



SOUTHERN RAILWAY

General Manager's Office,
Personnel Department,
Chennai - 600 003.

No. P(G)532//AEN/ 30% LDCE/CCBT 20025-2026

Date: 29.08.2025.

DGM Co-Ord & Secretary to GM for the kind information of GM

PPS to AGM for kind information of AGM

PCE CAO/CN/MS CAO/CN/ERS CAO/CN/RSP

CEE/Proj/MS CPM/MTP/MS SDGM PCSO

DRMs/MAS PGT TVC TPJ MDU SA

Sr.DPO/DPO MAS TVC TPJ PGT MDU SA

Dy.CE/EWS/AJJ Dy.CE/TMC/RPM

Sr.DEN/Co-ord/MAS TVC TPJ PGT MDU SA Dy.CE/CN/PTJ

Dy.CPLO/HQ/MAS DD/PG/MAS Vice Principal/SRCETC/TBM

The General Manager/RITES/MAS-600 006

Managing Director/RITES, 27 Barakamba Road, New Delhi

Managing Director/RITES, Southern Region, Mount Chambers, IV Floor, 758 Anna Salai,
Chennai 600 002.

Managing Director/IRCON, Palika Bhavan, No.13 R.K.Puram, New Delhi 110 110

Joint General Manager (P&A), RVNL, I Floor, August Kranti Bhawan, Bhikaji Cama Place,
R. K. Puram, New Delhi - 110 066.

Sub: 30% LDCE for the Group "B" post of AEN- Engineering Department in
Pay Matrix Level - 8 - through CCBT - Reg.

Ref: 1) Railway Board's letter No.E(GP)2022/2/4 dated 28.06.2022 &
06.09.2022 (PBC No.162/2022) and other related circulars
circulated as PBC No. 213/2022, 236/2022 and 241/2022.

2) Railway Board's letter No.E(GP)2024/2/28 dated 27.09.2024 &
08.10.2024 (RBE 93/2024).

1. As advised by Railway Board vide references cited above, it has been decided to conduct 30% LDCE and applications are hereby invited for promotion from Group "C" service to Group "B" service in Engineering Department for the post of AEN through Limited Departmental Competitive Examination against 30% of the vacancies for the vacancy cycle 01.01.2025 to 31.12.2026 including anticipated vacancies up to 30.06.2027 as per the schedule indicated below.

To apply online	Date and time of Opening	29.08.2025 - 17:00 hrs
	Date and time of Closing	18.09.2025 - 23:59 hrs
Last day for forwarding the online applications received by Personnel Officers concerned to Headquarters		25.09.2025 - 17:00 hrs

2. i) The number of vacancies to be filled up are as under:

UR	SC	ST	Total	PwBD
22	03	02	27*	01-Clause (c)

*The total vacancies include 01 (one) vacancy earmarked for PwBD which is a horizontal reservation.

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- ii) The PwBD vacancy is earmarked for Clause (c) as per DoP&Ts office Memorandum dated 17.05.2022 with functional classification as LD in terms of Railway Board's letter dated 14.11.2022 (PBC 242/2022) and any other related instructions, as detailed below.

Clause	Functional Classification	Physical Requirement
c	Loco motor disability (LD)- One Arm (OA)/One Leg(OL), Leprosy Cured, Acid Attack Victims	S,ST,BN,W,SE,MF,C,RW,KC,CL, JU,H.

3. Eligibility Criteria:

Non ministerial Group 'C' staff of the Civil Engineering Department holding the post in level – 6 (Rs.35,400-1,12,400) and above in the pay matrix with Five years of regular service in level – 6 (Rs.35,400-1,12,400) and above in the pay matrix (including regular service rendered in the corresponding pre-revised grades) on non-fortuitous basis as on 01.01.2025 are eligible to apply for the selection to the post of Assistant Engineer (AEN).

