant as :

- (i) the pay other than special pay or pay granted in view of his personal qualifications, which has been sanctioned for a post held by him substantively or in an officiating capacity or to which he is entitled by reason of his position in a cadre.
- (ii) Overseas pay, special pay and personal pay.
- (iii) Any other emoluments which may be specifically classified as pay by the President.

Average pay:- Average pay means the average monthly pay earned during the 12 complete months immediately preceding the month in which the event occurs which necessitates the calculation of average pay.

Overseas pay:- Overseas pay means pay granted to a railway servant in consideration of the fact that he is serving in a country other than the country of his domicile

Personal Pay:- Personal pay means additional pay granted to a Railway Servant—

- a) To save him from a loss in substantive pay in respect of a permanent post other than a tenure post due to a revision of pay or to any reduction of such substantive pay other wise than as a disciplinary measure.
- b) In exceptional circumstances, on other personal considerations.

Special Pay- Special pay means an addition, of the nature of pay, to the emoluments of a post or of a Railway servant, granted in consideration of—

- a) the especially arduous nature of duties./
- b) A specific addition to the work or responsibility and includes non practicing allowance granted to doctors in lieu of private practice.

Presumptive pay of a post—Presumptive pay of a post means the pay to which railway servant would be entitled if he held the post substantively and were performing its duties; but it does not include special pay unless the railway servant performs or discharges the work or responsibility, in consideration of which the special pay was sanctioned.

Substantive pay:-Substantive pay means the pay other than special pay, personal pay or emoluments classed as pay to which a railway servant is entitled on account of a post to which he has been appointed substantively or by reason of his substantive position in a cadre.

Stepping Up:- Where a senior employee draws lesser pay than his junior promoted after him, his p pay may be stepped up to the extent of the pay of his junior from the date of junior's promotion.

Next below Rule (NBR):- Literally it means promotion equal at least to the person next below the employee in a seniority group. Such a promotion is granted only to an employee who is out of his regular line of promotion.

Date of Increment The date of next increment normally falls after a lapse of 12 months but it is made as July 1st subsequent to implementation of VIth pay commission.

Efficiency bar:-In order to ensure continued efficiency of the employee, he may be allowed further increase of pay from the stage shown in EB stage in scale. If he is found fit EB in pay scales for the group D staff has been abolished.

II ALLOWANCES:-

1. Dearness allowance. 2. House rent Allowance 3.City Compensatory Allowance. 4. Transport allowance 5.Night duty allowance 6.Traveling allowance 7. Consolidated T.A. 8. National holiday allowance 9. Conveyance allowance 10.Over time allowance 11.Night patrolling allowance. 12.Construction and project allowance 13.Mileage allowance. 14. Border allowance. 15. Break down allowance. 16.Officiating allowance 17.Training allowance. 18. Remote locality allowance 19. Bad climate allowance 20.Special compensatory hill area allowance. 21. Special compensatory tribal/scheduled/agency area allowance. 22. out turn allowance. 23. Uniform allowance. 24. Washing allowance. 25.Cycle maintenance allowance. 26. Non-practicing allowance 27. Annual allowance to railway Doctors for research pursuits. 28. Composite transfer grant. 29.Running allowance.

DEARNESS ALLOWANCE:

It is granted to compensate the high cost of living based on the rise in price index.. The inflation neutralization may be made uniform @ 100% at all levels. The All India Consumers Price Index for Industrial workers will continue to be the basis for calculation. The series with base 2001 will henceforth be used replacing 1982 as the base. Government will continue sanctioning additional DA, if it falls due, every January and July.

NIGHT DUTY ALLOWANCE:-

Night duty allowance is granted to certain categories of staff for actual performance of duty between 22.00 to 6.00 hours.

HOUSE RENT ALLOWANCE:- This allowance is granted to the Railway servant in view of the higher rents, they have to pay for private accommodation due to non availability of Railway Quarters.

TRANSPORT ALLOWANCE:- Transport Allowance is granted to compensate the Railway Employees for the cost incurred on account of commuting between the place of residence and the place of duty. It depends upon the pay scales and cities / towns A-1 /A & Others. Transport allowance is fixed according to the grade pay being drawn by the employees. Dearness allowance sanctioned from time to time is also to be allowed on the fixed transport allowance.

TRAVELLING ALLOWANCE:- Traveling allowance is granted for journey on duty, on first appointment, to attend examination and training. To appear in Hindi examination, attending Territorial Army camps, to attend court and departmental enquiries, to attend meeting of departmental council, to appear as witness and defence counsel in enquiries, when recalled from leave, election duty, on transfer and retirement. Daily allowance (called traveling allowance) is percentage basis based on duration. (30% for less than 6 hours, 70% for 6 to 12 hours and 100% for more than 12 hours)

CONSOLIDATED TA;-Where a staff is required to travel on duty extensively, instead of giving him TA on duty basis, he may be granted a consolidated TA under the orders of Railway board. Once sanctioned, the employee will draw it irrespective of whether he remains out of his headquarters or not. The rate of CTA is fixed based on average no of days the employee is expected to remain out. It may be paid throughout the year. It is not to be drawn when the employee is on leave or is deployed on other stationary duties

NATIONAL HOLIDAY ALLOWANCE;-It is admissible when one works on a national holiday even for a part of a day or is on due rest, or is on journey, or is off duty after booking or is awaiting booking after completion of rest, RPF staff, casual labor on CPC scales those attending training courses etc are also entitled to it. The rates of this allowance will be increased by 25%, whenever the DA payable on the revised pay structure goes up by 50%.

OVER TIME ALLOWANCE: Over time allowance means the payment made to an employee for work done by him beyond duty hours prescribed statutorily and includes the payment made under departmental orders for work done by him beyond or outside normal scheduled working days or working hours. It is paid to the employees for actual time worked in excess of the maximum hours of employment laid down.

COMPOSITE TRANSFER GRANT:-

- The Railway servant joined Railway after 01.05.1976 , will be entitled to composite transfer grant at the rate of one months basic pay in the case of

transfers located at a distance of 20 Kms or more involving change of residence. In case the employee transports his luggage by VPU, the composite transfer grant will be at the rate of 80% of the basic pay if a car is carried in the VPU & the rate is 75% if no car is carried.

- The Railway servant joined Railway prior to 01.05.76, and are entitled to liberal scale of transportation of personal effects by rail, in terms of Railway Servant (Pass) rule 1986, will be entitled to composite transfer grant at the rate of 80% of one month basic pay for Group A, B, C Railway employees and for group D employees at the rate of 90% of one month basic pay.
- For short distance transfers which are within a distance of 20 kms, the composite transfer at the rate of one third of one month's basic pay will be admissible.

III- LEAVE RULES GENERAL:

- a) The employee as a matter of right cannot claim leave. The right to grant or refuse leaves vests in the authority competent to sanction leave.
- b) The leave usually commences on the day charge is handed over & ends on the day charge is taken over again.
- c) Leave sanctioning authority cannot alter the kind of leave due and applied for except at the written request of the employee.
- d) Leave already availed may be converted to another kind of leave on employees request retrospectively but not after retirement
- e) Leave cannot be sanctioned for more than 5 years.
- f) Combination of holidays proceeding in or in continuation of leave is permitted in case of medical certificate of sickness, the holidays will be part of sickness leave.
- g) The employee is not permitted to take up any employment during the period of leave.

KINDS OF LEAVE

a) Leave on Average Pay (LAP)

- It is earned at the rate of 30 days in a year.
- ii) 15 days leave is credited in advance on 1st of Jan and 1st of July of each year.
- Maximum of 300 days can be credited at the time with 15 days to be kept separate to adjust that one may take in ensuing half year.
- 1/10 of the extraordinary leave availed during the previous half year is debited to the leave account.
- New entrant will be given credit of two and a half days per month of the half year in which they join.
- Maximum limit of availing LAP at one spell is 180 days.

b) Leave on half average pay:

- It is earned at the rate of 20 days per year.(In two installments 10 each on 1st January and 1st July in a calendar year)

- No restriction on accumulation.
- It can be availed on medical certificate or otherwise.
- It can be commuted to LAP by surrendering 2 days LHAP for one day
- The amount of leave on half average pay that can be availed of in one spell irrespective of its being combined with any other kind of leave or not, shall be limited to 24 months.
- The leave shall be credited to the leave account at the rate of 5/3 days for each completed calendar month of service which the railway servant is likely to render in the half year of the calendar in which he is appointed.

c) Commuted leave:-When leave on half average pay is converted into half the period of such leave on average pay on medical ground, such leave is called commuted leave. Commutation on medical ground is permitted without any limit and upto a maximum of 180 days shall be allowed to be commuted during the entire service where such leave is utilized for an approved course of study. Leave on half average pay may be commuted to leave on average pay on medical certificate at the request of an employee even if he has LAP to his credit. Commuted leave however may not be granted if authority competent to sanction leave has reasons to believe that railway servant may not return to duty after expiry of such leave.

d) Leave not Due:- It is an advance cheque & is granted to a permanent employee, when no other leave is due and there are reasonable prospects of his coming back to duty/ It is sanctioned to the extent of the LHAP{ one is likely to earn. Maximum can be sanctioned 360 days in one's own career and not more than 90 days at a time and 180 days on medical ground. Temporary employee may be sanctioned leave not due on medical certificate if the post is likely to last till he returns and he has completed one year service.

e) Casual leave:-Casual leave is 8 days in a year. Those who are not enjoying Gazetted holidays may get 10 days. Casual leave can be combined with special casual leave and with no other leave. It can be granted to any extent due at a time. Sundays, holidays, restricted holidays can be prefixed or suffixed to casual leave. It can be taken while on tour.

f) Special Casual leave:-It is granted in the following circumstance

- Scout and guides
- Attending republic day parade, St.John Brigade Athletic tournaments.
- Attending courts as Juniors or assessors.
- Attending Union and federation meeting.
- Attending technical/ scientific Institution meeting.
- Absence for Lok Sahayak Seva.
- Sterilization operations
- For Election to Lok Sabha and Vidhan sabha.

- For RPF annual meet.
- To cooperative society office bearers.
- For Hindi examinations.

g) **Compensatory casual leave:**

Group C&D staffs excluding supervisory staff are entitled to compensatory off in lieu of working on Sundays/Holidays. It must be availed within 30 days of the days on which worked. It is not admissible for working as invigilators in RRB examinations.

h) **Maternity leave:**

A female railway employee with less than two surviving children may be granted maternity leave. It is a full pay leave not debited to any account and granted as under:

- For confinement—180 days from commencement.
- Female casual worker – 4 weeks.
- Ad-hoc employees, if their employment is likely to continue till they come back to service, may be granted on the basis of medical certificate.
- Maternity leave may be combined with any other kind of leave (any leave including leave not due) up to a maximum of one year may be granted in continuation of maternity leave, if applied for without medical certificate.
- Women casual labors who have attained temporary status are also granted this leave.
- For miscarriage/abortion—45 day during entire service, irrespective of number of surviving children

- b) **Paternity leave:-** A male employee (including an apprentice) with less than two surviving children may be granted Paternity leave for 15 days. It should not be availed 15 days before or up to 6 months from the date of delivery of the child. If such leave is not availed within this period, it shall be lapsed. Paternity leave may be granted to Casual labour who have attained temporary status.
- c) **Hospital leave:** It is granted to all staff excluding group A and B for illness or injury **directly** due to risks incurred in course of official duties. It is based on Railway Doctors' medical certificate and is sanctioned for such periods as may be considered necessary. For first 120 days leave salary will be as on LAP and for remaining period as on LHAP. It may be combined with any other kind of leave due provided that total period does not exceed 28 months.
- d) **Special disability leave:** A Non-debitable leave up to 24 months (in one or more spells) may be granted to an employee who had been injured by an injury caused intentionally by some one or has arisen due to performance of his duties. The injury must manifest itself within 3 months of its occurrence. A medical certificate is necessary. It can be combined with other kinds of leave. In case

those covered by WC act, leave salary be reduced to the extent of compensation payable. It counts for pension. It is not debited to leave account.

e) Extra ordinary leave: It is granted when no other leave is due or when the employee applies for it. No leave salary is given in this. It may be combined with others. Any kind of leave may be converted into it or it may be converted to any other leave retrospectively by competent authority. It can not exceed 5 years at a stretch for permanent and 3 months for temporary staff (6 months with medical certificate). Temporary employees suffering from leprosy, T.B. Cancer etc may be granted up to 18 months.

f) Study leave: Study leave for higher studies in subjects having direct bearing on one's sphere of studies, upto 12 months at a time and 24 months in entire career, not debitale to his account may be sanctioned on his filling Requisite Bonds. Total absence on study leave and other leave should not exceed 28 months at a stretch. Leave salary for study outside India will be pay last drawn plus DA, HRA and study allowance. For course in India it will be pay last drawn plus DA and HRA. Any stipend scholarship received should be adjusted against. One who does not resume after study leave, or having resumed quits service within 3 years or does not complete/pass the necessary course, will have to refund the cost incurred by government.

g) Child Care Leave:

Women employees having minor children may be granted child care leave by competent authority for a maximum period of two years(ie 730 days) during their entire service for taking care up to two children whether for rearing or to look after any of their needs like examination, sickness etc. Child care leave shall not be admissible if the child's age is 18 years or more. During the period of such leave, the women employees shall be paid leave salary equal to the pay drawn immediately before proceeding on leave. It may be availed in more than one spell. Child care leave shall not be debited against the leave account. It may be allowed for third year as Leave not due (without production of medical certificate). It may be combined with leave of the kind due and admissible. The child care leave is admissible for two eldest surviving children only.

IV - PASS RULES KINDS OF PASSES:

1. **DUTY PASS:-** This pass is issued to the railway employees in order to facilitate the performance of duty and is generally issued when an employee has to travel from one station to another either to carry out his transfer or in connection with some other official works.
2. **WIDOW PASS:-** This pass is issued to the widow to the railway employees, who were in railways service on or after 12-03-1987 and expired on or after that date whether after their retirement or during service and had opted for the scheme or were automatically governed under the schemes.
3. **RESIDENTIAL CARD PASS:-** This pass is issued to a railway servant for performing Rail journey from the place of residence to the place of his work.
4. **SPECIAL PASS:-** This pass is issued to Railway servants, family members or dependent relatives as the case may be on –
 - a) Medical grounds.
 - b) Sports accounts.
 - c) For attending children camp or scouts camp
 - d) Cultural functions
 - e) On any other occasion which the ministry of railway or a railway administration deems fit.
5. **POST RETIREMENT COMPLEMENTARY PASS:**
This pass is issued to a railway servant after retirement or after he ceases to be a railway servant.

- | | |
|--|------------------|
| • Gazetted officer 20 to 25 yr service | 2 sets per year. |
| • Gazetted officer over 25 yr of service | 3 sets per year. |
| • Group C staff 20 to 25 years service. | 1 set per year. |
| • Group C over 25 year service | 2 sets per year |
| • Group D over 20 year service
(self & wife only) | 1 set per year. |

6. **SCHOOL PASS:** - passes for journey of student son/daughter are admissible in addition to privilege pass, when the child studies in a school away from employees headquarters. Six single journey passes per child per year may be issued. Guardian may be included in school pass for a girl of any age and a boy under 18 years.

7. **PRIVILEGE PASS:** - this pass is issued to the railway employees as a privilege to travel on the railway with or without their families. Classes of pass as per pay limit are as under.

(i) Group A and Group B (Gazetted) ; 1 class A

(ii) Non gazetted group B and Group C employees:-

- | | | | |
|----|-------|--------------------------|--|
| A) | (i) | Grade Pay 4200 and above | - AC 2-Tier |
| | (ii) | Grade Pay 2800 | - AC 3-Tier |
| | (iii) | Grade Pay 1900 | - 1 set AC 3-Tier and 2 sets Sleeper Class |

While performing journey on duty all the employees below grade pay of 4200 are eligible to travel in AC 3-Tier.

B) Number of Privilege passes and PTO due per year:

S.No.	CLASS	PASS	PTO
1.	Gazetted and Honorary gazetted officers	6 sets	4 sets
2.	Non-gazetted staff		
	a) first to fifth year of service	1 set	4 sets
	b) 6 th year & onwards	3 sets	4 sets
3	Special class Apprentices	2 sets	4 sets.

Note: Two sets of PTO are reduced for availing the benefit of widow passes.

B. period of availability of Privilege passes:

- 1) Single journey pass 4 months from date of issue.
- 2) Return journey pass 4 months from date of issue.
- 3) Single journey PTO 4 months from date of issue.
- 4) Return journey PTO 4 months from date of issue.
- 5) Settlement pass 1 year from date of issue.
- 6) Kit wagon pass 1 month from date of issue.

C. BREAK JOURNEY:- pass holder can include any number of stations for break journey in the pass. As unscheduled break journey can be made and endorsed by SM/TC on the pass.

D. Luggage allowance on Privilege passes:

- 1) 1 A and ACC 140 kg per adult (1/2 per child)
- 2) I 70 kg per Adult (1/2 per child)
- 3) II 40 Kg per adult(½ per child)

NOTE:- Bicycles, scooters, etc may be allowed as free allowance on pass.

E Family for passes:

Spouse of a railway servant whether earning or not

i) Son or sons who have not attained the age of 21 years and are wholly dependent on the railway servant.

ii) Son or sons of the age of 21 and above who are

- Bonafide students of any recognized educational institution.
- Engaged in any research work and do not get any scholarship/stipend
- Working as an articled clerk under the Chartered Accountant
- Invalid, on appropriate certificate from Railway Doctor.

iv) Un married daughters of any age whether earning or not.

v) Widowed daughters provided they are dependent on the railway servant.

v) legally divorced daughter who is dependent on the railway servant.

F. DEPENDENT: maximum number of two dependents can be included in the family pass. If, so the maximum number of persons is restricted to five excluding servants. Dependent means widow mother, unmarried or widow sister and brother less than 21 years provided father is not alive, married daughter who is wholly depended on the employee.

G. PASSES BY SHORTEST ROUTE:

Normally passes are issued by shortest route but,

- a) If two alternate route are available, passes may be issued wither route irrespective of the distance.
- b) If longer route is quicker, passes may be issued by the quicker route
- c) Passes may be issued for longer route, if the distance does not exceed the distance via the shortest route by more than 15%.

V - Seniority and Promotion

SENIORITY:

Seniority means the relative positions of an employee in the cadre to which he belongs. Once fixed such a position may undergo changes in certain circumstances.

2. Seniority on Initial Appointment

- Direct recruits on joining a working post get seniority as per their merit in Recruitment Board panel.
- Where they undergo training in training school before joining working post, the merit figure obtained in the training school will determine their seniority.
- Those recruited on special quotas like sports etc. get seniority from the date of their recruitment.
- Where date of joining is same for two or more persons, the earlier born will rank senior.
- Among the direct recruits and departmental promotees, seniority will be as per date of joining but their inter-seniority will not be disturbed. If there is any quota or rota rule in the recruitment, it will be observed.

3. Seniority on Promotion:

- In selection posts, the merit position in the panel will determine seniority.
- In suitability posts original seniority of lower post will be maintained among promotees.
- Those who refuse promotion may lose seniority.

4. Seniority on transfer:

- In case of transfer in the exigencies of service, the seniority is not affected.
- In transfer on one's own request to a new seniority unit one gets the lowest position on the date of joining the new unit.
- On mutual transfer the junior of the two retains his own seniority whereas the senior loses his seniority to the extent of the junior.

D Seniority on Penalties: In case of reduction to lower grade, one is placed above all in the lower grade. On completion of penalty he gets his original position, unless otherwise ordered. Withholding of increment does not affect the seniority of a Railway servant.

5. Seniority on change of category:

- When permitted on administrative grounds, one may carry his seniority.

- In case of absorption of medically de-categorized people length of service in equivalent or higher grade will determine the seniority.
- In change on one's own request one will be placed at the bottom.

PERFORMANCE APPRAISAL AND CONFIDENTIAL REPORTS.

1. An annual assessment report called a confidential report is maintained for staff (other than Group D).
2. This is written annually for each financial year.
3. It is written by the immediate superior who must take into account all performance (good or bad) of the concerned officer over the period under report.
4. The new system of performance appraisal requires the senior subordinate officers to be given targets in advance and the work is reviewed periodically.
5. At the end of the year he gives his self assessment along with a resume of good work and reasons for not doing the allotted work.
6. The form covers general qualities, professional abilities, integrity, intelligence tact, industry, keenness, attitude to SC/ST, to superiors, equals & sub-ordinates, general conduct and character, sociability, aptitudes and shortcomings, etc.
7. Where ever an entry is based on an actual incident, it should be indicated.
8. Adverse entries shall be communicated to the employee and his representation if any shall be considered by the accepting authority, who will pass a speaking order, if representation is to be rejected.
9. If accepted, the adverse remark shall be expunged.
10. The system of CR is a very powerful tool for various purposes like placements, promotions, deputation, training, career planning and growth, EB crossing etc.
11. Thus CR should be written with utmost circumspection, caution and care.

VI -PROMOTION

Promotion from Group D to Group C:

A prescribed percentage in nominated group C categories is to be filled by promotion of group D employees on the basis of selection. Selection comprises of a written examination and there will be no viva voce in the selection. It will consist of written test of 85 marks and record of service 15 marks. The question paper comprises of questions to test ones knowledge of his work. Railways general knowledge and general English paper will be set in bilingual form and may be answered in Hindi. Staff having three years service will be eligible, may appear in the test. Panel is formed on the basis of seniority.

2 Promotion with in group C

Promotions within Group C are made through a process of selection or non-selection. Selection post are post/grade which have been declared as such by Railway board. Other than these selection posts are non-selection post.

Promotion on Selection Posts:

1. Selection post shall be filled by a positive act of selection made with the help of selection Boards from amongst the staff eligible for selection.
2. A selection Board, with 3 Officers conducts the proceedings.
3. The assessment of vacancies for selection post within the cadre will include the existing vacancies and those anticipated during the course of next 15 months.
4. For ex-cadre post, actual vacancies plus those anticipated in the next two years should be taken into account.
5. In regard to selection posts, selections will be conducted annually in a regular manner.
6. The staff in the immediate lower grade with a minimum of 2 years of service in that grade will only be eligible for promotion.
7. The selection for promotion to a selection post shall be made on the basis primarily of merits.
8. Eligible staff upto 3 times the number of staff to be empanelled will be called for written and/or viva voce test.
9. Professional ability is judged by written test 35 marks and viva voce 15 marks.
10. There will be no viva voce in departmental examinations except in case of selection for promotion to post in categories of law Assistant, Physiotherapists, Telephone operator and Teachers.
11. In this situation 15 marks allotted for Viva Voce will be added to written test.
12. For general selection posts for which staff of different categories/department are eligible, mark for seniority is not allowed .
13. Factors and their weightage for the selection are:

a. Professional ability (Written test + Viva test.) -----	50
b. Personality/address/leadership/academic /technical qualification----	20
c. Record of service. -----	15
d. Seniority.-----	15.

b. Promotion on Non-Selection posts:

Promotion on non-selection posts is considered on the basis of seniority cum suitability. The suitability is determined by the competent authority based on record of service or written/oral test or departmental examination or trade test, as laid down. A senior person is passed over only when declared unfit. For promotion within group C categories one must tender a minimum of two years of service in the immediate lower

grade for being eligible. In case of Junior Accounts Assistant where the passing of App II is essential, the two years rule will not apply Relaxation may be considered by GM/RB in special cases of administrative interest.

AD-HOC PROMOTIONS:

In purely short term vacancies in excess of 45 days ad-hoc promotions may be ordered. Where ad-hoc promotions are found inescapable, these may be ordered only for a short duration upto 4 months.

PROFORMA PROMOTIONS

An officer out on deputation or training and whose turn for promotion has come in his own cadre may, by a special order, be allowed a proforma promotion and granted the pay provided the officer is other wise fit for promotion and the vacancy exceeds 90 days.

VII - CONDUCT AND DISCIPLINE *Railway service (Conduct) Rules—1966*

Main features of the rules are:

1. Every Railway servant shall all times maintain absolute integrity, devotion to duty & do nothing, which is unbecoming of a Railway servant.
He shall not misuse his power in the judgment of the case unless is instructed by his superiors. The oral instructions of the superior must be confirmed later in writing.
2. No Railway servant shall in the performance of his official duties, act in a discourteous manner, in his official dealings with the public or otherwise adopt dilatory tactics or willfully cause delays in disposal of the work assigned to him.
3. Act in accordance with Govts policies regarding age of marriage preservation of environment, protection of wildlife and cultural heritage, prevention of crime against women.
4. No railway servants shall indulge in any act of sexual harassment of any woman at her work place. The incharge of a work place shall take appropriate steps to prevent sexual harassment to any woman at such work place.
5. No Railway servant will use his position or influence to secure employment for any member of his family
6. No railway servant shall be a member / office bearer of a political party. He will not take part in any manner in any political activity or movement.
7. No railway servant shall associate himself with any organization, the objects or activities of which are prejudicial to the sovereignty and integrity of India

8. No railway servant shall except with the previous sanction of the Government, won wholly or in part, or conduct or participate in the editing of management of any newspaper or other periodical publication or electronic media
9. No Railway servant shall criticize the policy or any action of government.
10. No Railway servant shall give evidence in connection with, any enquiry conducted by any person, committee or authority unless having sanction of Government. But he can communicate and give information in accordance with Right to Information Act 2005.
11. No railway servant shall communicate any official document or information to any un-authorized person.
12. No railway servant shall acquire moveable/immoveable property beyond one's known means.
 - i. On his first appointment submit a return of his assets and liabilities, giving full particulars regarding—
 - a. Immovable property inherited owned/acquired or lease/mortgage by him or his family
 - b. Shares, debentures and cash including bank deposits inherited by him or owned, acquired, or held by him;
 - c. Other movable property inherited by him or owned, acquired or held by him
 - d. debts and other liabilities incurred by him directly or indirectly.
 - ii. The above rule shall not ordinarily apply to Group 'D' railway servants, but the Government may, in appropriate cases, direct any of such railway servants or any class of such railway servants.
 - iii. In every return, values of items of movable property worth less than Rs. 10,000 may be shown as a lump sum. The values of articles of daily use such as clothing, utensils, crockery, books and the like, need not be included in such return.
 - iv. Where a railway servant already belonging to a service or holding a Post is appointed to any other government or Railway service or post, he shall not be required to submit a fresh return under this clause.
 - v. Every railway servant included in Group A or Group B shall submit an annual return prescribed by the Government in this regard giving full particulars regarding the immovable property the inherited by him or owned or acquired by him or held by him on lease or mortgage either in his own name or in the name of any member of his family or in the name of any other person.
 - vi. No railway servant shall, except with the previous knowledge of the Government acquire or dispose of any immovable property by lease, mortgage, purchase, sale, gift or otherwise either in his own name or in the name of any member of his family:

- vii. Provided that previous sanction of the Government shall be obtained by the Railway servant if any such transaction is with a person having official dealings with him.
 - viii. Where a railway servant enters into a transaction in respect of movable property, he shall, within one month, report the same to the Government, if the value of such property exceeds twenty thousand rupees in the case of a railway servant holding any Group A or B post or a Temporary Gazetted Officer or fifteen thousand rupees in the case of a railway servant holding any Group C or Group D post:
 - ix. Provided that previous sanction of the Government shall be obtained by the Railway servant if any such transaction is with a person having official dealings with him.
 - x. Purchase of items of movable property for giving presents at the time of marriage will be regulated by rule like any other transactions in movable property
 - xi. The powers of the Government exercised by—
General Manager and the Chairman, Railway Rates Tribunal, in respect of both gazetted and non-gazetted officers and Senior Deputy General Managers on Zonal Railways in respect of gazetted officers below the Senior Administrative Grade and non-gazetted officers.
 - xii. The Government, at any time by general or special order, require a railway servant to furnish, within a specified period, a full and complete statement of such movable or immovable property held or acquired by him or on his behalf or by any member of his family. Such statement shall, include the details of the means by which, or the source from which, such property was acquired.
 - xiii. Government may exempt any category of railway servants belonging to Group 'C' or Group 'D' from any of the provisions.
 - xiv. 'movable property' includes—
 - (a) jewellery, insurance policies the annual premium of which exceeds Rs. 10,000/- or one-sixth of the total annual emoluments received from Government, whichever is less, shares, securities and debentures;
 - (b) All loans, whether secured or not, advanced or taken by Govt servant.
 - (c) motor cars, motor cycles, horses, or any other means of conveyance; and
 - (d) refrigerators, radios, radiograms and television sets.
 - xv. "lease" means, except where it is obtained from, or granted to, a person having official dealings with the railway servant, a case of immovable property from year to year or for any term exceeding one year or reserving a yearly rent.
13. No Railway servant shall give or take or demand dowry.
14. No. Railway servant shall engage in any trade or business or undertake any other employment.

15. No Railway servant shall speculate in any stock, share or other investments.
16. Railway servant shall so manage his private affairs so as to avoid habitual indebtedness or insolvency
17. No Railway servant shall accept gift or lavish or frequent hospitality from any individuals, firms etc., having official dealings.
 - i. "gift" shall include free transport, boarding, lodging or other service or any other pecuniary advantage provided by any person other than a near relative or personal friend having no official dealings with the govt. servant.
 - ii. A casual meal, lift or other social hospitality shall not be deemed to be a gift.
 - iii. A Railway servant shall avoid accepting lavish hospitality or frequent hospitality from any individual, industrial or commercial firms, organizations, etc. having official dealings with him.
 - iv. On occasions such as weddings, anniversaries, funerals or religious functions, when the making of gift is in conformity with the prevailing religious and social practice, a Railway Servant may accept gifts from his near relatives or from his personal friends having no official dealings with him, but shall make a report to the Government, if the value of such gift exceeds –
 - a. Rs 7,000 in the case of a Railway servant holding any group 'A' post;
 - b. Rs 4,000 in the case of a Railway servant holding any Group 'B' post;
 - c. Rs 2,000 in the case of a Railway servant holding any Group 'C' post; and
 - d. Rs 1,000 in the case of a Railway servant holding any Group 'D' post.
 - v. In any other case, a Railway servant shall not accept any gift without the sanction of the Government if the value exceeds –
 - a. rupees one thousand and five hundred in the case of Railway servants holding any Group 'A' or Group 'B' post; and
 - b. rupees five hundred in the case of Railway Servants holding any Group 'C' or Group 'D' post.
 - vi. Railway Servant , being a member of the Indian delegation or otherwise, may receive and retain gifts from foreign dignitaries if the market value of gifts received on one occasion does not exceed rupees one thousand . In all other cases, the acceptance and retention of such gifts shall be regulated by the instructions issued by the Government in this regard from time to time.
 - vii. A Railway Servant shall not accept any gifts from any foreign firm which is either contracting with the Government of India or is one with which the Railway servant had, has or is likely to have official dealings. Acceptance of gifts by a Railway servant from any other firm.
18. No Railway servant shall appear in a public place in a state of intoxication not consume any intoxicating drink or drug while on duty. He shall strictly abide by the law relating to intoxicating drinks or drug in force in any area.
19. No railway servant shall practice un-touchability in any form or manner.
20. No Railway servant shall contract bigamous marriage.

21. No railway servant shall bring any political influence or other influence in respect of his service matters.
22. No railway servant shall stay as guest with foreign diplomats or foreign nationals nor shall invite them to stay with him as his guests in India.

VIII - Railway servants (Discipline and Appeal) Rules-1968:

Authority under Disciplinary Rules;

1 APPOINTING AUTHORITY: Appointing authority means the authority to made appointments to the service of which the railway servants is, for the time being, a member or the grade or the service in which the Railway servant is for time being included.

2. DISCIPLINARY AUTHORITY:- Disciplinary authority in relation to the imposition of a penalty on a Railway servant, the authority competent, to impose on him penalty is as per schedule in normal course and in case of imposing major penalties such authority would be Appointing Authority

3. ENQUIRY AUTHORITY: The official who is nominated by the Disciplinary Authority to conduct the disciplinary enquiry is the Inquiry Authority

4. DEFENCE COUNCIL: The charged employee may present his case with the help of another person who is known as Defence Counsel or Defence Helper. Defence council should not be a legal practitioner and should not be associated with the case in his official capacity.

Constitutional Provisions

Article 310 states that the central Govt employees are working under the President.

Article 311(1), no civil servant shall be removed or dismissed from service by an authority subordinate to the authority who appointed him.

Article 311(2), no civil servant shall be removed or dismissed from service or reduced in rank without an inquiry in which he is informed of the charges against him is given a reasonable opportunity to be heard about those charges.

PRINCIPLES OF NATURAL JUSTICE:

1. That every person, whose civil rights are effected must have a reasonable notice of the case one has to meet.
2. That one must have a reasonable opportunity of being heard in defence.
3. That the hearing must be by an impartial tribunal i.e who is neither directly or indirectly a party to the case
4. That the authority must act in good faith i.e reasonably but not arbitrarily

SUSPENSION:-

Suspension is not a penalty. An authority who is not competent to place an employee under suspension may suspend him, but immediately report to the competent authority who will confirm the order. The suspension continues till the order of suspension is modified or revoked by the competent authority that placed the employee under suspension, or by the higher authority.

Subsistence Allowance is granted to employee under suspension, equal to leave salary on half average pay and allowance admissible on such pay. Deduction of PF, courts attachment and fines cannot be recovered. House rent, water charges, diet charges, electric charges, re-payment of advance, station debits, income tax etc will be recovered. Recoveries other than these such as co-operative society's dues, institutes fee, LIC premium, school fee etc may be made on written request of employee. The amount of subsistence allowance may be increased up to 50% after 3 months, if in opinion of the authority, the period of suspension has been prolonged for reasons not directly attributable to the railway employee. The amount may even be reduced up to 50% of subsistence allowance after 3 months, if in opinion of the authority, the period of suspension has been prolonged for reasons directly attributable to the Railway employee.

(a) An employee may be placed under suspension:

- When a disciplinary proceeding is contemplated or pending against him.
- When engaged in activities prejudicial to the interest of the state.
- When a criminal case is pending for investigation, inquiry or trial.

b) An employee shall be deemed to have been suspended:

- If he remains in police custody for exceeding 48 hours.
- If he is convicted for an offence and sentenced to imprisonment for a period exceeding 48 hours and is not forthwith dismissed, removed or compulsorily retired consequent to such conviction.

c) Other circumstances of deemed suspension

1. When a penalty of dismissal, removal or compulsory retirement, imposed on an employee under suspension, is set aside on appeal or revision and the case is remitted for further inquiry or action, the order of his suspension shall be deemed to have continued in force from the date of original order or dismissal etc.

2. When a penalty of dismissal, removal or compulsory retirement, imposed upon an employee, is set aside or declared void by a Court of law and when the disciplinary authority decides to hold a further inquiry in the same case. The employee shall be deemed to have been placed under suspension by the competent authority with effect from the date of original order of dismissal etc.

EFFECTS OF SUSPENSION:

- The suspended employee remains a Government employee for all practical purposes. Various service conditions remain applicable to him.
- The last place of duty will continue to be his head quarter. The request for a change in Headquarters may be granted.
- An employee under suspension cannot be promoted. But he will be called for selection. His result will be kept in sealed cover and a provisional panel will be published. He will be considered for promotion after finalization of the disciplinary proceedings.
- Forwarding of application for deputation, assignment foreign training are not permitted.
- Resignation will be accepted normally.
- The right of voluntary retirement is not freely available.
- No leave will be sanctioned.
- Traveling allowance may be allowed if inquiry is held at an outstation.

PENALTIES:

The following penalties under DAR, for good and sufficient reasons, may be imposed on a Railway servant.

A. MINOR PENALTIES:

- Censure.
- Withholding of promotion for a specific period.
- Recovery from pay of the whole or apart of any pecuniary loss caused to the Railway Administration by his negligence.
- Withholding of passes or PTO or Both.
- Reduction to lower stage in time scale for not more than 3 years without cumulative effect & not affecting adversely his retirement dues.
- Withholding of increments (with or without cumulative effect.)

B. MAJOR PENALTIES

- Reduction to a lower stage in the time scale of pay for a specified period, with further directions as to whether on the expiry of such period,. The reduction will or will not have the effect of postponing the future increments of his pay.
- Reduction to a lower time scale , grade, post or service with or without further directions regarding conditions of restoration to the grade or post or service from which the Railway servant was reduced and his seniority and pay on such restoration to that grade, post or service.
- Compulsory retirement.
- Removal
- Dismissal.

These are Not Penalties

With holding of increment for failure to pass the departmental examination.

- Stoppage at Efficiency Bar for failure to cross it.
- Non promotion when eligible & considered but not found suitable
- Reversion to lower post, grade or service when considered unsuitable after promotion.
- Reversion at the end of promotion as per rules of probation.
- Replacement when service borrowed from another department.
- Compulsory retirement as per rules.
- Termination after probation or other conditions when made as per service agreement.
- Discharge for in-efficiency for failure to pass standards of physical fitness or reduction of employment.

Special Procedure in Some cases:

Where the normal procedure cannot be followed under the circumstances of the case, it may be desirable to follow a special procedure under Rule 14 of D&A Rules.

(i) Where any penalty is imposed on the employee on the ground of conduct which has led to his conviction on a criminal charge; or

(ii) Where the disciplinary authority is satisfied, for reasons to be recorded by it in writing that it is not reasonably practicable to hold an inquiry according to the rules; or

(iii) Where the President is satisfied that in the interest of the security of state, it is not expedient to hold an inquiry according to the rules.

Procedure for imposition of Minor Penalty:

- Charges should be framed against the delinquent employee and communicated to him on prescribed standard Form No.11. Along with the charge sheet a statement of allegations is also supplied mentioning therein the charges in detail and also the basis on which the charges have been framed and a list of documents relied upon, should also be supplied to the delinquent employee. The period within which the employee should submit his explanation is specified in the charge sheet, which is usually 10 days.
- In the case the railway servant refuses to accept the charge sheet issued for service on him, it shall on the written statement of two persons to the effect that this refusal was witnessed by them or on an advice from the post office to the effect that the addressee refused delivery of the registered postal cover, be deemed to have been served on him.
- After receiving the charge-sheet the delinquent employee may request the disciplinary authority for permission to inspect and take extract from the documents mentioned in the list accompanying the charge-sheet and also the additional documents which are relevant to the charges framed against him but

have not been relied upon by disciplinary authority. Then after getting permission of the disciplinary authority, delinquent employee will inspect and take extract from document.

- After having inspected the documents the delinquent employee should submit his written statement of defence to disciplinary authority within the prescribed time. The written statement of defence should clearly contain the defence of the delinquent in regard to each of the charges.
- After considering the written statement of the charge sheet submitted by the delinquent employee, if it is proposed in the following cases an enquiry as for a major penalty shall have to be held.