Note:

- Staff whose lien and seniority is maintained in the relevant cadres of Southern Railway are only eligible to apply.
- Eligible staff working in the Construction/Project Organization on deputation, training & any Ex-Cadre Organization and having lien & seniority in the relevant cadres of Southern Railway, who desire to volunteer for the above LDCE may submit their online application through proper channel i.e. through their respective Personnel Department Officer, where they hold lien.
- Employees working in Level-6 on adhoc basis are not eligible to apply. Employees who have been granted financial upgradation in Level – 6 under MACPs are also not eligible to apply.
- For assessing the period of regular service, the following may be kept in view.
 - As per RBE 55/1997 dated 17.04.1997, regarding counting of service rendered in the old unit on “own request transfer”, the service rendered in the absorbing unit alone will count for eligibility wherever a minimum length of service is specified as a condition for consideration for promotion including promotion to general selection posts.
 - The above instructions were partially modified vide RBE 34/2006 dated 21.03.2006. In terms of RBE 34/2006, on counting of service rendered in the old unit on “own request transfer” for the purpose of qualifying service for promotion in new unit, the service rendered by them in the old unit may be reckoned for determining their eligibility wherever a minimum length of service is prescribed as a condition for promotion including promotion to general post in the new unit subject to the conditions that the service so allowed to be counted does not exceed the length of service of the immediate senior in the new unit



and the benefit of counting of service will be applicable only if those cases where the staff join the new unit on request transfer in the same category of posts.

- c) In terms of RBE 40/2008 dated 13.03.2008, those instructions were made applicable for reckoning the minimum qualifying service of Group "C" employees, in case of own request transfer to a new unit in the same category of posts, for determining their eligibility for promotion to Group "B" posts also.
- d) Regarding counting of service rendered in the old unit before mutual transfer of the employee for the purpose of determining eligibility for promotion to Group "B" post, Board has clarified that instructions contained in Para 310 of IREM Vol.I governing the seniority of Railway servant transferred on mutual transfer will prevail.
- e) As advised in RBE No.102/2019 dated 25.06.2019 the time spent by a Railway servant under training immediately before appointment to service is to be counted as service for the purpose of appearing in Departmental Examination including LDCE for promotion to Group "B".
- f) The Volunteers who have completed 5 years of regular service in the current seniority unit of the cadre as on 01.01.2025 are only eligible to apply. The same may be verified and ensured, by the Personnel Officer concerned while forwarding the applications.
- g) The instructions contained in RBE No. 40/2023 regarding Medically De-categorised are not applicable while determining eligibility for promotions from Group "C" to Group "B" posts, as clarified by Railway Board and circulated vide PBC No. 108/2024 & 235/2024. Accordingly, employee should have rendered the requisite eligibility service in the relevant grade(s) after absorption in the alternate post for being eligible to apply for the post of AEN.
- v) Eligible volunteers should apply online in the link <https://southernrailway.gov.in/srhqpb/home/> and submit their application.
- vi) As vacancies are earmarked for "SC, ST", Pre Selection Training (PST) for employees belonging to SC & ST community will be organized before CCBT. The Reserved community (SC,ST) employees who are willing to appear for CCBT without undergoing PST may do so by exercising their option in the online application form. Employees belonging to Reserved Community (SC,ST) who have expressed their willingness to attend PST and if they fail to attend the PST on the specified dates, will have to appear for CCBT without such PST being imparted.

4. How to apply:-

- i) Detailed instructions for filling up the online application is available in the web portal and also enclosed herewith as Annexure "B".
- ii) Volunteers should apply for the post **ONLINE** by visiting the official website <https://southernrailway.gov.in/srhqpb/home/>

- iii) Volunteers are advised to carefully read the entire instructions and information available on the official websites of sr.railnet.gov.in, sr.indianrailways.gov.in, <https://southernrailway.gov.in/srhqpb/home/> and rrbajmer.gov.in before filling up the application online.
- iv) The applications received will be treated as "Invalid/Ineligible" on the following grounds:
 - (a) Unsigned application.
 - (b) Application without affixing latest photograph.
 - (c) Application without verification and certification by Supervisory/Controlling official.
- v) Applicant must note that, if any information furnished by him/her is false or misleading, the application/candidature is liable for rejection and action will be initiated under the Railway Servant (D&A) Rules 1968.