: (i) Imposition of withheld of increment temporarily(WIT) for a period exceeding three years

(ii) Imposition of withheld of increment permanently(WIP) for any period

(iii) Where the penalty will affect the retirement dues of the employees

- (i) In case where the disciplinary authority feels that a detailed enquiry should be held.
- The disciplinary authority shall then take in to consideration the representation if any, made by the delinquent servant and also the record of enquiry if any and shall determine the particular minor penalty, that should be imposed on the delinquent employee. If the penalty determined by such authority is the one when it cannot be imposed on the railway servant concerned, it shall pass on the papers for orders to such authority which is competent to do so.
- The authority imposing the penalty should record a finding on each imputation of misconduct or misbehavior and should also consult the UPSC, if necessary, before awarding the penalty. The disciplinary authority should pass speaking order i.e., should give reasons therefore.
- If some penalty is awarded, it must be communicated to employee concerned on prescribed form, signed by the authority imposing the penalty, over its own designation. Brief reasons for holding the employee guilty should also be communicated to him. In cases where it is decided by the disciplinary authority not to take any further action such decision should also invariably be communicated to delinquent railway servant within two months of the date, the decision is taken, so that the railway servant is not kept in suspense.

In case the delinquent railway servant does not submit his written statement of defence within the prescribed time without genuine and sufficient cause, the disciplinary authority may consider the case and pass the necessary orders imposing the penalty, as deemed fit.

PROCEDURE FOR IMPOSING MAJOR PENALTIES:

- Issue memorandum of charges in SF 5 and provide copies of documents of their inspection.
- Obtain and consider statements of defence
- Appointed an Inquiry Officer if charges are not admitted.
- Inquiry officer will allow a defence counsel where asked for additional documents, when relevant should be allowed. Perusal and extracting from the list of document relied upon should be permitted.
- Inquiry Officer will decide modalities of inquiry, decide defence witness to be called for, fix calendar for inquiry and sort out other preliminary matters.
- The procedure for conducting the inquiry:
- + The charges will be explained to the employee. Documents may be produced as required.
- + The charged employee will be asked to state if he accepts or denies the charge, will take defence counsel or will defend his case himself
- + The prosecution witnesses,, cited in the charge sheet, will be examined. Then cross-examination of each witness by the charged employee or his counsel. Examination on any point of cross-examination, if necessary.
- + The defence witness, if any may then be examined, cross-examined and re-examined.
- + The charged employee will be permitted to state his defence.
- + Inquiry authority may question the charged employee on the circumstances appearing against him in the evidence.
- + The charged employee will be permitted to state his defence.
- Based on evidence on record, the inquiry officer shall draw his finding and inquiry report & send along with records of case and records of inquiry to the Disciplinary Authority.
- A copy of the inquiry reports should invariably be given to the charged employee and his defence should be considered before any further action is taken.
- The Disciplinary Authority shall consider the report and may accept it or draw its own finding or remit it or ask for fresh inquiry.
- If it is decided to impose a penalty which is in within its competence, the Disciplinary authority shall issue notice of imposition of penalty, otherwise forward the case to competent authority.

NOTE: In all cases where consultation of UPSC is necessary, it should be consulted.

Appeal:

- The appeal against punishment lies to the appellate authority who is usually the next higher authority to whom the disciplinary authority is subordinate.
- The Limitation is a period of 45 days from the date of order of punishment. Delay on sufficient causes may be condoned.

- A single person should appeal in his own name. The appeal should be addressed to the appellate authority only. It should not be in a improper language.
- In case of major penalty to subordinate staff, a personal hearing may be granted by the appellate authority.
- The decision in appeal cases may be (a) setting aside(b) reducing (c) confirming (d) enhancing the penalty. In case of enhancement, reasonable opportunity will be given to make a representation.
- Normally there is no second appeal. It is permitted only in case of group "D" staff who has been dismissed, removed or compulsory retirement.

REVISION

- The revising authority should not be below the rank of JA grade officer. The appellate authority may become the revising authority if no appeal was made.
- No revision can be made after more than six months of the date of order to be revised, if it was proposed to enhance the penalty or modify it to the detriment of the employee. It will not be made after more than one year if the penalty was to be reduced or cancelled. These time limit do not apply if revision was to be made by President or Ministry or the Chief Executive.
- The decision in revision cases may be similar to those in appeal cases. Reasonable opportunity will be given in case of enhancement of punishment.

REVIEW

Where a new fact comes to notice which is likely to affect substantially the decision in the case, the President of India may review the case. President may make this review at any time on his own motion or on a reference made to him. He may pass any orders in the case as deemed fit. If it proposed to enhance the penalty, a reasonable opportunity will be given to the employee to submit his representation.

X - RETIREMENT BENEFITS

Retirement Benefits: Benefits to all staff on death/retirement As follow:

- Pension/family pension
- Gratuity
- Provident Fund at the credit of employee.
- Voluntary provident fund deposit money.
- Amount Under group insurance scheme.
- Encashment of leave.
- Transfer TA for self and members of the family as on transfer.
- Transfer grant.
- Incidental charges for loading of kit.
- Settlement/kit passes.
- Amount under deposit linked insurance scheme.
- Appointment of dependent on compassionate ground in case of death/disablement
- In case of death, allotment of quarters out of turn to dependent.
- Post retirement complementary passes.
- Facility for medical assistance.
- Booking of holiday homes.

Retirement Gratuity:

In case of retirement, when the employee has rendered minimum of qualifying service of five years it is paid @ $\frac{1}{4}$ months pay per each completed half year of the service subject to a maximum of 16-1/2 months pay or Rs.10lacs, whichever is less.

Death Gratuity: in case of death of railway employees while in service the death gratuity shall be as given below; Less than one year service.	Two times of emoluments.
One years or more but less than five years.	Six times of emoluments.
Five years or more but less than 20 years.	Twelve times of emoluments.
20 years or more.	Half of the emoluments for every completed six monthly period of qualifying service subject to maximum 33 month pay or Rs.10lacs whichever is less.

Service Gratuity: For service less than 10 years no pension is paid. Only service gratuity at the rate of one month's emoluments for each completed year of service shall be paid and no reduction will be made whether retirement is on personal grounds or medical grounds.

XI - Pension

1. A Railway servant retiring in accordance with the provisions of the pension rules before completing qualifying service of ten years shall not be entitled to pension but he shall continue to be entitled to service gratuity.

2. Linkage of full pension with 33 years of qualifying service shall be dispensed with. Once a railway servant has rendered the minimum qualifying service of twenty years, pension shall be paid at 50% of the emoluments or average emoluments whichever is more beneficial to the railway servant.

3. In cases where railway servant becomes entitled to pension on completion of 10 years of qualifying service in accordance with rule 69[2] of the pension rules, pension in those cases shall also be paid at 50% of the emoluments or average emoluments whichever is more beneficial to the railway servant.

4. The revised provisions for calculation of pension in Para 2 and Para 3 above shall come into force with effect from 2nd September, 2008 and shall be applicable to railway servants retiring on or after that date. The railway servants who have retired on or after 1.1.2006 but before 2nd September, 2008 will continue to be governed by the rules/orders which were in force immediately before coming into effect of these orders.

5. The amount of pension shall be subject to a minimum of Rs.3500/- and maximum up to 50% of highest pay in the government [The highest pay in the Govt. is Rs.90,000 since 1.1.2006].

6. the provisions of clauses [a] to [c] of sub rule[2] of rule 69 of the pension rules shall stand modified to the extent mentioned in Para 1 to pat 5 above. The other provisions contained in rule 69 shall continue to apply.

7. The quantum of pension available to the old pensioners shall be increased as follows.

Age of the Pensioner	Additional quantum of pension
From 80 years to less than 85 years	20% of basic pension
From 85 years to less than 90 years	30% of basic pension
From 90 years to less than 95 years	40% of basic pension
From 95 years to less than 100 years	50% of basic pension
100 years or more	100% of basic pension

The pension sanctioning authorities should ensure that the date of birth and age of a pensioner is invariably indicated in the pension payment order to facilitate payment of additional pension by the pension disbursing authority as soon as it becomes due. The amount of additional pension will be shown distinctly in the pension payment order. For

example, in case where a pensioner is more than 80 years of age and his pension is Rs.10,000 p.m. the pension will be shown as (i) Basic pension = 10,000 and additional pension = Rs.2,000 p.m. The pension on his attaining the age of 85 years will be shown as (i) Basic pension = 10,000 and (ii) additional pension = 3,000 p.m.

Addition to Qualifying Service: In view of the revised provisions for computation of pension in para 5 above, the extant benefit of adding years of qualifying service for the purpose of computation of pension shall stand withdrawn with effect from 2nd September, 2008. Rule 45 and 66 of the pension rules shall stand modified to this extent. Linkage of full pension with 33 years of qualifying service is dispensed w.e.f. 02.09.2008

Family Pension 1964:

1. Family pension shall be calculated at a uniform rate of 30% of basic pay in all cases and shall be subject to a minimum of Rs. 3500/- per month and maximum of 30% of the highest pay in the Government (Rs.90, 000). Rule 75[2] relating to family pension, 1964 under pension rules shall stand modified to his extent.
2. The enhanced family pension under rule 75[4][i][a] shall be payable to the family of a railway servant who dies in service from the date of death of the railway servant for a period of ten years, without any upper age limit. Rule 75[4][i][a] shall stand modified to this extent. There will be no change in the period for payment of enhanced family pension to the family in the case of death of a pensioner.
3. The quantum of family pension available to the old family pensioners shall be increased as follows:

Age of the Family Pensioner	Additional quantum of family pension
From 80 years to less than 85 years	20% of basic family pension
From 85 years to less than 90 years	30% of basic family pension
From 90 years to less than 95 years	40% of basic family pension
From 95 years to less than 100 years	50% of basic family pension
100 years or more	100% of basic family pension

Commutation of Pension:

1. A Government servant shall continue to be entitled to commute for a lump sum payment up to 40% of his pension.
2. The revised table of commutation value for pension will be used for all commutation of pension which becomes absolute after 02.09.2008. In case of those pensioners, in whose case commutation of pension became absolute on or after 01.01.2006 but before 02.09.2008, the pre-revised table of commutation value for pension will be used for payment of commutation of pension based on pre-revised pay / pension.

Value of Commutation = Commutation Value (X) 12 (X) amount of pension.

After 15 years of retirement or from the date of commuting pension, which ever is earlier, the employee will start getting full pension again.

Constant Attendant Allowance: In case of pensioners who retired on disability pension under the Railway Services (Extraordinary Pension) rules, 1993 for 100% disability (where the individual is completely dependant on somebody else for day to day functions) a constant attendant allowance of Rs.3000/- p.m. shall be allowed in addition to the disability pension, on the lines existing in Defense Forces.

XII - Provident Fund

It is a fund in which monthly subscription of an employee @ 8.33% of his pay is received and held on his account with interest accruing on such subscription to the fund is compulsory. The amount standing at the credit of the subscriber is payable on the termination of his service or on his death while in service. An employee is permitted to have advances/withdrawal from his P.F. Account on certain grounds like marriage, sickness, higher education, construction of a house, purchase of conveyance etc.

XIII - Encashment of leave

The ceiling on accumulation of LAP is 300 days. The encashment of unutilized LAP on superannuating is 300 days. On resignation or quitting the service, half of LAP at his credit subject to a maximum of 150 days. Encashment of LAP of 10 days at the time of availing railway passes/PTOs while in service, once in two years subject to a maximum of 60 days during the entire career, introduced. This is subject to [1] availing at least an equivalent duration of LAP [2] balance of at least 30 days of LAP remaining at credit after period of encashment as well as leave availed of [3] Only pay in the pay band, grade pay and DA admissible on that date without any HRA / Transport Allowance will be paid as leave encashment. Railway servants directly engaged in running of trains viz. all the running staff including drivers, assistant drivers, motormen, shunters, guards etc. and station masters / assistant station masters are exempt from the requirement of availing of passes and equal duration of LAP for availing the benefit of encashment of 10 days of LAP.

XIV - Group Insurance scheme.

This scheme is compulsory to all railway employees, the benefit of an insurance cover to help their families in the event of death while in service. A portion of the subscription is credited to the insurance fund and the other portion to the saving funds in the ratio of 30:70. The amount of saving fund with interest is payable to the employee on termination of service or to his family in case of his death in addition to the amount of insurance cover.

Group to which employee belongs	Monthly subscription Rs.	Insurance cover Rs.
A	120	1,20,000
B	60	60,000
C	30	30,000
D	15	15000

XV - Voluntary retirement:

Voluntary retirement is permissible if only one has put in a minimum of 20 years of qualifying service, by giving three months notice. The employee will be eligible for full pension. Linkage of full pension with 33 years of qualifying service is dispensed w.e.f. 02.09.2008

IX - PAYMENT OF WAGES ACT, 1936.

This Act aims at securing prompt and regular payment of wages without any arbitrary deductions, to certain class of persons employed in Industrial employment including Railway either directly or through a sub-contractor, by a person fulfilling agreement with Railway & employing or having employed twenty or more persons on any day of the preceding 12 months. It applies to employees whose wages are less than Rs.6500 per month.

a. Important Provisions:

- i) Wages shall be paid on working day.
- ii) Wages shall be paid in current coins or currency notes and not in kind.
- iii) Wages shall be paid within 7 and 10 days of the expiry of wages period where less than 1000 and more than 1000 or 1000 persons are working respectively.
- iv) When the employment is terminated, wages shall be paid before the expiry of the 2nd day after termination.
- v) Wages do not include traveling allowance or concession value of house accommodation or any contribution paid to any pension and PF or gratuity payable on the termination of employment.

b) Deductions:

No Unauthorized deductions shall be made. The following are the authorized deductions:

- i) Fines for acts and omissions as notified, after a show cause.
- ii) Deduction on account of absence from duty.
- iii) For damage to or loss of goods expressly entrusted to the employed person for custody or for loss of cash through or default.
- iv) Deduction for amenities or services supplied by employer.
- v) Deduction for housing accommodation provided.
- vi) Deduction for recovery of advances and adjustment of over payment of wages.
- vii) Deductions of income tax.
- viii) Deduction required by the order of court.
- ix) Subscription for PF & repayment of PF advance.
- x) Payment of co-operative stores and credit societies.
- xi) Recovery in respect of theft or loss of cash for which the employee is responsible.
- xii) Contribution to LIC and Insurance scheme framed by Government.
- xiii) Contributions to National Defense Fund, Prime Minister's Relief Fund, etc.
- xiv) Incorrect rebates or refunds.
- xv) Use of Railway clubs, institutes-supply of water, electricity, conservancy, Hospital diet charges etc.
- xvi) Land licensing fee for grow more food.
- xvii) Any welfare fund set up by the employer.
- xviii) Any other deduction with the written authority of the employee.

c) Extent of Deduction:

The deductions shall not exceed 75% of wages where payment towards co-operative societies is to be made and shall not exceed 50% of wages in other cases.

XVI - FACTORIES ACT-- 1948

This Act lays down the obligation of the occupier of a factory in the matters of cleanliness of the premises, disposal of wastes and effluents, maintenance of proper ventilation and temperature, prevention of over crowding, provision of cool drinking water, latrines and Urinals, fencing of machinery, maintenance of machines in safe condition, pre-cautionary measures against fire hazard, provisions of washing facilities, fixing of weekly holidays and payment of overtime allowance, prevention of accidents etc

A) factory is a place where manufacturing operations are carried out with or without power, where on 10 or more worker are working on any day the preceding 12 months

and in any part of which a manufacturing process is being carried out with the aid of power or any premises where on 20 or more are working on any day of preceding 12 months and in any part of which a manufacturing process is being carried out without the aid of power and it should be registered with state government and license obtained.

B) Occupier means the persons who has ultimate control over the affair of factory and in case such affairs are entrusted to a manager such manager shall be deemed to be the occupier.

B) Worker is a person employed in a factory either for wages or otherwise, who is engaged for manufacturing operation, or any kind of work incidental to or connected with manufacturing process. Children below the age of 15 years should not be employed in a factory or workshop.

D) Hours of work: 48 hours in a week, 9 hours in a day, Period of work shall not exceed 5 hours at a time, an interval of $\frac{1}{2}$ hours shall be given. The spread over including the rest period shall not be more than 10-1/2 hours in a day. Over time shall be paid at the rate of twice his ordinary rate of wages and not more than 60 hours in a quarter. No women should work between 7 p.m to 6 a.m.

E) Rest Day: If a worker works continuously for 6 days he shall be entitled for one day rest and if the rest cannot be given then 11th day must be granted rest. Rest can be granted either 3 days advance or three days later. Normally rest should fall on Sunday.

F) Other provisions: First Aid Box for every 150 workers. One Ambulance for more than 500 workers, a welfare Officer for more than 500 workers and provisions of canteen for more than 250 workers.

XVII - MINIMUM WAGES ACT- 1948:

This Act aims at securing minimum rates of wages in those categories where wages are low in order to prevent exploitation of unorganized labor. It lays down the procedure for regulating the hours of work and the payment of wages, including the overtime, so as to ensure prompt payment and specifies the deduction that can be made from the wages of the workers. So far as Railway Administration is concerned, the minimum wages act applies to casual workmen in employment:-

- a) On the construction or maintenance of roads or in building operations; and
- b) In stone breaking or stone crushing.
- c) In other goods godowns, stone houses for loading and unloading operations.

The important provisions of this act are as follows:

1 Wage period should be fixed for the payment of wages at intervals not exceeding one month

2. Wages should be paid on a working day within 7 and 10 days of the end of the wage period if less than 1000 and 1000 or more persons are employed respectively.

3. Wages of persons discharged should be paid not later than 2nd working day after the discharge but the retrenchment compensation due if any, shall be paid at the time of the retrenchment of the work man in accordance with the provisions of the industrial Dispute Act, 1947.

4. The wages of an employed person should be made to him without deduction of any kind except those authorized under the Act.

5. If an employee work more than maximum number of hours fixed, he would be entitled to overtime at double the ordinary rate of wages.

6. The rate of wages admissible to workers in the various localities are fixed by Central Government, Ministry of labor (by issue of notification for the five zones, A, B-1, B-2, C and D and are to be reviewed by that authority at suitable intervals not exceeding five years.

7. DRM and GM are empowered to sanctioned daily rates by 20% ,33 1/3% respectively over the rates notified by the Ministry of Labor.

XVIII - EMPLOYEES COMPENSATION ACT, 1923

It provides for payment of compensation to workers in case of accidents involving injuries to them or to their dependents in case of death. The act also provides for a machinery to deal with claims of the workers.

*** Compensation when payable:**

Compensation is payable when the accident causing death/injury arose “out of and in course of employment”. In case of injury it must cause a disablement for a period of at least 3 days. In case of temporary disablement the employee is entitled to half monthly payment, and in case of permanent disablement or death to a lump-sum amount on the basis of workmen’s monthly wages calculated as per Schedule IV given in the act. The compensation is also payable for such disabilities/death caused due to occupational diseases as given in schedule III of the act.

Employer’s pleas not to be applicable:

In a claim of compensation for injury an employer may take pleas like:

1. The workman was under the influence of drug or drinks.
2. Willful disobedience of orders or disregard of rules made for safety of workers.
3. Willful removal or disregard of any safety guard or devise.

These pleas however are not applicable in case of the death of the workman.

Important Features:

By a recent change in the Act following important features have been added:

1. The term 'Workmen' is replaced by 'Employee'.
2. the amount of compensation will now be related to a "relevant factor". What is a relevant factor has been given in Schedule IV.
3. Amount spent on medical treatment shall not be deemed as a payment or allowance received by worker;
4. All the employees are covered under this act except Group B and Group A officers.

A new and more comprehensive Schedule III of "occupational diseases" has been given.

Liabilities for compensation: arises in case of:

- Death
- Permanent total disablement.
- Permanent partial disablement
- Temporary partial or total disablement.

Calculation of Compensation: Compensation will be calculated as under:

- For death 50% of emoluments X Relevant Factor –(Minimum of Rs.1,20,000) and Rs.5000 for funeral expenses;
- For permanent total disablement—60% of emolument X relevant factor (Minimum Rs. 1,40,000)
- For permanent partial disablement—Proportionate percentage of item (ii) above will be paid.

Wage Limit: Where the monthly wages of workman exceed Rs.8, 000, then his monthly wages for the purpose of calculation of compensation shall be deemed to be Rs.8,000 only.

XIX = INDUSTRIAL DISPUTES ACT 1947

This act makes provision for the investigation and settlement of industrial disputes that may arise in an industry between employer and workmen or between workmen and workmen, which is connected with employment or non-employment or terms of employment or with conditions of labor of any person and certain other purposes.

XX - INDUSTRIAL RELATIONS***Trade Union Act, 1926***

1. Objective: The Act provides for registration of trade unions. It clarifies privileges of registered trade unions and Rules etc.
2. Registration of Unions: Seven persons can together apply for the registration of the union.
3. Provisions in the Rules of a trade Union: A trade union should frame its Rules before registration. They should include Name, Objective, Purpose on which funds are to be spent, list of members, facilities for inspection of this list by members, subscription, conditions in which members get or forfeit benefits, Executive committee, Safe custody of funds, Dissolution, subscription should not be more than Rs 1 per month per member. Outsiders should not be more than 50% on the executive.
4. Privileges of trade unions.: A registered trade union is a corporate body. It can sue or can be sued. It can purchase property. It can be sued for breach of agreement but it has protection in trade disputes and cannot be prosecuted. In certain cases it has immunity from civil suits.
5. Annual returns: A trade union is required to file an annual return including its receipts and payments, list of office bearers, modification in rules etc.
6. Facilities to trade unions: Recognition by management representation in various committees, representation on labour conference, facilities of land, office, telephone, notice board, collection of subscriptions, meetings, etc.

INDUSTRIAL RELATIONS MACHINERY (TRADE UNIONS)

Indian railways have two federations

NFIR (National Federation of Indian Railwaymen) affiliated to Indian National Trade Union Congress

AIRF (All India Railway Mens federation) affiliated to Hind Mazdoor Sabha.

I P.N.M. (Permanent Negotiating Machinery)

Both the recognized unions have a system of negotiations with the administration at the following three levels since 1st January 1952

- (i) Zonal Railways – Divisional/Workshop & Head quarters
- (ii) Railway Board
- (iii) Adhoc Tribunal

S.no	Level	Period	Chairman	Convenor
1	Division/Workshop	One in two months	DRM/Head of workshop	DPO
2	Head quarters	Once in three months	General Manager	CPO
3.	Railway board	Once in three months	Member (staff)	Advisor (IR)

Number of items of agenda for these meeting – 30

Number of Union Representatives – 20 (15 at workshop level)

Both the unions hold these meeting with administration separately. The agenda is furnished 21 days before the date of meeting facilities of Special CL and travel passes are given to union representatives.

Adhoc Tribunal: In case of disagreement with railway board on some important issues, the matter may be placed before this tribunal which has its chairman a retired Justice of High Court or Supreme Court and equal number of representatives of both administration and employees. Tribunal decision may be accepted/not accepted or modified by the board. Unions will not raise the same issue within two years of decision or one year of non acceptance/modification.

II Joint Consultative Machinery (JCM)

Objective: Promoting harmonious relations and securing the greatest measure of co-operation between the Government in its capacity as employer and the general body of its employees in matters of common concern and with the object further of increasing the efficiency of the public service.

Levels of functioning : It will function at three levels- National, Department & Regional

S.no	Particulars	National	Departmental	Regional
1	Chairman	Cabinet Secretary	Member (Staff) Rlys	Head of region
2	Members	24	10	Depends on No of staff
3	Official members union side	60	30	Depends on No of staff
4	Deals with	Central Govt. employees	Particular Ministry	Within region

III Corporate Enterprise Group (CEG)

This scheme of workers 'participation in Management was introduced in 1972 at three levels Rly Board, Zonal HQ and Divisions. It is named as PREM

IV PREM (Participation of railway Employees in Management)

Labour is the back bone of any organization. For efficient working of any system the relationship between the management and labour should be cordial. Then only targets of high production can be achieved. Workers participation in the management promotes better understanding goodwill and cooperation between management and labour. It reduces tensions and conflicts and promotes industrial peace.

Objectives:-

1. Humanization of the work place.
2. Promotion of the productivity.
3. Improvement of quality.
4. Reduction of costs.
5. Elimination of accidents.
6. Frictionless operation.
7. Job satisfaction
8. Better performance.

In order to have a better and systematic participation of labour in management for improvement in the working system and to improve efficiency a corporate enterprises group was set up in the ministry of railways in 1972. Later the same was replaced by 'PREM'

In PREM meeting matters pertaining to the improvement in the working system will be discussed, recommended and appropriate changes are made for improving efficiency.

The PREM is organized in Railways at three levels. They are

Railway Board level , Zonal level and Divisional level

There should be 4 meeting in year (i.e. once in 3 months). Five recognized trade unions participate in PREM meeting. They are

1. Railway Officers Association
2. Railway Promotee Officers Association
3. RPF association
4. NIRF (Board level) SCRES (South Central Rly Employees Sangh)
5. AIRF (Board level) SCRUMU (South Central Rly Mazdoor Union)

Railway Board Level meeting:-

4 members each from recognized trade unions (ie NIRF,AIRF)

2 members each from officers association will attend from official side chairman, members and Secretary Rly Board will attend. Cabinet Secretary will act as chairman as JCM

Zonal Level Meeting

4 members each from recognized trade unions, 2 members each from all India Officers federation and Indian Rly Promotee officers association will attend the meeting. From official side GM, all HODs will attend the meeting. GM will act as chairman and DGM will act as secretary. (AGM/PHODs are co ordinators for conduct the PREM meeting)

Divisional level meeting

Leaders from the recognized trade unions nominated by the unions will participate in the meeting along with the divisional secretary and Divisional President of the trade unions. From official side DRM will act as chairman and Sr.DPO/DPO as Secretary and all other divisional officers will attend the meeting.

Facilities to PREM members

1. Railway phone with STD facility
2. Photo copying machine (Xerox machine)
3. Electronic type writer.
4. Secretarial assistance
5. Accommodation for the office
6. Special CL, Passes for attending meeting.

On Railway the trade unions are participating in the following fields

1. PREM
2. SBF (Staff Benefit Fund)
3. Quarters Committees (for fixing priorities)
4. Colony Committee (Railway colonies)]
5. Joint councils and staff councils at workshop
6. FNM (Fortnight meeting at divisional level for payment item meetings)
7. Surrender of posts (Surplus staff)
8. Joint meetings (Both organization)
9. Canteen management committee
10. Hospital Committee
11. JCM, PNM
12. Railway safety committee
13. Cleanliness committee (Rly hospital/colonies)
14. Labour advisory committee for programmes of staff amenities.

XXI - WELFARE MEASURES AND FACILITIES.

Various welfare measures provided by the Railway to the Railway employees and their families are given below:-

1. Medical and health care.
2. Contributory health scheme and liberalized health scheme.
3. Co-operatives.
4. Railway subsidized hostels at 20 selected stations.
5. Staff benefit fund.
6. Educational assistance.
7. School uniforms for children.
8. Holiday homes.
9. Social welfare centers.
10. Children tours and camps.
11. Employees tours/camps.
12. Scouting and girl guiding.
13. Various measures for blind and other physically handicapped persons.
14. Handicraft centre.
15. Sports and cultural activities, institutes , clubs etc.
16. Crèches for children of working women/
17. Own your home schemes in certain railways.
18. Employment training scheme for employees children
19. Mahila Samithies in major colonies.
20. Children parks.
21. Community centers.
22. Adult education scheme
23. Railway minister relief fund.
24. Canteens.
25. Schools for employees children.
26. Hostel for women employees/trainees.
27. Reimbursement of tuition fees.

Reimbursement of tuition fees: *is revised to maximum of Rs.1,000 per month from 01.09.2008 subject to annual ceiling of Rs.18,750/- for children of railway employees from nursery to 12th class held by junior colleges or schools affiliated to universities or boards of education subject to a maximum, of 2 children. Hostel subsidy revised from Rs.300 to Rs.3000. However both hostel subsidy and children education allowance cannot be availed concurrently.*

XXII - HOURS OF EMPLOYMENT REGULATIONS

Hours of employment regulation determines and regulates the hours of employment of the workers, necessary periods of rest between two periods of works, weekly rest overtime allowance etc.

Classification of Workers under HOER:

1. **INTENSIVE:** An employment is intensive when declared to be so, on grounds that it is of strenuous nature involving continued mental and physical strain or hard manual labour with little or no period of relaxation. The staff covered by the class include Signallers, Telephone and wireless operators, section controllers etc who declare as such.

2. **ESSENTIALLY INTERMITTENT:** An employment is essentially intermittent when it is declared to be so, on grounds that daily hours of duty normally include periods of inaction aggregating to six hours or more including at least one such period of not less than one hour or two such periods of not less than half an hour each during which the employee may be on duty but is not called upon to display either physical or sustained attention. The staff covered by the class include waiting room bearers, caretakers of rest houses, C class gateman, saloon attendants, Bungalow peons etc.

3. **EXCLUDED:** The employment of railway servant is said to be excluded if he belongs to the categories of supervisory staff, those in confidential capacity armed guards, staff imparting technical training or academic education, specified staff of Health and Medical department and categories of group D staff as may be specified by the prescribed authority. For excluded staff no statutory maximum limit for the hours of employment has been prescribed but he should not absolve the railway administration of their responsibility, on humanitarian grounds, of seeing that unreasonable conditions are not imposed. There is no provision for rest to the excluded staff except in cases of D excluded staff.

4. **CONTINUOUS:** An employment is continuous except when it is Excluded or declared to be intensive or Essentially intermittent. The staff covered by the class includes Guards, Drivers, clerks, Gangman, Mate, PWiS etc.

XXIII - MEDICAL EXAMINATION**Periodical Re-examination of serving Railway employees:-**

1) In order to ensure the continuous ability of Railway employees in class A-1, A-2, A-3, B-1 and B-2 to discharge their duties with safety, they will be required to appear for re-examination at the following stated intervals throughout their service.

(A) Category A-1, A-2 and A-3:-

(i) At the termination of every period of four years, calculated from the date of appointment, until they attain the age of 45 years, and then every two years until the age of 55 years and then there after annually, until the conclusion of their service.

(ii) If an employee in Medical category A has been periodically medically examined at any time within two years prior to his attaining the age of 45, his next medical examination should be held two years from the date of the last medical examination and subsequent medical examinations every two years until years and then annually thereafter until retirement. If however such an employee has been medically examined at any time earlier than two years prior to his attaining the age of 45 years, his next medical examination should be held on the date he attains the age of 45 and subsequent medical examinations every two years thereafter.

(B) Category B-1 and B-2:- On attaining the age of 45 years, and thereafter at the termination of every period of 5 years.

(C) Category C-1 and C-2:- Will not be required to undergo any re-examination during the course of their service, unless specifically directed.

(D) Any Railway employee in service may be required to undergo tests for vision and general physical examination in the event of his failure to comply with signals.

(E) Work shop staff and artisan staff in Loco shed and C&W depots would be exempt from P.M.E s except when such staff are promoted to depots requiring higher medical examination from safety angle.

(F) Special Medical Examination : The staff in the categories A-1, A-2, A-3 should be sent for special medical examination in the interest of safety under the following circumstances unless they have been under the treatment of a Railway Medical Officer.:-

(a) Having undergone any treatment or operation for eye irrespective of the duration of sickness.

(b) Absence from duty for a period in excess of 90 days. In case of A-1, A-2 and A-3 an employee may be asked to give an undertaking to his supervisor when reporting

back to duty after leave or absence, irrespective of the period, that he has not suffered from any eye disease or undergone an eye operation

WORK STUDY

Work study is a term used to embrace the techniques of method study and work measurement, which are employed to ensure the best possible use of human and material resources in carrying out a specific activity.

Work study is basically concerned with productivity since it is used to increase the amount produced from a given quantity of resources without further capital investment except, perhaps on a very small scale.

Method study and work measurement are the two techniques applied in work study. MS and WM are therefore, closely linked. MS is concerned with the reduction of work content of the operation. WM is concerned with the investigation and reduction of ineffective time and subsequent establishment of time standards for operation on the basis of work content as established by the MS.

METHOD STUDY: It is systematic recording and critical examination of existing and proposed ways of doing work, as a means of developing and applying easier and more effective methods and reducing costs. MS consists of six basic steps: a) Select b) Record c) Critical Examination d) Develop e) Install f) Maintain.

- a) **SELECT:-** The factors are to be kept in view before selecting a job for study; i) Economic factor ii) Technical factor iii) Human reaction
- b) **RECORD:-** After a job has been selected for the study, the important step is to record all the facts related to the existing method. The whole procedure depends on the accuracy with which the facts are recorded because it provides the basis for critical examination and development of the method. It is therefore the record must be clear and concise. "Record the facts as they are and not as they appear to be or said to be". **RECORDING TECHNIQUES:** a) Charts b) Diagrams c) Models d) Motion and film analysis.
- c) **CRITICAL EXAMINATION:-** Critically examine the recorded facts / events in a sequence. The CE is achieved by means of two sets of detailed questions. (a) Primary question (b) Secondary question. The questioning sequence follows a well established pattern of examination. i) Purpose for which ii) Place at which c) Person by whom d) Means by which e) Sequence at which the activities are undertaken.
- d) **DEVELOP:-** Once a new method has been proposed after critical examination, prepare the same on a flow process chart so that it can be compared with the existing method. It is essential in order to show that the improvements are factual and it is important. Therefore that all the activities are portrayed in the same scale and at the same level.

- e) **INSTALL:-** The proposed method is installed in two stages; i) Preparation and ii) Implementation. (i) Preparation:- When a method is developed it shall be implemented as per the planning duly fixing a target time for each stage. The program of the work shall be checked, such a checking of all the necessary plants, tools and equipments are available as per the plan. (ii) Implementation:- During the initial period and after installation a close watch should be kept so that the problems amounts with the proposed method are carefully studied and remedied if necessary.
- f) **MAINTAIN:-** Once the new method has been installed, it should be maintained in its specified form and the workers should not be allowed slip back in to the old method or introduce elements not allowed for unless there is very good reason for doing so.

WORK MEASUREMENT: WM is the application of techniques designed to establish the time required to carry out a specified work for a qualified worker at the defined level of performance. WM techniques find the time required to do a job by a qualified operator working at a standard pace and using the standard method. The following are various commonly employed Work Measurement techniques. i) Time Study ii) Production Study iii) Synthesis Method iv) Analytical Estimating.

1. **TIME STUDY:** It is employed for evaluating works of short duration and repetitive type of work. Calculations of active and inactive periods are taken and approximate relaxation allowances are added and ineffective or unproductive time is eliminated.
2. **PRODUCTION STUDY:** It is employed for work of long duration and larger elements and for post mortem of work study data. In this time required can be evaluated considering the activity time and improvements can be made accordingly when inactivity is more.
3. **SYNTHESIS STUDY:** It involves comparison of work items with already existing data available from previous similar work done, and time is worked out for which, no specific study is made or conducted.
4. **ANALYTICAL METHOD:** It is employed where the work is non repetitive in nature and longer duration and the normal time for most of the elements is estimated by a person who has sound training in work measurement and a wide practical experience of the type of work to be estimated.

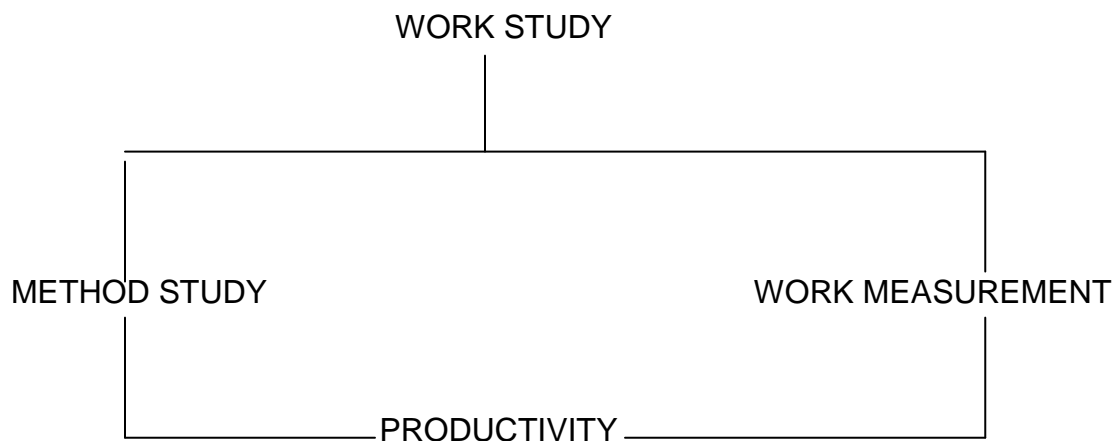
PRODUCTION AND PRODUCTIVITY

PRODUCTION: Production means in general producing goods for services or converting raw materials into finished products by applying various required processes. The word production merely implies OUTPUT. To increase output management can apply the following techniques.

- Increase in raw materials

- Increase in number of shifts
- Increase in number of machines
- Increase in man power

Thus output can be increased by increasing input (men, materials, equipments etc). The concept of work study is not merely increasing production but is mainly applied to achieve more productivity. Therefore it can be said that work study (method study and work measurement) is applied for achieving more productivity.



PRODUCTIVITY: As per PRK Menon “ Productivity implies the development of an attitude of mind and constant urge to find better, cheaper, easier, quicker and safer ways of doing a job or manufacturing a product and providing services”.

Productivity is the quotient obtained by dividing output by input (factors of production) $\text{PRODUCTIVITY} = \text{OUTPUT} / \text{INPUT}$

In this way, it is possible to speak of productivity of capital, material, man power etc. according to which the output is being considered in relation to input.

The term productivity is different from production. It is misunderstood by many a people that larger the production, greater the productivity. It is not true. Production is concerned with activity of producing goods for services, where as productivity is concerned with efficient utilization of resources. Productivity in the sense producing more with same resources (with or without little addition to input or producing same with less resources).

PRODUCTIVITY BY MEN: It can be achieved by concentrating on the performance of workers. More can be achieved by deputing right person for the right job, providing training to workers and reducing idle man hours.

PRODUCTIVITY BY MACHINES: It can be achieved by utilizing the services of trained and experienced operators to handle the machines, so that more can be manufactured with the same machine concentrating on its proper maintenance and attending to its defects and break down immediately and also by reducing machine idle hours.

PRODUCTIVITY BY MATERIAL: Productivity can be achieved by procuring good quality raw materials by redesigning the job and using skilled worker for a job thereby wastages can be reduced.

DIFFERENCES BETWEEN PRODUCTION AND PRODUCTIVITY

PRODUCTION	PRODUCTIVITY
1. Means output of goods or services	Means effective utilization of resources
2. It can be increased by increasing men, material, machines etc.	It can be achieved by reducing wastage of material, man power and machine hours.
3. By increasing production cost of the product will remain same	By increase in productivity cost of the product will come down
4. It does not have impact on standard of living	It certainly improves the standard of living.
5. It changes the raw material in to finished product	It is the ratio between output to input.