5. Instructions to the forwarding Cadre Controlling Officials:-

- i) The respective cadre dealer/Controlling Personnel Officer of Division/Unit concerned has to verify the correctness of the particulars of the application with the Service Register, Seniority Lists and other available relevant records. The application of the employees who have been **transferred on or after 01.01.2020 on IRMT/IDMT or IRT/IDT** may be thoroughly scrutinized regarding their eligibility duly verifying the seniority assigned in the newly joined unit. The details regarding the date of seniority assigned in the new unit, seniority assigned to the immediate senior in the new unit etc., may also be indicated while forwarding the application, if found eligible. After due verification, only applications of the employees who have completed 5 years in the present seniority unit as on 01.01.2025 should only be forwarded online.
- ii) In addition, an excel file containing all the relevant details of all applications should also be downloaded. The downloaded excel data file should also be verified and corrections, if any, has to be carried out duly indicating the same in the remarks column. The same has to be uploaded in the website and also forwarded in e-office to the undersigned as e-receipt **on or before 17:00 hrs of 25.09.2025**.
- iii) **It may be strictly ensured that only the applications found eligible are to be forwarded to Headquarters.**
- iv) **The relevant data in Excel sheet received without such certification will be summarily rejected and the responsibility will be fixed for such Incorrect or incomplete certification.**
- v) The Genuineness of the community certificate of the reserved community employees may be verified and certified by the cadre controlling Personnel Officer duly enclosing the attested copies of the **community certificate** failing which the candidature will be summarily rejected.


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- vi) The details of court cases, if any, against the seniority or substantive status of the employees who have submitted their application for the above selection may be advised separately to this Office by the controlling Office drawing the attention of APO/Gaz/CBT/HQ/MAS on or before 25.09.2025 through e-office.
- vii) If volunteers are undergoing penalty of reduction to lower grade etc., or under suspension or any departmental proceedings have been initiated for major penalty or any RPUP cases are pending, the particulars of such employees should also be advised with details to Dy.CPO/Gaz/HQ in a sealed cover.
- viii) It is observed from the applications received from volunteers in the past that the date of entry into Grade Rs.5000-8000 in V PC/ Rs.9300-34800+GP Rs.4200 in VI PC/ Level-6 in VII PC and above on regular basis has not been indicated in several cases due to which it becomes difficult to decide their eligibility or otherwise at this end. This aspect may specifically be scrutinized and specified before forwarding the application to this office by the forwarding Officer of the unit concerned.
- ix) When an employee is holding an ex-cadre post, details of his post in regular cadre with the grade and date of entry as a regular measure should be furnished. This may also be brought to the notice of all concerned.
- x) It is the responsibility of the Personnel Officer of Division/Unit concerned to certify the correctness of the eligibility of candidates for appearing for the examination as per the Service Register, Seniority List and other relevant documents maintained by them and as per the conditions laid down in the Notification.

6. Method of Selection:

- i) CCBT – In terms of Railway Board's letter No.E(GP)2022/2/4 dated 28.06.2022 (PBC 162/2022), Board had introduced Centralized Computer Based Objective Type Examination.
- ii) The selection will be on the basis of written exam (Objective Type), Viva-Voce and assessment of record of service.
- iii) The examination for LDCE will be one stage only and will comprise of only 1 paper with the following set up:

Single paper of 150 marks comprising 100% Objective type Multiple Choice Questions with following distribution of marks:

Topic	Questions	Marks
Technical (Professional) subject	85 Questions (Including 5 optional questions)	80 Marks
General Knowledge & Official Language Policy & Rules	55 Questions (Includes 15 optional questions on official language policy & Rules)	40 marks
Establishment & Financial Rules	35 Questions (Includes 5 optional questions)	30 marks
Qualifying marks		90 marks

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- iv) Duration of the CCBT examination will be 3 hours.
- v) Question Paper will have 175 Questions. Out of which, 150 Questions are to be attempted.
- vi) One mark will be allotted for every correct answer. There shall be negative marking for incorrect answers and 1/3rd of marks allotted for each question will be deducted for every wrong answer.
- vii) Record of Service and Viva-Voce:

Description	Max Marks	Qualifying Marks
1. Viva Voce	25	30 (including at least 15 marks in the record of service)
2. Record of Service	25	

viii) **Medical Examination:** Those who qualify in the written examination will be subjected to Medical Examination as per Para 530(a) of IRMM. Those qualified in the written examination and declared medically FIT for Group "B" service will only be called for Viva-Voce as per Railway Board's letter No.E(GP)80/2/8 dated 31/10/1991.

ix) **There will be no supplementary Examination.**

7. **Syllabus – Enclosed as "Annexure A".**

8. **General Instructions:**

- i) All the eligible volunteers should be in readiness to appear for the CCBT at short notice as per the schedule advised by RRB/Ajmer.
- ii) The volunteers who have responded to this Notification are also equally responsible to attend the CCBT on the scheduled date and time. They shall be in touch with their Headquarters office at frequent intervals for any updates. For inquiries, they may contact the following Railway Phone numbers.

APO/Gaz/CBT : 23215
Ch.OS/Gaz : 22710

iii) Since, this LDCE is being conducted by CCBT by RRB/Ajmer, the candidates who are applying in response to the Notification are required to check the following websites for latest updates:

- (a) SR Railnet – sr.railnet.gov.in
(b) SR Internet – sr.indianrailways.gov.in
(c) SR HQ PB – <https://southernrailway.gov.in/srhqpb/home/>
(d) RRB/Ajmer – rrbajmer.gov.in

In addition to the above, candidates are instructed to check their email provided in the application for any updates.

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- iv) For any assistance with regard to the above – the under mentioned Helpline Number may be contacted during office hours:

Name	Designation	Helpline Number
Shri C.Thirumalar	CSWI	9003160640

9. The tentative selection calendar:

Particulars	Date
To apply online – Date and time of Opening	29.08.2025 – 17.00 hrs
To apply online – Date and time of Closing	18.09.2025 – 23.59 hrs
Last date for receipt of online applications at Headquarters from respective unit	25.09.2025 – 17.00 hrs.
Publication of eligibility list	24.10.2025
Pre Selection Training commence From	29.10.2025
Date of CCBT	Will be intimated in due course.

10. Important instruction to the Controlling Officer/ Personnel Officer:

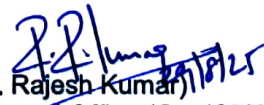
The Original updated SRs and APARs for the last five years (along with the acknowledgement of the employee for having received the copies of APAR for each year) may be kept ready by concerned Controlling Officer for immediate transmission to this office whenever called for.

11. This LDCE is subject to the provision contained in IREC, IREM & any other instructions issued by Railway Board from time to time.

12. **Wide Publicity of this notification should be given to all staff including those who are on Deputation, Ex-cadre, training, leave/sick etc., so as to enable them to submit their application through proper channel in time and staff may contact their Headquarter Office at frequent intervals.**

The last date for applying through online by employees is 18.09.2025 – 23:59 hrs.

Encl.: Annexure "A" & "B"


(R. Rajesh Kumar)
Assistant Personnel Officer/Gaz/CBT
For General Manager

Copy to: PCPO, CPO/A, CPO/G, CPO/IR – for kind information please.

Dy.CPO/Trg., Dy.CE & Secy. to PCE, APO/IR&Trg.

Ch.OS/Engg (NGS)