Official Language Policy: Constitutional Provision.

On 14th September, 1949 Hindi Was accepted as Official Language of the Union by the Constitutional Assembly to include in the Constitution of India which was promulgated on 26 th January, 1950. We celebrate Hindi Day (Hindi Divas) on 14 th September, every year. Provisions regarding Official Language are contained in Article 120 (1), 210(1) and 343 to 351 of the constitution.

Article 120 :- Business in Parliament shall be transacted in Hindi or in English

Article 210 :- Business in the Legislature of a State shall be transacted in the Official Language or Languages of the State or in Hindi or in English.

Article 343(1):- The Official Language of the Union shall be Hindi in Devanagari script. The form of numerals to be used for the official purposes of the union shall be the international form of Indian numerals.

Article 343(2) - For a period of 15 years from the commencement of this constitution, the English Language shall continue to be used for all official purposes of the Union for which it was being used immediately before such commencement.

Article 343(3) - Parliament may by law provide for the use of the English language after 14-15 years for such purposes as may be specified in the law.

Article 344 - The president shall constitute a commission after five years from the commencement of the constitution and thereafter ten years from such commencement.

The duty of the commission shall be to make recommendations to the president as to:-

- (a) the progressive use of the Hindi Language for the Official purposes of the Union.
- (b) restrictions on the use of English Language for all or any of the Official purposes of the Union.
- (c) the official language for communication between Union and State or between One State and another.

There shall be a constitutional committee consisting of thirty members of whom twenty shall be from Lok Sabha and ten from Rajya Sabha. It shall be the duty of the Parliamentary Committee to examine the recommendations of the commission so constituted.

Article 345 - The Legislature of States by law can adopt one or more languages as Official Language or Languages of the State.

Article 346 - Official Language for communication between one state & the Union.

Article 347 - Provides for special provision relating to language spoken by a Section of the population of a state.

Article 348 - deals with languages to be used in the Supreme Court and in the High Courts and Acts, bills etc. The authoritative of bills Act, ordinances, orders regulations and bye-laws issued under the constitution shall be in English language.

- Article 349 - No bill to be introduced for amendment of the language unless president gives sanction after considering the recommendation of the commission and the committee constituted for the purpose.
- Article 350 - deals with language to be used in representation for redressal of grievances.
- Article 351 - deals with Directive for development of Hindi language to promote the spread of the Hindi language to develop it so that it may serve as a medium of expression for the composite culture of India to secure its enrichment by assimilating without interfering with its the genius forms, style and expressions used in Hindustani and in the other languages of India.

(VIII) Eight Schedule Languages

1.	Assamese	2.	Oriya	3.	Urdu
4.	Kannada	5.	Kashmiri	6.	Gujarati
7.	Tamil	8.	Telugu	9.	Punjabi
10.	Bengali	11.	Marathi	12.	Malayalam
13.	Sanskrit	14.	Sindhi	15.	Hindi
16.	Manipuri	17.	Konkani	18.	Nepali
19.	Bodo	20.	Maithili	21.	Dogri
22.	Santhali				

THE OFFICIAL LANGUAGE ACT 1963 AMENDED IN 1967.

Section 3 (1) deals with the continuation of English language in addition to Hindi for Official purposes of the union and for use in parliament.

Section 3(2) deal with the provision of Hindi or English language used for the purpose of communication between Ministry or Department or Office of Central Government and any corporation or company owned or controlled by Central Govt. Translation of such communication in Hindi or English shall be provided till such date as the staff concerned, Ministry, Department, Office or Corporation or Company have acquired working knowledge of Hindi.

Section 3(3) deals with the provision of both Hindi & English languages shall be used for Resolutions, General Orders, Rules, Notifications, Administrative or other reports or press communiqué, Contracts and agreements executed and licences, permits, notices and forms of tender issued by the offices.

Section 3 states that the Central Government may by notification in the official gazette make rules for carrying out the purpose of this Act.

Resolution 1968-- Intensive & Comprehensive Programme should be prepared and implemented by the government of India for accelerating the spread and development of Hindi in collaboration with the State Government.

SALIENT FEATURES OF OFFICIAL LANGUAGES RULES 1976

In exercise of the powers conferred by section 8 of the Official Language Act, 1963, the Central Government has made the following rules. With a view to implement the Official Language Policy, regions namely "A B C" have been constituted in the country.

A region- Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan and Uttar Pradesh and Delhi & Andaman Nicobar.(Uttaranchal, Jharkhand & Chattisgarh.)

B region- Gujarat, Maharashtra, Punjab & Union Territory of Chandigarh, Dadar & Nagar Haveli and Daman & Diu

C region- States and Union Territories other than those referred to in A & B regions. Rule 1 deals with the title and Rule 2 regarding the definitions of words such as "Employee", Notified office, Proficiency etc., used in the rules.

3. Communications to states etc., other than Central Government offices. Communications from Central Government Offices to states and Union territories in A & B region be normally in Hindi. For states, Union territories in the region "C" shall be in English (Office includes individual also).
4. Communication between Central Government offices situated in "A" shall be in Hindi and for offices situated in "B" & "C" may be in Hindi and English or in such proportion determined from time to time.
5. Replies to communications received in Hindi - Replies to communications in Hindi shall be in Hindi.
6. Use of both Hindi and English for all documents referred in Section 3(3) of 1963 Act and it shall be responsibility of the persons signing such documents to ensure that such documents are made executed or issued both in Hindi and in English.
7. Applications, Representations- Employee may submit an application, appeal or representation in Hindi or in English.
8. Noting-- An employee may record a note or minute on a file in Hindi or in English without being himself required to furnish a translation thereof in the other language.
9. Proficiency in Hindi--Matriculation or any equivalent or higher examination with Hindi as the medium of instruction or Hindi as an elective subject in degree.

10. Working knowledge of Hindi- Matric with Hindi as one of the subject i.e., 1st language or pragya pass or declaring himself having working knowledge in Hindi.

11. All Manuals, codes, other procedural literature Article of Stationary, Forms & Headings of registers, all name plates, sign boards letter heads and other items of Stationery written, printed or inscribed for use shall be in Hindi & English.

12. Responsibility for compliance--

(1) to ensure implementation of the provision of the Act.

(2) to devise suitable and effective check points.

(3) to issue of Directions from time to time.

VARIOUS AWARD SCHEMES FOR USE OF RAJBHASHA HINDI

Railway Board's Individual Cash Award Scheme:-

Every year 6 to 8 Officers/Employees are awarded for doing commendable & maximum work in Hindi by Railway Board at All India Hindi Week Celebrations. These awards are given by the Railway Minister.

Every award winner gets Rs.1,500/- in cash and a certificate.

General Manager's Individual Cash Award Scheme:-

Every year on the eve of South Central Railway's Hindi Saptah Celebrations 10 Officers / 30 Employees are awarded for doing commendable and maximum official work in Hindi. These awards are given by the General Manager.

Officers -- 1,200/-

Staff -- 1,000/-

Home Ministry's Award Scheme:-

The particulars of the scheme are as follows:-

1. All officers and employees working in South Central Railway can participate in the competition under this scheme.

2. Officer / Employees working in regions:

"A" & "B"

"C"

for writing minimum

for writing minimum

20,000 words in Hindi per year.

10,000 words in Hindi per year.

Awards to be given:-

- 1. Two first prizes : Rs.1600/-each
- 2. Three Second prizes : Rs.800/-each
- 3. Five third prizes : Rs.600/-each

Note:- Under this scheme minimum 10 participants should be there from any Unit/Section/Office.

Collective Cash Award Scheme:-

Under this scheme 3 departments are awarded for doing commendable and maximum work in Hindi.

Particulars of the award:-

- First prize : 9,000/- (for 6 employees Rs.1500/- for each employee)
- Second prize : 6,000/- (for 5 employees Rs.1200/- for each employee)
- Third prize : 4,000/- (for 5 employees Rs.800/- for each employee)

Award For writing original Hindi books on Technical Subjects.**1. Lalbahadur shastri Award Scheme**

Every year following 3 cash awards are distributed by Railway Board to such of genius Railwaymen who write original Hindi books on technical subjects:-

- First prize : Rs.15,000/-
- Second prizes : Rs.7,000/- each
- Third prizes : Rs.3,300/- each

Three consolation prizes: Rs.2,500/-each

Apart from this copies of the awarded books are purchased for the Railway Hindi libraries.

Cash award scheme for writing story, Novel and poetry in Hindi:-**1. Premchand Award Scheme:-**

Every year premchand awards are given to the best story books or novels in Hindi.

- First prize: Rs. 15,000/-
- Second prize Rs. 7,000/-
- Third prize: Rs. 3,300/-

2. Maithilisharan Gupta Award:-

Every year Maithilisharan Gupta award are given for best poetry books in Hindi.

First prize: Rs. 15,000/-

Second prize Rs. 7,000/-

Third prize: Rs. 3,300/-

Indira Gandhi Rajbhasha Award Scheme:-

Every year following 3 awards are distributed to the writers of the best Hindi books on Official working:-

First prize: Rs.40,000/-

Second prize Rs.30,000/-

Third prize: Rs.20,000/-

Consolation Prize- Rs.10,000/-

Rajiv Gandhi Rajbhasha Award Scheme:-

Every year following awards are distributed to the writers of the best Hindi books on Gyan Vigyan(Technical):-

First prize: Rs.2 lakhs/-

Second prize Rs.1.25 lakhs/-

Third prize: Rs.75,000/-

Consolation Prize- Rs.10,000/-

Award Scheme for writing Original books on subjects related to economics in Hindi :-

First prize Rs 50,000/-

Second prize Rs 40,000/-

Third prize Rs 30,000/-

Award Scheme for writing Original books in Hindi in the field of new and renewable sources of Energy :-

First prize Rs 50,000/-

Second prize Rs 30,000/-

Third prize Rs 20,000/-

TRAINING:-**Incentives regarding Hindi / Hindi Typing / Hindi Stenography Training:-**

(Only for those officers / employees who do not possess working knowledge of Hindi)

The Officers / employees of group "A","B" and "C" who pass the above examinations conducted under the Hindi teaching scheme with creditable marks are awarded in the following manner.

Lumpsum award:-

On passing prabodh / Praveen / Pragya /Hindi Typing/Stenography examination under the Hindi Teaching Scheme by own efforts the officers and employees are awarded in the following way:-

Prabodh: Rs.1600/-,	Praveen: Rs.1500/-,
Pragya2400/-,	Hindi Typing Rs1600/-,
Hindi Stenography 3000/-	

Hindi Examination of voluntray Hindi organisations, which are recognised by Government of india as equivalent to Matric or higher Rs.600/-

Cash Award:-

<i>Having Secured</i>	<i>Prabodh</i>	<i>Praven</i>	<i>Pragya</i>
70% Or More marks	1600/-	1800/-	2400/-
60% Or More marks	800/-	1200/-	1600/-
55% Or More marks	400/ -	600/-	800/-

in addition personal pay equal in amount to one increment for 12 months.

For Passing Hindi Typing and Stenography Examinations:-

Typing	Stenography	Amount
97%	95% and above marks	2400/-Rs
95%	92% Or More marks	1600/-Rs
90%	88% Or More marks	800/-Rs

Typewriting:-

In addition personal pay equal in amount to one increment for 12 months.

Stenography:-

In addition, Stenographers whose mother tongue is not Hindi are given personal pay equal in amount to two increments for the first 12 months and one for the next 12 months on passing Hindi Stenography examination.

Hindi Essay, Elocution, Noting and Drafting Competitions:-

Hindi Essay, Elocution, Noting and Drafting Competitions are conducted at Zonal & Railway Board level and the Hindi Typewriting competition is conducted only at Zonal level. All these competitions are conducted once in a year.

Awards are given in the following manner:-

For Hindi, Essay, Elocution and Noting and Drafting Competition:-

Prizes	Zonal level	Rly Board level
First prizes	Rs 2000/-	Rs 3000/-
Second prizes	Rs 1600/-	Rs 2500/-
Third prizes	Rs 1200/-	Rs 2000/-
Consolation Prize	Rs.800/- (3 Prizes)	Rs 1500/- (5 Prizes)

These competitions are held in July & August

For Hindi Typewriting Competition-Zonal Level:-

First prize Rs 300/-
 Second prize Rs 200/-
 Third prize Rs 100/-

Railway Minister Hindi Essay Competition:-

For writing best essays pertaining to Railway subject following awards are distributed:-

First prizes Rs 6000/-
 Second prizes Rs 4000/-
 Competition is held in January

Railway Yatra vritant Award Scheme :

For writing a best report / narrative on Railway journey experience, following awards are distributed:-

First prize Rs 4000/- Second prize Rs 3000/- Third prize Rs 2000/-

Incentive allowance to Typists and Stenographers:-

English Typists and English Stenographers are allowed on certain conditions incentive allowance of Rs.80/- and Rs.120/- per month respectively for doing Hindi Typing and Hindi Stenography work.

Incentive Scheme for Officers giving dictation in Hindi:-

All the officers who have been provided Stenographic assistance and who generally give dictation, can participate in this scheme.

Hindi Speaking officers for giving dictation in Hindi for a minimum of 20,000 words per calendar year. Non Hindi speaking officers for giving dictation in Hindi for a minimum of 10,000 words per calendar year.

Amount of award Rs.1000/- for each officer. Two awards for each office.

Note:- The Officers / Employees working in Hindi Organisation will not be eligible to participate in any of the above competitions.

Financial Rules**FUNCTIONS, OBJECT AND STRUCTURE OF ACCOUNTS DEPARTMENT**

The basic function of Accounts department is to

- A) Account for all the earnings and expenditure in a systematic manner as per the articles of the constitution.
- B) Advise the administration regarding financial matters.

Any correspondence with regards traffic matters are to be addressed to FA&CAO (WST).

The function of Accounts department is mainly responsible for

- a) Keeping the accounts of the Railway in accordance with prescribed rules;
- b) Check with reference to rules or orders (Known as "Internal Check") all transaction affecting the receipts and expenditure of Railway.
- c) Prompt settlement of proper claims against the railway.
- d) Tendering as a part to its important functions, advice to the administration whenever required or necessary in all matters involving railway finance;
- e) Compilation of budgets in consultation with other departments and monitoring the budgetary control procedures as may be laid down in the relevant orders and code rules from time to time;
- f) Generally discharging other management accounting functions such as providing financial data from management reporting, assisting inventory management, participation in purchase/contracting decisions and surveys for major schemes in accordance with the relevant rules and orders; and
- g) Seeing that there are no financial irregularities in the transactions of Railways.

The following are the broad principles to be followed in the matter of check of traffic earnings:-

- i) that the person to whom the service is rendered pays the proper amount;
- ii) that the railway servants receiving payment correctly account for the same;
- iii) that, if more than one railway renders the service, the receipt is properly distributed between them.

STATUTORY AUDIT

Railways are part of the Government of India and not a corporation under any statute or Indian Companies Act. There is, therefore, no statutory audit of the type under Indian Companies Act. Statutory Audit is conducted by CAG which is much more comprehensive than company auditors and the audit report on performance is submitted to the Parliament by CAG. Public Accountability is, therefore, maximum.

Functions

The Comptroller and Auditor General of India is the final audit authority in India and he is responsible for the audit of the accounts of the Indian Railways (Article.149) but has no responsibility for the compilation of such Accounts. The form in which account of the Indian Railway should be kept and changes in accounts classification affecting the recording of the expenditure in the finance and Revenue Accounts are, however, subject to his approval.

Object of Statutory Audit (116 AI AND 911 OF Finance Code)

The Statutory audit has three fold purposes viz.

- i) accountancy audit- to check the accuracy and to see that all payment are supported by receipted vouchers,
- ii) an appropriate audit- to check to ensure that expenditure and receipts have been properly classified and voted appropriations have not been exceeded,
- iii) administrative audit to check that expenditure has been incurred according to prescribed rules and regulations.

The main object of audit is to ensure –

- a) that the system of accounts used by the internal check authority is correct,
- b) that the method of check applied at every stage of the accounts is sufficient,
- c) that the accounts are maintained and the checks applied with due accuracy and,
- d) that the arrangements exist in the accounts office to ensure attention to the financial interest of the Railways on the part of all concerned.

Responsibility of statutory audit is briefly as follows

- a) it extends in respect of expenditure transactions to all expenditure incurred in India;
- b) in respect of receipts, it includes of Indian railways including receipts relating to accounts of manufacture;
- c) it includes stores and stock accounts to the extent prescribed by the CAG of India

Audit is always conducted ex-post facto i.e. after the event.

Audit cannot prevent an overpayment through negligence or non-observance of rules and regulations. It is duty of Audit to report results to the proper authority that appropriate action is taken to rectify the irregularity wherever possible and at least to prevent its recurrence.

AUDIT DRAFT PARAS AND AUDIT REPORTS

Ordinarily the results of statutory audit are communicated through

- i) Specific reports of the more important and serious irregularities discovered in the Audit of departmental offices and station records.
- ii) Audit notes detailing minor irregularities discovered in the course of Audit of Accounts office records.
- iii) Inspection reports showing the results of Audit of the initial records of the executive offices and stations.

An inspection report will consist of two parts, namely Part I dealing with the more important matters and Part II dealing with the rest, containing minor routine matters. Audits notes will also similarly consist of two parts. The final disposal of Part II of audit notes and inspection reports rests with the Accounts Officers and no formal reply to the Principal Director of Audit is necessary. Replies to Part I of inspection report and audit notes and specific reports should be sent by the executive offices concerned to the accounts officer. In scrutinizing them, the Accounts officer should call for further information, if necessary, and consult the head of division or department concerned, where desirable before giving a reply to the Director of Audit (918 and 919 of financial code). All audit objections and notes should be promptly attended to by the Accounts officer.

All important cases coming to the notice of Audit during inspection or regular audit which in the opinion of the Director of Audit merits inclusion in the Audit Report are brought to the notice of the Railway administration through Special letters, notes of objections etc., to the HOD/FA&CAOs by the Director of Audit. Since these special letters, factual statements form the basis of the material for the Audit report, the Railway administration should deal with at a sufficiently high level and bring out their point of view in a convincing manner before they proceed to prepare a draft paragraph for incorporation in the Audit report.

Draft Para

Draft Para is a para of the report proposed by the Principal Director of Audit to be included in Railway Audit report in connection with a serious irregularity coming to notice in the course of Audit activities. These serious irregularities may be on account of the following:-

- a) Those cases of financial irregularities as have not been rectified to the satisfaction of the Audit by the executive and
- b) Cases of loss, write off or nugatory expenditure.

The Principal Director of Audit sends the draft paragraphs to the GM. He also sends simultaneously advance copies of the draft paragraphs with connected correspondence, to the FA&CAO, the Head of department concerned, ADAI (RLYS),

and the Director (Accounts), Railway Board, to facilitate prompt action and detailed examination of the points brought out in the draft paragraph. A draft Para is to be addressed to the General Manager of the Zonal Railway in person and a copy of it has to be sent to the FA&CAO and to the Head of Department of the concerned department ADAI (RLYS), and the Director (Accounts), Railway Board, to facilitate prompt action and detailed examination of the points brought out in the draft paragraph. From the date of receipt of Draft Para, GM will have to furnish sentence wise replies to the draft Para within five weeks to the Railway Board. The Railway Board shall reply the draft Para within Seven weeks to CAG (Rlys). If the reply given is unsatisfactory, the draft Para will be converted into a provisional Para for inclusion in the Audit Report. To enable Railway Board to approve the draft reply prepared by the Railway administration. The GM should furnish additional information to the Railway Board.

1. A history of the case with copies of relevant correspondence not covered in the Chief Auditor's letter.
2. Sentence wise comments on the draft paragraph, specifically verifying/ correcting the facts & figures quoted therein.
3. A Chronological summary of the case where there has been unusual delay in dealing with the subject matter.
4. Disciplinary aspects where individual lapses have been brought to light.
5. Remedial action called for or taken to avoid similar cases in future.

Any aspects which the Railway administration may wish the Principal Director of Audit to consider before sending the final reply should, as far as possible, be settled by personal discussions so that the time limit may not be exceeded. The report of CAG is presented to the Parliament, generally during budget session, where it is taken up for consideration by the Public Accounts Committee. The Committee obtains the personal evidence of senior officers of Railway Board in respect of the various items in the CAG's report. The results of the deliberations of the Public Accounts Committee are published in the form of reports which are laid on the table of each house of Parliament and forwarded to the Ministry of Railways. These reports contain the recommendations of Public Accounts Committee for implementation by the Railways.

Standards of Financial Propriety or Canons of Financial Propriety

While exercising their financial powers, sanctioning authorities must pay due regard to the following principles which are known as the canons of financial propriety:

1. The expenditure should not prima facie be more than what the occasion demands, and that every Government servant should exercise the same vigilance in respect of expenditure incurred from public money as a person of ordinary prudence would exercise in respect of the expenditure of his own money.
2. No authority should exercise its powers of sanctioning expenditure to pass an order which will directly or indirectly be to its own advantage.

3. Public moneys should not be utilized for the benefit of a particular person or section of the community unless:-
 - i) the amount of expenditure involved is insignificant; or
 - ii) a claim for the amount could be enforced in a court of law; or
 - iii) the expenditure is in pursuance of a recognized policy or custom.
4. The amount of allowance, such as traveling allowance granted to meet expenditure of a particular type should be so regulated that the allowances are not a source of profit to the recipients.

Exchequer Control

Exchequer control is a mechanism for concurrent regularization of cash outgo by each disbursing officer against the cash content of the budget allotment. Railway expenditure falls into two categories viz. cash and adjustments. The former covers all transactions completed through cash payment of issue of cheques and broadly comprises disbursements to staff and contractors as also settlement of bills/claims for supplies and services. Adjustments represent inter or intra accounting unit book-keeping transactions which entail no cash outgo. The object of exchequer control is establishing a system for correct estimation of cash outgo and to monitor disbursements. It is thus an important tool of budgetary control.

Exchequer control is an important aid to the expenditure control mechanism as this envisages an effective check on cash outgo through drawing limits. One of the measures introduced to conserve and stabilize the cash resources of the Government is known as 'Exchequer Control'.

The exchequer control mechanism will mainly operate as a preventive measure against the excess budgetary allocations in respect of Cash transactions. It will constitute an essential improvement over the existing system of 'post facto' control through monthly financial reviews and other reviews.

The implementation of exchequer control involves the following steps

- i) Correct assessments of cash and adjustments portion of the sanctioned annual budget under each demand by each disbursing officer.
- ii) As accurate and assessment as possible of the Quarterly requirement of cash.
- iii) Issue of Quarterly/ Monthly cash authorization to disbursing officer.
- iv) Concurrent control cash outgo by each disbursing officer.

Broadly the cash budget should be broken under the following main categories:-

- i) staff, ii) Fuel, iii) other purchases, iv) payment to contractors bills v) other disbursements and vi) civil grants.

The present mechanism serves the purpose under normal circumstances. But whenever there is inflationary trend due to sudden hike in prices, payment of arrears of DA etc., the cash allotment is not increased automatically. The delay in getting additional allotments results in deferring certain payment such as contractor's bills etc. thereby artificially controlling cash outgo.

In the exercise of Exchequer control, the total allotments for the year are divided between Cash and Adjustments. Success of Exchequer control greatly depends upon this distribution. Board has laid down broad guidelines for making a realistic estimate of Cash and Adjustment portion of expenditure falling within the sanctioned budget. Thereafter, the cash outgo is further distributed amongst the four quarters of the year. Railway Board issue quarterly cash allotment. Each Railway administration will report to the Railway Board, the actual disbursement during the quarter while asking for the cash allotment for the next quarter. The report is scrutinized in the Board's office to see the progress of cash expenditure vis-à-vis the authorization for the quarter and Railway administration is cautioned against overstepping the authorized limit for cash disbursement.

Exchequer Control mechanism is necessarily limited in scope to the control of cash outgo which on average is about 70% of the total expenditure of Railway. Exchequer Control has thus the merit of providing an effective method of monitoring a substantial portion of expenditure on a day to day basis. But it may be that the scope of this control is limited. Firstly, it is a self regulatory exercise because it does not restrict the cheque drawing powers of the Railway Accounts officers even if the cash outgo allotment is exceeded. Moreover it does not provide complete co-relation with earnings. Further for certain services such as payments to out-agents, refund of fares, and the Accounts office cannot withhold payments. The system is now being refined now by introducing the system of controlling net withdrawals from Reserve Bank of India.

FINANCIAL APPRAISAL OF RAILWAY PROJECTS

Investment decisions are among the most interesting and difficult decisions to be made by the managements. It is fundamental to Railway system as a commercial undertaking that expenditure other than wholly chargeable to ordinary revenue incurred on new assets or for improvement of existing assets should be financially justified and sanctioned before it is actually incurred.

Financial justification is an examination of work or scheme with a view to see that when completed it will increase the earning or result in saving in the working expenses after meeting annual average cost of the service. In order to judge whether or not a proposal is financially justified, annual cost of service is worked out on the

amount proposed to be spent on the proposal and taking into account, the annual recurring charges on repairs and maintenance, depreciation and interest, and the anticipated additional earnings expected to be realized or savings to be achieved in existing expenditure after incurrence of the expenditure, the percentage return on the total amount is worked out. Interest charges are taken into account only if the construction of work is likely for more than one year or where expenditure is to be incurred on alternative schemes.

The net financial gain expected to accrue from project may be either by way of savings in expenditure or increase in the net earnings or combination of both. No proposal for fresh will considered financially justified unless it can be shown that the net gain expected to be realized as a result of the proposed outlay would, after meeting the working expenses, yield a return of not less than 10% on the initial estimated cost.

In regard to works proposals estimated to cost Rs.50 lakhs or more, which are intended to increase line capacity, detailed traffic surveys should be conducted by a team consisting of officers of requisite status and experience from the Commercial/ Operating departments and Accounts department. Where traffic survey is conducted along with an engineering survey (Reconnaissance, preliminary engineering or final location), the traffic survey report should be prepared under the general guidance of the leader of the team who will be an officer appropriate status from the Civil Engineering Department.

WORKS PROGRAMME

Meaning of works programme: Since the necessity utility, financial prospect and availability of funds etc. are the conditions precedent to the execution of works, advance planning is necessary to select the most urgent and advantageous works. With this object in view and also to facilitate preparation of Budget estimates of construction of new lines open line works, the Railway administration prepares a programme of works proposed which is known as works programme.

Objects of works programme

1. to examine and select the most urgent and productive works required to be undertaken in the next financial year ;
2. to facilitate preparation of budget estimates of works chargeable to capital, DRF, DF, OLWR;
3. to enable the Railway Board to examine the necessity and urgency of each work proposed by the Railway administration;
4. to enable the Railway Board to make provision in the Railway budget accordingly for expenditure on works;
5. to enable the Railway administration to keep the expenditure on works within the amount of allotment sanctioned for them.

Works programme is submitted to Railway Board in September each year and expenditure to be incurred during the next year as programmed. It includes all the 'Works in progress' and 'new works proposed'.

Before any 'New Work' can be included in the programme a full justification justifying the necessity and the utility of the work is to be furnished to the finance branch, duly accepted by the HOD. If the proposal is concurred in by Finance branch then only the same can find its place in the programme.

The programmes, as framed by the Railways and consolidated in Board's office, are intimated to the Ministry of Finance for necessary provision being made in the ways and means position of the Government of India and after it has been ascertained that the funds are available to meet the estimated expenditure, the programs is submitted to the minister for approval.

Methods of preparation

The Railway administration should submit every year to the Railway Board their preliminary works programme (in 15 copies) of works chargeable to capital, DRF, DF, OLWR so as to reach the Railway Board not later than the 7th September.

When DRM is satisfied about the need for a project, he obtains a rough estimate for their work from the DEN and submits the case to HOD. If HOD considers the project necessary and sound, he prepares a detailed justification and sends the proposal to FA&CAO. If the project is accepted by FA&CAO, the HOD forwards the case to CE. The programme is then considered for finalization by the GM.

Final works programme

The programme of individual Railways are examined by the Railway Board and discussed with GMs. The Railway Board there after decides the works which should be undertaken during the following year and which should be included in the final works programmed. The Railway administration then modify their works programmes as a result of the Board's decision and send their final works programmes (in 15 copies) to the Railway Board.

PARLIAMENTARY CONTROL OVER RAILWAY FINANCES

Parliament exercises control over Railway finances through the following methods

- i) Railway convention committee.
- ii) Estimates committee.
- iii) Public Accounts committee.
- iv) Committee on subordinate legislation
- v) Committee on Govt. assurances.

- vi) Railway budget discussion.
 - vii) National Railway users Consultative Council.
 - viii) References from Members of Parliament.
-
- i) **Railway convention committee** will be constituted by the parliament, generally for every five years, to review the rate of dividend payable by the Railways to the General Revenues as well as other ancillary matters which have a bearing on the needs of the Railways and are essential for maintaining operational efficiency and earning potential of the Railway undertaking so as to enable it to continue to pay the dividend.
 - ii) **Estimates committee** examines such of the estimates as it deems fit or are specially referred to it by Parliament or Speaker. The functions of the committee are:
 - a) to report what economies, improvements in organization, efficiency or administrative reforms consistent with the policy underlying the estimates may be effected.
 - b) To suggest alternative policies in order to bring about efficiency and economy in administration.
 - c) To examine whether the money is well laid out within the limits of the policy implied in the estimates; and presented to Parliament.
 - iii) **Public Accounts Committee** examines the appropriation accounts of Railways to satisfy itself on behalf of parliament:
 - a) that the moneys shown in the accounts as having been disbursed were legally available for and applicable to the service or purpose to which they have been applied or charged and
 - b) that the expenditure conforms to the authority which governs it; and
 - c) that every reappropriation has been made in accordance with the provisions made in this behalf under rules framed by competent authority.
 - iv) **Committee on subordinate legislation:** Whether the powers to make regulation, rules, sub-rules, bye-laws etc., conferred by parliament are being properly exercised within such delegation or not are scrutinized by the committee on subordinate legislation and a report is prepared for submission to parliament.
 - v) **Committee on Govt. assurances:** This committee scrutinizes whether the assurances, promises, undertakings etc., given by ministers from time to time, on the floor of Lok Sabha and Rajya Sabha, have been implemented within the minimum time necessary for the purpose.
 - vi) **Railway Budget discussion:** The Railway Budget is discussed and debated in the parliament by the members of Parliament of both Houses. They raise questions of different nature such as starred Questions, Unstarred Questions and short notice questions in both the houses of Parliament and the Railway Minister gives suitable replies. Debates and questions are therefore two main weapons through which parliamentary control is exercised over Railway finances and budget. After the budget is discussed and debated, the Railway budget is passed by both Houses of Parliament.
 - vii) **National Railway Users Consultative Council:** To secure better representation of Railway users and afford more frequent opportunities for

consultation between Railways and Railway users on matters relating to the service provided by Railways, a National Railway User's Consultative Committee was formed in 1953. The council consists of 70 members appointed to it by the Minister of Railways, drawn from various concerned Secretaries of Ministries, Chairman and Members of Railway Board, Members of Parliament, representatives of each Zonal Railway users Consultative Committee, one representative each from the chamber of commerce and other eminent persons. The function of the council is to consider the services and facilities provided by Railways.

- viii) **References from MPs:** Letters are often addressed by MPs to the minister, Members of Railway Board, GMs and HODs of departments in connection with various issues including finance and policy. The letters should be attended to and reply should be given as early as possible.

In view of the above, it can be said safely that the Parliament exercises excellent control over the Railway Finance through different machineries with a view to ensure that the government's money is properly utilized and the working is directed in public interest.

Railway Budget – An Overview

Budgeting is the most widely used accounting tool for planning and controlling organizations. Budgeting is most useful when done as an integral part of an organization's strategy analysis.

A budget is the quantitative expression of a proposed plan of action by management for a future time period and an aid to the coordination and implementation of the plan. The budget, an annual financial statement, is a management tool, which helps us to make best use of our resources and avoid duplication of efforts. Naturally any fluctuations in the financial fortunes of the Railways rendered a violent jolt to the General Finances of the Central Government. Under article 112 of the constitution of India, the budget has to be presented before both the houses of Parliament. In 1924 (Separation Convention), Railway Finances were made separate from General Finances. This brought (i) stability in General Finance (assured contribution from Railways) and (ii) created flexibility in Railway's Financial Management.

It comprises of

- Estimated receipts and the expenditure of the government for the budget year.
- Receipts, expenditure and review of the preceding year.
- Proposals for meeting the requirements of the coming year.

Objectives:

- To define objectives in financial terms for execution at all levels.
- To allocate scarce resources to important activities.
- To co-ordinate complex plans for action.
- To compel planning, including the implementation of plans.
- To provide performance criteria.

- To promote coordination and communication within the organization.
- Facilitates controls by a) Establishing departmental budgets b) Fixing responsibility c) Comparison and reviews d) Corrective measures
- Budgeted performance measures can overcome two key limitations of using past performance:
 1. Past results incorporate past mistakes and sub-standard performance.
 2. The future may be expected to be very different from the past.

Types of Budget: a) Capital Budget b) Revenue budget c) Performance Budget d) Zero based budget e) Responsibility budget f) Kaizen Budget.

Capital Budget: It presents the funds requirement for asset / infrastructure development.

Revenue Budget: It reflects the routine business of an organization and contains expenditure and income statements.

Appropriation Budget: Parliament appropriates certain money. This is the ceiling limit. It emphasizes on monetary spending rather than performance.

Performance Budget: Spending is justified by performance. Emphasis on performance – asking, spending and accounting. Good data on norms and standard costs is needed.

Responsibility Budget: It is a system for evaluating the performance of managers based on activities under their supervision. Responsibility centers are as under:-

Cost center – Reports costs only while a revenue center reports only revenues.

Profit center – Reports revenues, expenses and net income or net loss.

Investment center – Reports revenues, expenses, income or loss and the investment used by the center.

Zero Based Budget: Unlike appropriation budget and performance budget, which are based on passed trends, Fresh justification is required every time. There is a move to introduce progressively the concept of zero base budgeting in railways. Budgeting is done for each year while the planning is done for certain longer periods. As the very name implies, budgeting under this systems for each year is done taking the base as zero. In other words the budgeting for each year is to be done from scratch every year. Under this system each executive has to explain in greater details the need for the money he has sought for. The main criterion for budgeting under this system is decision packages. Such decision packages are analyzed in the order of priority. The provision required during the year is to be sought for on the basis of these priorities.

Kaizen Budget: This technique is a budgetary approach that explicitly incorporates continuous improvement during the budget period in to the budget numbers. Suppose it

was previously estimated that an activity would take 3 labor hours, A Kaizen budgeting approach would incorporate future improvements in this activity i.e. this activity may take 2.95 labor hours after 3 months and 2.90 hours after 8 months.

Features of Railway Budget

The Railway Budget is presented in the form of Demand for grants. The estimates of expenditure are either 'voted' or 'charged'. The 'charged' expenditure is outside the scope of Parliamentary approval. The 'voted' expenditure has to be approved by Parliament. Such estimates are submitted in the form of 'Demands for Grants'.

As far as earnings are concerned the Ministry of Railway have full powers to vary the freight rates and passenger fares, being charges for service rendered and not taxes, and therefore, are not subject to the approval of the Parliament. However, by tradition the proposals for increase in fares and freight are placed before the parliament and implemented only after the budget is passed.

On the expenditure, the Revenue budget falls into categories:

- i) Policy formulation & Services common to all Railways/Administration
- ii) General Superintendence and Services on Rlys
- iii) Repairs and maintenance of rolling stock and plant and equipment
- iv) Operating expenses
- v) Expenditure on fuel
- vi) Staff welfare, Retirement benefits & Misc.
- vii) Railway Funds and payment to General Revenues

The four major steps involved with the Railway Budget are:-

- i) Preparation of the budget
- ii) Voting of the Budget
- iii) Execution of the budget
- iv) Review of the Budget

Of these (i) and (iii) are Executive functions while (ii) and (iv) are Parliamentary functions.

Preparation

The revised estimates for the current year and budget estimates for the ensuing year are prepared simultaneously and the preparation should commence at the Grass Root level i.e. Divisions, workshops, stores depots etc. The entire responsibility for the framing of the budget estimates depend upon the spending/ authorities concerned though the actual work of compilation and scrutiny would rest with the FA&CAO.

After proper scrutiny and also after discussion with the spending authorities the budget estimates are submitted to Railway Board. The estimates so submitted are subjected to a critical examination by the Railway Board and taking all relevant factors into account, the Board frame the estimates of income and expenditure for the Railways as a whole.

The revised estimate for the current year is fixed under each demand for each railway/ production unit etc. after into account, the actuals of the current year, the expenditure during the first seven months of the current year and any special features that may be known.

So far as expenditure on works (i.e. on rolling stock, plant and machinery, engineering and signaling works, electrification etc.,), is concerned, initially the Railway Administration formulates a list of new works to be taken up in the following year, within the ceiling fixed by the Board. The ceilings are fixed with reference to the allocation received from the planning commission. These proposals for new works are discussed by the Board with the Railway administration and a list of approved works is prepared. The proposed expenditure in the following year on such new works and on works-in-progress form the works programme or the budget estimate of the railways for expenditure to be incurred on new or ongoing works chargeable to Capital, DF, DRF, OLWR, Capital Fund and SRSF.

Voting of Budget

Before the budget is presented to the parliament, the recommendations of the President are obtained under Article 113(3) of the constitution. The budget papers are circulated to members of Parliament and the budget is debated in the parliament. In accordance to the Article 114 of the Constitution after the demands for grants have been voted by the Loksabha, a bill is introduced to provide for the appropriation out of the consolidated Fund of India, of all moneys required to meet the grants made by the Loksabha as also expenditure, if any, charged on the Consolidated Fund of India.

Execution of Budget

The grants as voted by the parliament and the appropriation for charged expenditure as sanctioned by the President are distributed by the Railway Board among the Railway administration and other spending authorities. The orders by which the allotments are made are called Budget orders.

Machinery exists on the Railway for control of expenditure in relation to the sanctioned budget allotments in the form of financial and budgetary reviews at appropriate stages so as to ensure that the expenditure is regulated in accordance with the budget as sanctioned by parliament. The various stages of review of budget are:

i) August review	August
ii) Revised estimates	December
iii) First modification	February
iv) Final modification	March

Review of the budget as executed

Maintaining a check on the utilization of funds as voted by the Parliament is an important Component of Parliamentary control. This function is exercised through Appropriation Accounts which makes a comparison between the grants and the actual expenditure and provide reasons for variations. These accounts are audited by the CAG who submits his audit report to the Public Accounts Committee which is an important Parliamentary Financial Committee.