GS/SRMU, DREU, NFIR, AISC & STREA, AIOBCREA, SROA, SRPOA

INSTRUCTIONS FOR ONLINE APPLICATION

Link for applying online - <https://southernrailway.gov.in/srhqpb/home/>

Instructions to Candidates: -

- i) The willing employees will have to click on the link. The link will lead to the application format in which the candidate needs to fill up the required particulars.
- ii) The application format has to be filled up carefully and after the employee is satisfied that all the particulars have been correctly filled up, he/she should register. Once registered, the employee will not be able to make any change in the application.
- iii) After registration, a unique application number will be allotted to the employee and the employee should download and take a print of the filled in application from the portal in PDF format.
- iv) In the print out, latest photograph of the employee should be affixed in the space provided and his/her signature should be affixed in the space provided.
- v) In the above application, the photograph should be attested by the controlling supervisor / official and the application should be forwarded by the controlling supervisor/official affixing signature duly mentioning the name, designation along with the seal of the forwarding supervisor / official.
- vi) The application completed in all respect duly forwarded by the Controlling supervisor / official, community certificate (for SC, ST) & any other relevant documents, should be scanned as a single PDF and uploaded in the portal after obtaining Competent Authority's approval.
- vii) Employee can thereafter login either by using "IPAS number & date of birth" or "Application number & date of birth" for uploading above scanned copies by using the "Upload the application" option in the portal.
- viii) Employee can also download acknowledgement for the submission of his/her application. The employee may use the unique application number to check the status of his application/ instructions later on.
- ix) For any assistance required with regard to the above Shri C.Thirumalar, CSWI may be contacted in the mobile number 9003160640 during office hours

Instructions to Personnel Department Officer:-

- (i) The access to the online application at the stage of scrutiny and further forwarding will be restricted to the officials granted user rights at the level of Dealer(s), Personnel Officer/ Divisional Officer etc.
- (ii) The user rights and passwords already provided may be utilized.
- (iii) The respective cadre dealer / controlling Personnel Officer should verify the correctness of the particulars of each application with the Service Register and other available relevant records. After due verification, each online application has to be certified and forwarded online with remarks, if any. In addition an excel file containing all the relevant details of all application should also be downloaded. The downloaded excel data file also has to be verified and corrections, if any, has to be carried out duly indicating the same in the remarks column without fail. The same has to be uploaded in the website along with the covering letter, the same should be forwarded in e-office to the undersigned as e-receipt on or before 17.00 hrs of 25.09.2025.
- (iv) The Personnel Officer concerned should reject the ineligible application duly specifying the reason for rejections.
- (v) Divisions and units may set up suitable helpline and give wide publicity to the same along with details including mobile number of the person who can be contacted for any assistance.



SYLLABUS FOR 30% LDCE FOR PROMOTION TO GR.B POST OF AEN IN CIVIL ENGINEERING DEPARTMENT

(A) Civil Engineering (General)

1. Surveying

a. Types

i. Surveying basics

Basic principles; base lines; check lines: perpendicular and oblique offsets; conventional signs; plotting of survey; true and magnetic bearings; open and closed traverses; recording plotting of traverse, closing errors.

ii. Surveying equipment

Auto level, Total station, DGPS, LIDAR.

iii. Leveling –

Level Lines - datum, bench marks, simple leveling, fly leveling; recording the levels in field book; method of reducing levels; arithmetical check; longitudinal and cross section contouring.

iv. Theodolite Survey –

Types of theodolites; measurement of horizontal angles, vertical angles, magnetic bearings and deflection angles; prolonging a straight line; traversing by method of included angles; balancing the survey - closing errors; calculations of latitude and departure.

b. Curves-

Elements of simple circular curves, setting out simple circular curves.

c. Set out works -

Setting out buildings, culverts, Central line of Railway alignment. Usage of GPS technology in setting out Centre line of Railway alignments.

2. Strength of Materials, Structural Designs & Drawings

a) Strength of Materials:

Stress, strain, Hooke's law, working stress, factor of safety; bending moment and shear force in simply supported beams and cantilevers; simple theory of bending. Moving loads on simply supported beams; influence lines for bending moment and shear force in statically determinate beams; short columns, long columns - empirical formulae.

b) Structural Design & Drawing Drawings

Different sizes of paper, folding and storage of drawing, plan, elevation, sections, isometric view.


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c) RCC Structures

RCC, methods of design, Working Stress Method and Limit State Method. Design of singly and doubly reinforced rectangular beams including T and L beams. Design of slabs, design of column, IRS Code of Practice for RCC (Concrete Bridge Code).

d) Steel Structures

Rivets and welds. Sketch and detailing of connections different types of joints and strength determination. Design of tension member and compression member. Plate Girders, IRS Steel Bridge Code.