Estimates

The following are the various Estimates prepared in connection with Open line works:-

- a) Abstract Estimate
- b) Detailed Estimates
- c) Supplementary estimates
- d) Revised Estimates
- e) Project Abstract Estimate
- f) Construction Estimate
- g) Completion Estimate

Abstract Estimate

An abstract Estimate is prepared in order to the authority competent to give administrative approval to the expenditure of the nature and magnitude contemplated to form a reasonably accurate idea of the probable expenditure and such other data sufficient to enable that authority to gauge adequately the financial prospects of the proposal. Abstract estimates avoid the expenses and delay of preparing estimates for works in detail at a stage when the necessity or the general desirability of the proposed work has not been decided upon by the competent authority. An abstract estimate should contain a brief report and justification for the work, specifications and should mention whether funds are required in the current year and to what extent. It should also show the cost sub-divided under main heads and sub-heads or specific items, the purpose being to present a correct idea of the work and to indicate the nature of expenditure involved. The allocation of such items as between Capital, Development Fund, OLWR, DRF, DF etc. should be indicated.

Detailed estimate

On receipt of administrative approval to a project or scheme other than for the construction of a new line conveyed through the sanction to the abstract estimate relating thereto, detailed estimates for the various works included in the abstract estimate should be prepared and submitted for the technical sanction of the competent authority. It is prepared in sufficient detail to enable the competent authority to make sure that the abstract estimate sanctioned by a higher is not likely to be exceeded. No work included in an abstract estimate should be commenced till a detailed estimate for the same is prepared and sanctioned and adequate funds are allotted by the competent authority. The detailed estimate of Open line work will comprise:

1. statements showing details of estimated cost, and
2. an outer sheet giving the abstract of cost of work, therefore, the financial justification and the allocation.

Note: Technical Sanction: The sanction of the competent authority to the detailed estimates of a work is called the 'technical sanction'. The authority according technical sanction should satisfy itself that

- i) the details of the scheme as worked out are adequate; and
- ii) the methods proposed for the execution of the work are adequate; and
- iii) the cost has been estimated from reliable data and is likely to be reasonably accurate.

In case of the works within his power of sanction the GM, he may in lieu of procedure of preparing abstract estimates for administrative approval, prescribe that both the administrative approval and technical sanction should be accorded on the detailed estimates.

Supplementary estimates

A supplementary estimate should be prepared for any item of work, which ought to have been included in the first instance in an estimate already sanctioned but had not been so included, or which if found later, should be considered as being a part or a phase of an estimate already prepared and sanctioned, if it cannot be met out of contingencies. Such a supplementary estimate should be prepared in the same form and same degree of detail as the main estimate and for all and for all purposes be treated as a part of the main estimate.

Revised estimate

A revised is prepared and submitted for the sanction of competent authority, as soon as it becomes apparent that the expenditure on a work or project is likely to exceed the amount provided therefore in the detailed estimate and in the case of

construction of a new line, construction estimate, it should unless otherwise ordered by the sanctioning authority, be prepared in the same form and the same degrees of detail as the original estimate, and should be accompanied by a comparative statement showing the excess or saving under each sun-head of account against the latest sanction. In cases where a supplementary estimate or a previous revised estimate has been sanctioned by the Railway board it should be made clear how the original sanction has been modified by such further sanction.

In cases, however, where the work is in an advanced stage and is likely to be completed before revised estimate can be got out, the excess may with the prior approval of the competent authority be dealt with in the completion report of the work. The fact that a competent authority has permitted the regularization of excess over an estimate through completion report should invariably be intimated to the Accounts officer.

Project Abstract Estimate

This is an abstract estimate for a construction project. It should be prepared in form E-554 and submitted to the Railway Board for approval. It should show the abstract cost of the Railway, for the whole line by each section of the line. It should be accompanied by:-

- i) an abstract estimate of junction arrangements;
- ii) a narrative report explaining the salient features and major terms expenditure.
- iii) Detailed estimates on form E-553 showing the cost of construction of the projected railway under the various heads of capital classification.

The abstract estimate of an unremunerative project chargeable to development fund should be prepared in the same detail as the abstract estimate for a construction project chargeable to capital.

Construction estimate

When it is decided to undertake the construction of a new line, a final location survey should be made and based on the information collected in that survey; detailed estimates of all works included in the project as a whole should be prepared.

These detailed estimates are collectively known as construction estimates of the project. It should be prepared after a careful examination of various details construction involved in the project. It should be prepared in such detail as to render it possible to dispense with working estimate or any other further estimating after the construction estimate has been sanctioned (except when supplementary or revised estimates are necessary). It should provide for the buildings and equipment of the railway up to a standard that will be sufficient for working such traffic as may be expected during the

first and second year after the opening of the line. It is the basis on which technical sanction to the various works included in the construction of a project is accorded.

Completion estimate

A completion estimate is prepared in super session of a construction estimate. In case of Railway projects costing over Rs.1 crore , the construction or abstract estimate should be closed at the end of one of the first three financial half year after the date of opening as may be convenient and a completion estimate prepared. The completion estimate is a stock taking estimate and all works which could not be started by that date are excluded from the scope of the project and are to be dealt with separately.

Completion estimate should be prepared in form E-713 and following particulars in respect of all works included in the construction are to be shown.

- I. amount of sanctioned estimate;
- II. actual expenditure on all works up to the date of closing of the construction estimate;
- III. commitments on that date;
- IV. anticipated further outlay;
- V. total estimate cost
- VI. difference between the sanctioned estimate and the estimated cost.

An abstract of the completion estimate showing the above particulars against the various heads of capital classification should be submitted to the Railway Board for sanction if there is any material modification in the project as sanctioned by the Railway Board or an excess over the estimate beyond the powers of sanctions of the GM, after verification by the Accounts officer, together with brief explanations for excesses of not less than Rs.10000 or 10% over the provision under sub-heads of account and for saving of 20% or 1 lakh, whichever is less occurring under any main head of account. Provision for further outlay should be made in the completion estimate only for those works which are in progress or completed on the date of closing construction estimate.

Works programme

The preparation of the annual works programme of a Railway is not an isolated exercise for the year but is part of a continuous planning process from the level of the Divisional Officer upwards. Investment proposals from the division would be those which are intended to effect improvement in operation or remove bottlenecks etc. within the division itself. Major investment proposals which benefit a zonal Railway System or the Indian Railways as a whole are coordinated and planned at the level of the Railway headquarters or the Railway Board, where necessary.

An important requirement for effective investment planning is the realistic estimation of project costs. Full details of the scheme must be worked out and no scheme should be included in the Railway Works programme unless detailed plans and estimates have been prepared and are ready. Detailed Traffic and Engineering surveys should be carried out for new lines, gauge conversion, doublings and other line capacity works costing more than Rs.50 lakhs each. In the case yard remodellings, line capacity works, goods shed facilities and important buildings, the estimates should be based on the plans approved and signed by the concerned departments who should scrutinize the plan carefully to avoid the need for making any substantial modifications in the required facility at a subsequent stage. If major changes in the plans/ schemes specifications of works nevertheless become necessary and are likely to lead to substantial excesses over the sanctioned estimates, the changes asked for by the concerned departments should not be agreed to unless reviewed and approved by the competent authority sanctioning the original estimate. In regard to yards etc. work study teams should go into the actual working before formulating schemes for the additional facilities required.

It is essential that detailed financial implications, (including financial return) should be worked out in all cases including works financed from Development Fund, OLWR or SRSF.

All schemes costing Rs.50 lakhs or above are worked out comprehensively and sent to the Board along with full details of (i) the technical details;(ii) cost break-up (iii) benefit expected to accrue (iv) financial implications. A sketch map of each proposal is also sent. The Railway administration must clearly bring out the purpose of each scheme and confirm that the proposal meets the objective fully and that the scope and cost of the project have been arrived at after the fullest possible investigation including assessment of the financial implications. After the scheme has been scrutinized by the Board, the Railway administrations are advised of the acceptance, with or without any modifications for inclusion in the Works Programme.

Preparation of the Preliminary Works programme

The Chief Engineer of the Railway will be primarily responsible for ensuring that the proposals prepared by the various departments are complete in all respects and are correctly prepared. The overall priorities within the ceilings given by the Board will also be fixed by him in consultation with the General Manager and other Heads of Departments. He will be responsible for the preparation and timely submission of the preliminary and the Final works programme.

In or about June/July each year, the Railway Board conveys to each Railway, in respect of each plan head, the total outlay within which the Works Programme should be framed by the Railway. On receipt of the financial ceiling, the Railway administration takes stock of the schemes already formulated and those under consideration and selects for inclusion in the works programme within the financial ceiling such works as are expected to yield the maximum benefit to the Railway, preference given to works in progress. Further necessary changes in the investment schedule may be made in order to work within the financial ceiling for the year such modification being taken note of in framing the Preliminary works programme and revising the financial implications, if necessary.

The preliminary works programme for the following year should be submitted by the Railways to the Railway Board by 1st week of September or such earlier date as may be laid down by the Board. Proper financial appraisal of each work should be given in the Preliminary works programme together with the comments of the FA&CAO.

Each investment proposal should be accompanied by a detailed plan showing the scheduling of the project to match the traffic requirements and the financial outlay proposed for the year should be in accordance with this project schedule to enable the Railway Board to arrange for a realistic funds allocation for implementation of the programme.

Works once introduced through a works programme (including Track Renewal Programme) and taken up after the estimates have been sanctioned by the competent authority should continue to be included every year till they are finally completed, except in cases where the works have reached the completion stage and where funds required if meager could be found by re-appropriation.

In respect of works in progress reference to item No: of the current year's pink book and also the authority under which the work was first started should be indicated. The works are to be arranged as per the plan heads.

The item in the work programme should be grouped under the following categories while compiling the works programme:-

- a) New works
- b) Works programme
- c) Works approved in earlier years, which have not been commenced and on which no expenditure has been incurred till 30th June of the year to the programme year.
- d) Works approved in the earlier years but estimates for which have not been sanctioned by 30th June of the year previous to the programme.

The programme or construction of new lines is prepared separately. No new project is included unless it has been specifically approved by the Railway board either on the basis of plans, abstract estimate and justification by the Railways or otherwise.

Railway Board have since issued instructions that Preliminary Works Programme should be accompanied by a consolidated Budget called Integrated Budget which may include all the Budget statements sent separately to the Railway Board. It will also include show the effect of the budget proposals on the efficiency of operations as indicated by the operating ratio and financial viability of the system. Final works programme is also accompanied by the final integrated budget.

Final works programme

After having examined the individual Railway Programme, and discussed it with the General Manager, the Railway Board decides upon the works which should be undertaken during the following year and which should be included in the Final Works programme. The administration then modify their works programme as a result of the Board's decision and send the final programme to the Railway Board by the Railway Board.

In the course of compilation of the works programme, the FA&CAO is responsible to supply the figures of actual outlay incurred to date in respect of works in progress. In respect of new works he has to satisfy that:-

- i) the work proposed is really necessary and needs no postponement;
- ii) the cost shown is realistic and is based upon reliable data;
- iii) the service expected to be received cannot be rendered by an alternative arrangement at lesser cost;
- iv) the allocation of charges is in accordance with Railway Board's instructions;
- v) the proposed expenditure is really necessary and financially justified and is in the interest of the taxpayer.

Various Modes of payment

Credit Note:

Credit note is a composite document, a paper instrument to be exchanged in the bank. The upper portion thereof containing particulars of the consignment tendered for dispatch, the station “from” and “to”, weight, rate, amount of freight charged, particulars of invoices issued and RRs granted and the lower portion treated being the authority for payment. It has to be signed by the party duly authorized to issue the credit notes and purports to be an order on the agent and bankers of the firm/ individual entitled to the use of the credit note to effect the payment on demand.

Object: The above procedure avoids huge cash payments both to the parties and the Railways. To attract more traffic from accredited firms.

Procedure:

1. Firms with good financial background and a good track record of transactions with railways.(credit worthiness)
2. The scheme will be granted on the basis of a Bank guarantee to the extent of 15 days based on peak month's transaction in the past 12 months
3. According to the latest guidelines issued by the Railway Board, this period of Bank guarantee has been reduced from 15 days to 7 days. An additional condition was prescribed that the party availing the credit note facility should open a bank account where the Railway deposit accounts is also in operation.
4. In case of default of credit note cum cheque, the following are the consequences:
 - I) A penal interest of 18% will be levied for the period of default.
 - II) The consignment for which default of in payment of freight will be treated as a To-Pay consignment.

Weight Only System

Bulk cash cannot be carried/ remitted at remote places like sidings. In order to avoid such difficulties Railway Board introduced weight only coal system.

Under the weight only coal system of booking traffic, the station is not responsible for the collection of freight amount but instead, the Traffic accounts office will do the billing against the parties and is responsible for collection of amount. The facility of Weight Only system is available only in respect of selected commodities which are coal, minerals oils, manganese ore, lime stone, dolomite, gypsum, and cement.

After establishing the credit worthiness of firm the system is extended to a party. The booking of traffic on is treated as Paid if the Security Deposit is in the form of cash

(Equivalent to 20 days peak transactions in the previous 12 months). If the Security Deposit is in any other form like, Bank guarantee, NSC bonds, Government Securities etc., the traffic is being booked on To-Pay basis for which a security deposit is fixed of 30 days peak transactions in the previous 12 months.

Procedure:

1. The billing is done once in every 10 days.
2. The forwarding notes received from the party are dispatched to the Traffic Accounts office are checked and fed into computers.
3. A free time of 3 days is given to the party to make the payment.
4. In case of default of bills, the following are the consequences:
 - I) A penal interest of 18% will be levied for the period of default.
 - II) The consignment for which default of in payment of freight will be treated as a To-Pay consignment.

Freight deposit System:

Under the Freight Deposit Account, the party deposits sufficient cash to cover 15 days transactions or one month's transactions with Railways. The Cash is decided on the basis of 15/30 days peak transactions in the last 12 months. The freight due is debited to the station and a special credit is taken in the balance sheet. A register is maintained in the station showing the freight as reduced from the freight deposited with Railways. This facility has been extended to parties wherein reciprocal transactions are involved.

In South Central Railway, this facility has been extended to MSPS/Parli. This siding receives coal from various mines. The consignments are booked on To-Pay basis to MSPS/Parli. The freight element alone is debited to the account leaving out the To-Surcharge element.

In case of default in payment, the following are the consequences:-

- I) A penal interest of 18% will be levied for the period of default.
- II) The consignment for which default of in payment of freight will be treated as a To-Pay consignment.

Monthly Account for booking of newspapers:

This system of booking newspaper on the basis of monthly payment is extended to accredited firms whose creditworthiness has been established.

The procedure established for operating such an account is given below:-

1. Two months freight charges must deposited with Railway in the form cash deposit, NSC bonds, Government securities or a bank guarantee should be furnished. On the basis of the party's creditworthiness, sanction is accorded to make payment on a monthly basis.

2. At the station, the firm will submit a statement in triplicate along with the weight and destination.
3. Booking is done on General forwarding Note.
4. Regular test checks are conducted to ascertain the weight declared by the party.
5. The weight is recorded on all the foils of the statement and on foil is handed over to them as acknowledgement.
6. One foil is kept in the station as a record foil.
7. One foil is sent to FA&CAO's office along with a monthly Account statement.
8. FA&CAO will realize the freight due and intimate the station of realization.

The above system will help in reducing the pressure on the station in cases of regular parties.

Station Balance Sheet

The main function of the Railway is to manufacture and sell the 'Transport'. This selling of the commodity 'Transport' means the selling of tickets to passengers and booking of other coaching and Goods traffic. The station is a place where the transactions originally take place and are recorded in the initial documents. The earnings from different sources are brought to account in different returns and statements required to be prepared separately for each category. The station master is responsible for accounting to the Government all the items of earnings which accrue at the station and for the realization of which he is responsible. He clears his liabilities either through remittance of cash or vouchers or through other items of special credit, the balance indicating outstanding at the station. It is thus for the purpose of taking to account all the liabilities and credits under classified heads that a summarized statement called station balance sheet is prepared by the station master and submitted to the accounts office after the close of the month incorporating therein all the transactions for the month to which it pertains.

The station balance sheet is prepared separately for coaching and goods transactions in the prescribed format. The station Balance sheet is a personal account of station master. On the debit side of the balance sheet are shown the items of earnings for the accounting of which he is responsible, classified under the various heads of traffic. On the credit side of the balance sheet are shown the amounts remitted by the station master to the cashier whether in cash or in the form of vouchers and acknowledged by the cashier, and other special items by which the station master clears his liability. The balance represents the unrealized earnings at the close of the month for the collection of the station master is responsible and this forms the first liability in the balance sheet of the following month.

Outstanding

The various kinds of station outstanding are classified under following two classes:-

“A” class outstandings:-

- (a) Cash office disallowances
- (b) Admitted debits
- (c) Disputed debits

“B” class outstandings:-

- (a) Freight outstanding for goods on hand
- (b) Freight outstanding for goods not on hand
- (c) Demurrage and wharfage awaiting clearance by means of remission statement.
- (d) Unsold stamped indemnity bonds and time tables etc.,
- (e) Imprest

The circumstances which lead to creation of outstanding and various steps to be taken to clear them are enumerated below:

“A” Class Outstandings

- (a) Cash office disallowances: As a result of counting the cash by the cashier, any short remittances due to receipt of base coins and forged notes is less acknowledged by the cashier in the Cash acknowledgement Note. On receipt of CR Note acknowledgement the station master is required to recover the amount from the responsible staff and remit the same to the cashier at once.
- (b) Admitted debits: Debits received from Accounts office and TIA debits which are admitted by the staff responsible should be cleared at the earliest. The debits of less than Rs.100 should be cleared by cash at the station. Debits beyond Rs.100 can be cleared through salary recovery. Regular monitoring of admitted debits by intimating the Sr.DFM's office regarding pending admitted debits. By giving the PF number of the employee along with outstanding debits will help in recovering the dues.
- (c) Disputed debits: When debits are received from the accounts office it is the responsibility of the station master to intimate the staff responsible about the debits. These debits should be accounted in the month of receipt and reasons for dispute should be clearly given both in the outstanding list and the outstanding register. All steps should be taken to clear the debits by submitting proof to get credit from the accounts office.

“B” class outstanding

- (a) & (b) : Freight outstanding for goods on hand and freight for goods not on hand: Due to the introduction of mechanized system of accounting (MPAs), the outstanding in the station is steadily rising. Steps should be taken in getting certified overcharges sheets from station for traffic which was diverted or

delivered short of destination. Following the guidelines issued from time to time by Railway Board on diversion of traffic will help in containing the outstanding to a great extent.

- (b) Demurrage and wharfage awaiting remission orders: Strict implementation of Railway Board guidelines on the subject will help in reducing the outstanding to a great extent. Before filing a second appeal for increasing the percentage of waiver the party has to pay the balance as the first waiver. This is not being done in many stations leading to increase in outstanding.

The following steps will help in reducing the outstanding to a great extent:-

- a) Coordination with PCCM TIA and Outstanding CI on a regular basis will help in reducing outstanding.
- b) Simplification of the rules and regulations will help in reducing the number of disputed debits.

INSPECTIONS

Railways conduct their business through various stations situated in the farflung areas. The working of the stations is controlled by centrally located headquarters. Therefore, a team of inspectors from various departments are nominated to verify whether the stations staff is working according to the directives issued by the headquarters or not. These inspections provide a vital link in the working of the organization.

The basic function of Accounts department is to

- A) Account for all the earnings and expenditure in a systematic manner as per articles of the constitution.
- B) Advise the administration regarding financial matters.

The above objects are achieved by adopting the following measures:-

- i. Keeping the accounts of the Railway in accordance with prescribed rules;
- ii. The check with reference to rules or orders (Known as "Internal Check") all Transaction affecting the receipts and expenditure of Railway.
- iii. Prompt settlement of proper claims against the railway.
- iv. Tendering as a part to its important functions, advice to the administration whenever required or necessary in all matters involving railway finance;
- v. Compilation of budgets in consultation with other departments and monitoring the budgetary control procedures as may be laid down in the relevant orders and code rules from time to time;

- vi. Generally discharging other management accounting functions such as providing financial data from management reporting, assisting inventory management, participation in purchase/contracting decisions and surveys for major schemes in accordance with the relevant rules and orders; and
- vii. Seeing that there are no financial irregularities in the transactions of Railways.

As the actual activity of Railways is spread out through the length and breadth of the country and the number of stations which into thousands are the activity centres, the maintenance of accounts in the activity centres is a Herculean task.

The accounts are maintained and verified by:-

- a) Conducting internal check on returns and statements submitted by various activity centres
- b) Inspections of activity centres.

The following are the broad principles to be followed in the matter of check of traffic earnings:-

- j) that the person to whom the service is rendered pays the proper amount;
- iv) that the railway servants receiving payment correctly account for the same;
- v) that, if more than one railway renders the service, the receipt is properly distributed between them.

As a part of the above checking mechanism, a team of inspectors are deputed to verify:-

- a) Stores
- b) Stations.

Inspectors of station Accounts(TIAs) and Inspectors of stores(ISAs) represent FA&CAO on line and they conduct inspections a systematic check of the records of stations and stores.

The object of inspections is to see that :-

- a) To see that the records maintained at the station are submitted to FA&CAO/WST
- b) To see that the records at the station reflect the true and correct picture of working at stations.
- c) To see that the remittances are made agree to records maintained at the station.

Inspections are designed to encompass the following characteristics:-

- a) to include the element of surprise
- b) to conduct the inspection in such a manner that all aspects of the working of the station are verified

c) to ensure that the records are maintained as per the extant rules and regulations.

A searching check is conducted on the records of the station by TIAs and reports are submitted to FA&CAO/WST. Serious irregularities are brought to the notice of the Commercial authorities for necessary action. Station Inspections include inspection of :-

- 1) Booking offices
- 2) Goods offices
- 3) Reservation offices
- 4) City booking agencies
- 5) Parcel offices
- 6) Catering units
- 7) Platform stalls
- 8) Bookstalls
- 9) CTI offices
- 10) TC offices
- 11) Any unit as prescribed by administration

It can be seen from the above that inspections are an integral part of the day-to-day working of the administration.

FRAUDS

Frauds can be defined as an act committed intentionally resulting in financial loss to an organization. The most important word is the malafide intention of the staff committing the fraud.

Frauds are committed basically in two different methods:-

1. Within the books of accounts.
2. Outside the books of accounts.

The various methods of detecting frauds are:-

1. Internal check
2. Inspections
3. Linking the beginning of a transaction to the end of it.
4. Surprise inspections.

The most difficult type of frauds are those committed outside books of accounts. These can be detected only by conducting inspections at the various sites of operations. The persons

committing the frauds try to avoid bringing the transactions into books of accounts. To understand the method of working in Railways, it is necessary to understand the checking mechanism in place. A brief of the same is given below.

Railways operate through various stations spread over the length and breadth of the country. Therefore, there is all the more need for a systematic way of check which needs to be introduced. To fulfill this very important purpose, a team of inspectors (inspectors of station accounts) have been deputed to :-

- 1) verify the station records and certify that a copy of the same have been submitted to accounts office
- 2) see that all the transactions of the station are reflected in the books of accounts.
- 3) see that the revenue which is due to Railways has been correctly collected and accounted.

The checks in the traffic accounts office have been designed in such a manner that they encompass all the principles discussed above. The various stages in the checking mechanism are enunciated below:-

1. Self check
2. Supervisory check
3. Commercial inspections
4. Accounts inspections
5. Vigilance inspections
6. Audit inspections
7. Officers inspections
8. Internal Check by FA&CAO's office
9. Audit by Principal Director of Audit.

The instances of frauds which can be committed in different locations in a station are given below:-

S. N O	TYPE OF FRAUD	MODUS OPERANDI	DETECTION METHODS	PREVENTIVE STEPS
1	Undercasting of totals in returns. This fraud can be quoted in any of frauds pertaining	1. The totals in the returns prepared daily are undercast. 2. The reduced amount is remitted to the	1. This type of fraud takes place where the number of transactions are run into hundreds. 2. Surprise check by Supervisors will reveal this fraud.	1. Deterrent steps taken by administration in case of errant staff. 2. Regular Surprise inspection by officials. 3. Increase of awareness

	working of BO, RO, PO, GO.	<p>cashier.</p> <p>3. For example, if the page total of a parcel way bill local return is Rs.20000/-, it is deliberately undercast as Rs.15000/- and the same is remitted to the cashier.</p> <p>4. The reduced total is taken into the balance sheet also.</p>	3. Random check by inspectorial and Account office staff should reveal such a fraud.	<p>among staff.</p> <p>4. Separation of duties between issue of way bills and preparation of returns.</p>
2.	Privately printed tickets. This fraud can be quoted with reference to working of BO, RO, PO, GO.	Money value tickets and books are printed privately and are issued to rail users.	<p>1. Frequent train checks by checking officials.</p> <p>2. Pairing of collected tickets with the accounts foils in the accounts office.</p> <p>3. Check of collected tickets at stations by inspecting officials.</p>	<p>1. Strong action to be initiated against offenders</p> <p>2. Wide publicity given to punishment meted out to offenders.</p> <p>3. Increase in linking beginning of transaction to end of it.</p>
3.	Avoiding the recording of transactions in the books of original entry. Mainly, Wharfage and demurrage.	<p>1. Entry into Accrual register is deliberately avoided.</p> <p>2. The timing of accrual is deliberately altered in connivance with the operating officials.</p>	<p>1. On the spot surprise inspection will reveal such a fraud.</p> <p>2. Verification of records at the stations will reveal such fraud.</p> <p>3. Comparisons of normal time taken in the previous rakes loading and unloading.</p> <p>4. Any exceptional situation</p>	<p>1. Deterrent steps taken by administration in case of errant staff.</p> <p>2. Regular Surprise inspection by officials.</p> <p>3. Increase of awareness among staff.</p> <p>4. Separation of duties between issue of way bills and preparation of returns.</p>

		3. Entries are not in the other relevant registers.	<p>should be looked into great detail.</p> <p>5. Any alterations in records should be looked in great detail.</p> <p>6. Comparisons of the beginning and end of the transactions, i.e., the placement and release memos with delivery books.</p>	
4.	Irregular student concessions.	Concessions are issued by College or school authorities without observing the formalities.	<p>1. Regular train checks by inspectorial staff will reveal such a fraud.</p> <p>2. At the time of exchanging the concession, the issuing officials should verify whether all the information provided by the person exchanging the concession is complete in all respects or not.</p> <p>3. The signatures should tally with the one provided in the certificates.</p> <p>4. The signatures of the officials authorized to issue such a concessions should be crosschecked.</p> <p>5. TTEs on train should verify the ticket authority particulars on any ticket.</p>	<p>1.Regular communications with the officials issuing the concessions will help in reducing such frauds.</p> <p>2. Strong action to be initiated against offenders</p> <p>3. Wide publicity given to punishment meted out to offenders.</p> <p>4. Educating the importance of issuing proper concessions should be conveyed to the officials.</p> <p>5. Most of the concessions frauds are due to the lack of awareness on the part of issuing officials.</p>
5.	Fraud in SPTM by	A low value ticket is issued	Regular check by TTEs on trains will reveal mismatch	1.Strong action to be initiated against habitual

	<p>using saved stationery.</p>	<p>by printing the ticket on the printer roller.</p> <p>The saved ticket is further used to issued to issue a high value ticket.</p> <p>The subsequent ticket is then rolled over and the high value ticket is non-issued and the same is nullified in the system by quoting a number of reasons like ticket not printed etc.</p> <p>Ultimately the high value tickets are sold to passenger in reality, but the same are accounted in the system.</p>	<p>of tickets.</p> <p>The tickets when collected at the destination will reveal the same error.</p> <p>Pairing of the tickets with the Classification of tickets will reveal this fraud.</p> <p>The Alpha code at the top of the subsequent ticket will also reveal this fraud.</p>	<p>offenders.</p> <ol style="list-style-type: none"> 2. Wide publicity given to punishment meted out to offenders. 3. Educating the importance of issuing proper concessions should be conveyed to the officials. 4. Most of the frauds are due to the lack of awareness on the part of issuing officials. 5. The speedy implementation of UTS will result in reduction of such frauds. 6. The advent of computerization will result in real time detection of frauds. Thereby the loss incurred is also reduced to a great extent.
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Station Earnings and withdrawal from station earnings

Indian Railways have the biggest rail network in Asia. The operations of Railways are conducted through the length and breadth of the country. It earns its revenue by transporting of people and commodities. On this basis, Railways earnings are categorized into three major heads. They are :-

1. Coaching – denoted by Alphabet 'X'
2. Goods _ denoted by Alphabet 'Y'
3. Sundries _ denoted by Alphabet 'Z'

Coaching earnings includes all revenue received from operation of passenger trains. These are received from booking offices, Reservation offices and parcel offices.

The following are the earnings included in the under head coaching earnings:-

1. Ordinary full fares
2. Ordinary reduced fares
3. Military Passengers
4. Reservation charges and surcharge for sleeping accommodation provided in II class carriages
5. Special trains and reserved carriages other than Military
6. Special trains and reserved carriages Military other than Military passenger.
7. Luggage charges ordinary collected by station
8. Luggage charges ordinary collected by Ticket checking staff.
9. Public Parcels
10. Service Parcels for Non-Budget lines,
11. Rail and Road Motor Vehicles and Carriages
12. Live stock by Passenger trains
13. Special Postal trains
14. Hire and Haulage of Postal Vans and compartments.
15. Post Office bags and Parcels by Weight
16. Penalties levied for irregular traveling.
17. Demurrage on Luggage and Parcels and receipts on account of left luggage
18. Sundry
19. Refunds of Earnings collected.

Earnings received from transportation of goods is categorized as Goods earnings. The following revenue is included:-

1. Container traffic
2. Freight forwarding scheme and other schemes
3. Other General Merchandise
4. Demurrage.
5. Wharfage and Storage

6. Sundries.
7. Refunds of Earnings collected
8. Military traffic
9. Gross earnings from road transport.
10. Live – stock
11. Railway Material other than coal and coke

Revenue received from sources other than from sale of transport are categorized under the head sundries. The following items are included under the head sundries:-

1. Electric telegraph Earnings
2. Rents and Tolls
 - a) Residential buildings Retiring Rooms, Rest Houses,
 - b) Rest Homes and convalescent Homes etc.
 - c) Other Building or Rooms
 - d) Land
 - e) Tolls on bridges
3. Receipts from Catering Department
4. Overhead charges and profits recovered on work done for outside parties and on sales of stores
5. Sale proceeds of:-
 - a) Unclaimed and damaged goods
 - b) Gross and trees on the line
- c) Unserviceable Revenue scrap i.e. not creditable to DRF , DF or OLWR or suspense.
6. Miscellaneous
 - a) Advertisement fees
 - b) Interest and maintenance charges on account off siding, saloons, level crossing, etc. from private bodies and other government Departments / Ministries
 - c) dividends etc. from investments in road transport service
 - d) Diet charges recovered from patients in Railway hospitals
 - e) Other unclassified receipts.
 - f) Guarantee fees received from Public Sector Undertakings.
 - g) Dividends etc. from Public Sector undertakings
 - h) Leasing of right of way from Optical Fibre Cables

Stations remit every rupee collected through cash remittance notes everyday. This is directly credited to General Revenues of Govt. of India. This amount is appropriated to various heads of expenditure as approved by parliament by passing of General Budget and Railway Budget by vote. Except under circumstances specifically mentioned in IREM. Para 2425 station earnings cannot be withdrawn for any other purpose. As can be understood, these are exceptional situations. They can be broadly classified as under:-

1. Natural calamities/Accidents
2. Staff benefits
3. Judicial requirements
4. Refunds
5. Miscellaneous.

**Previous Question papers for written test for selection to Group 'B' posts of
AOM/ATM against 30% quota**

(08.08.2010)

(3 hours)

Paper I Professional subject, General Knowledge & Official Language

Part – I Professional Marks -125 (Answer any five questions each question carries 25 marks)

1. What are the duties and role of section Controllers in improving punctuality of coaching trains and speed of freight trains (25marks)
2. What are the important steps taken by Indian Railways to improve loading and wagon utilization (25 marks)
3. What are the important factors to improve "Engine utilization" What steps should be taken to improve 'Train ordering' and Running staff duty hours' (25 marks)
4. What is the Primary function of control office? Describe the traffic control organisation (20 marks)
5. What are the Duties of Control Office in a train accident involving passenger injuries (25 marks)
6. Write short notes on any five
 - I. Wagon turn round
 - II. Originating loading
 - III. FOIS
 - IV. Operating ratio
 - V. Close circuit rakes
 - VI. Engine Kms Per Engine Day in use (25 marks)

Part II General knowledge 10 Marks

What do the following abbreviations stand for answer any 10

- | | | | | |
|---------|------------|----------|------------|---------|
| i) RDSO | ii) ISD | iii) WTO | iv) JCM | v) EMU |
| vi) GMT | vi) IST | vii) OHE | viii) ARME | ix) ART |
| x) RCT | xi) UNICEF | | | |

Part III Official Language Marks 15 Marks (Answer any one question)

- i. What are the measures to improve use of Hindi on South Central Railway
or
Suggest measures to reduce wagon detention at major unloading goods shed

Paper II Professional subject & Establishment and Financial Rules**Part – I Professional Marks -100 (Answer any five questions each question carries 20 marks)**

1. Describe the Safety items to be checked by TI at a station during regular inspection (20marks)
2. In a serious train accident of passenger train, what are the duties of
 - (i) Station Masters of Adjoining stations
 - (ii) Guard of the train (20 marks)
3. What are the major factors affecting punctuality on South Central Railway? Suggest measures to improve punctuality (20 marks)
4. What are the various works to improve line capacity on non electrified double line section (20 marks)
5. What are the important features of working time table for loco pilots and guards (20 marks)
6. How will control office applications and new coaching management system ICMS improve passenger information and punctuality? (20 marks)

Part II Establishment 25 Marks (Answer any one question)

1. What are major and minor penalties? Indicate the procedure for imposing major penalty
2. Write short notes on any five
 - a. PNM
 - b. PME- Periodical Medical Examination
 - c. Medical decategorisation
 - d. Continuous Roster
 - e. HOER – Hours of employment regulation
 - f. Pass Rules

Part III Financial 25 Marks (Answer any one question)

7. Describe the features of preparing the balance sheet of a station? What are admitted Debits?
8. What is station Outstandings? Suggest measures to stop leakage of railway revenue.

Date: (08.08.2012)

Time : (3 hours)

Paper I Professional subject, General Knowledge & Official Language

Part I

All questions carry equal marks

Q1. Write true or False (2 marks each)

- i. SC division runs 111 MMTS services daily.
- ii. Except an inspection carriage, no other coach can be attached in a 24 coach train.
- iii. BPC for a passenger train is valid for 3500 kms or 96 hours whichever is earlier.
- iv. A train booked on FTR should have minimum 15 coaches.
- v. NRUCC is a consultative body in the zonal level.
- vi. For stoppage of an express train at a station a minimum of 30 tickets for a distance of 500 kms and above per train should be sold at that station.
- vii. CCRS works under the Ministry of Civil Aviation.
- viii. EX gratia payment for a grievously injured passenger is Rs 1500.
- ix. SPAD is an Indicative Accident.
- x. Now a days new time table is implemented from 1st July of every year.

Q2. What do the following abbreviations stand for : (2 marks each)

- (i) OCV (ii) PSR (iii) SCC (iv) PTT (v) IRFC (vi) CTPM
(vii) NTES (viii) COA (ix) VHF (x) JPO

Q3. What are the factors affecting punctuality of Mail/Express trains and the methods to improve the punctuality ? (20)

Q4. a. What are the measures taken in SC Rly in the last few years to improve the line capacity? (5)

b. What are the saturated sections on SC Rly? What are your suggestions to increase the line capacity of these sections? (15)

Q5. a. What is the process for booking a train on FTR ? (15)

b. What precautions are to be taken while preparing engine links and guards/drivers link ? (5)

PART II

Q6. Write short notes : (Max 75 words each) (any four) (5 marks each)

- i. PREM**
- ii. The process of departmental promotion of guards.**
- iii. Commutation of leave.**
- iv. Compassionate Appointments.**
- v. Process for acquisition of Immovable property by a railway servant.**
- vi. Final Settlement.**

PART III

Q7. Write notes on : (Max 75 words each) (any four) (5 marks each)

- i. Cannons of financial propriety.**
- ii. Implications of DF, DRF and CAP in Works Programme.**
- iii. Audit and Draft Paras.**
- iv. Schedule of Powers.**
- v. Balance sheet of a station.**
- vi. E payment and its benefits.**

(10.11.2012)

(3 hours)

Paper II Professional subject & Establishment and Financial Rules

PART I

Attempt any five questions. All questions carry equal marks.

Q1. Write full forms of the following. (2 marks)

- | | | | | |
|---------|---------|---------|---------|-----------|
| a. MEMU | b. PTS | c. SSI | d. RDSO | e. CONCOR |
| f. PDD | g. CRIS | h. KRCL | i. RRT | j. EIMWB |

Q2. Fill in the blanks. (2 marks each)

- i. SC Rly loadedmt of originating traffic last year.
- ii. An AC chair car coach is called
- iii. A BOXN CC rake can run uptoKms ordays
- iv. The target of electric engine utilization for SC Rly this year is
- v. Gooty diesel shed largely holds Locos.
- vi. WAG 9 loco has horse power.
- vii. Regulation of loading due to congestion in a terminal is governed by system.
- viii. An unweighed rake has to run at a speed of Kmph.
- ix. Percent of cement rakes are required to be weighed per month.
- x. The maximum permissible speed of Duranto Express on DHNE-KCG section is kmph.

Q3.

- a) What is six monthly review of requirement of goods guards? How is it done? (15 marks)
- b) How is the availability of goods guards monitored on daily basis? (5 marks)

Q 4. What are the contents of the daily operating performance report prepared in a divisional control. ? (20)

Q5. Write short notes : (Max 75 words each) (any four) (5 marks each)

- a) Commodity wise loading pattern on SC Rly.
- b) Factors affecting speed of goods trains.
- c) Various types of engg blocks and their significance.
- d) Methods to improve the 10 hr performance of crew in a division.
- e) Preference Traffic Schedule and its importance.

Q6. Write notes on : (Max 75 words each) (any four) (5 marks each)

- a) Action to be taken by ASM when running trains on Temporary Single Line.
- b) Data loggers and its importance.
- c) SPAD and action to be taken by Dy SS on duty in such situation.
- d) Causes of stalling of goods trains and action to be taken to prevent them.
- e) NI working at a station and its planning.

PART – 2

Q7. How does the Rajbhasha organization oversee the implementation of Official Languages Act in a division? (15 marks)

OR

What are the advantages of containers and how it can be further leveraged to increase Railway's transport share. (15 marks)

PART- 3

Q8. In the context of Indian economy, explain the following: (Max 75 words each) (5 marks each)

- a. Core sector.
- b. Sensex.
- c. Inflation.
- d. Fiscal Deficit.
- e. Balance of payment.

Q9. What are the various PSUs of Indian Railways? Describe their function in brief of any three. (10 marks)