3. Construction material:

Description, specification, properties and uses of building materials - stones, sand, timber, bricks, cement, lime, building hardware, paints varnishes, glasses, and tiles. Concrete mix design, placing, compaction and durability.

4. Foundation & Construction Engineering

a) Soil Mechanics

Different type of Soils, Three phase diagram and their relationships, IS classification of soil, index and engineering properties of soil, compaction, consolidation, shear strength, earth pressure theories, slope stability. Specification and construction of earthwork in embankment and cuttings.

b) Foundation Engineering

Functions of foundation, different type of foundations - open foundations; well foundations and pile foundations, determination of safe bearing capacity, stress and settlement analysis, method of reducing differential settlements.

5. Hydrology and Hydraulics:

a) Hydraulics

Elements of hydraulics - Open Channel flow; flow in pipes, frictional loss, empirical formulae.

b) Hydrology

Rainfall and run-off; rainfall statistics; rain gauges, run-off calculations by empirical methods, flood discharge estimation; measurement of flood discharge-current meter.

c) Hydraulic structures

Design of bridges - alignment, number of spans; economic spans; waterway calculations; scour depth, afflux; clearance; depth of foundations; BOX and Pipe Culverts, estimation of design discharge based on para 4.3.4 of sub structure code namely using RDSO report RBF-16 for catchment size less than 25 sqkm and using flood estimation report (Synthetic unit hydrograph concept) for catchment size .25 sqkm, to 2500 sqkm.

B) Civil Engineering (Railways)

1. Railway Surveys & Construction



Provisions in Engineering Code regarding - Classification of Surveys, Terms of Reference, Principles governing Railway alignment, Ruling gradients, Grade compensation for curves, Horizontal and vertical curves, Hill Surveys, Catch sidings, Tunnels, preparation of various maps and drawings, preparation of Survey reports for RECT, PECT and FLS, Project estimates.

2. Railway Track.

(a) Track Structure and Components.

Classification of Lines, Track Structure, Rail and Rail fastenings, Sleepers & Fastenings, Ballast- Specifications, Ballast Profile/Section/Depth of Cushion, Formation- Classification of Formation Requiring Treatment and Remedial Measures Suggested, Insulated joints & Switch expansion joints, Track structure on Bridges.

(b) Duties.

Duties of ADEN, Duties of SSE/P.Way (In-charge), Duties of JE/ SSE/ P.Way (sectional), Duties of JE/ SSE/ P.Way (Other than sectional), Duties of Gang mates, Keymen, Patrolmen, Gateman and Track maintainer.

(c) Maintenance of Permanent way.

Regular track maintenance, Handling and maintenance of rails, sleepers, fastenings & other misc. Items, Works incidental to regular track maintenance, Record keeping, Maintenance of track in track circuited areas, Maintenance of track in electrified areas

(d) Special Maintenance Works.

Alumino Thermit welding of rails, Flash-Butt welding of rails, Short welded Rails, Long welded Rails. USFD.

(e) Curves and Turnout.

Curves, Realignment of curves, Points and Crossing.

(f) Track tolerances and Track Monitoring.

(g) Schedule of dimensions.

Schedule-I Standard dimensions, Station Yards and extra clearance on curve.

(h) CRS sanction for works affecting passenger running lines.

(i) Training and Competency of Permanent Way Staff.

(j) Permanent Way renewals.

(k) Engineering Restrictions and Indicators.

(l) Level Crossings and Gateman.

(m) Working of Trolleys, Lorries and Material trains etc.

(n) Track Management System.



(o) General:

Reference to G & SR; types of signals and their significance; rules for working of trains; block working rules - types, Introduction of temporary single line working.

(p) Accidents:

Action during accidents including breaches, Restoration of through running, Pre-monsoon precautionary measures.

3. Maintenance of Bridges

a) Maintenance of bridges: Responsibility of the Engineering officials, action to be taken after inspection of bridges; maintenance of substructure - abutments, piers, wing walls and return walls, maintenance of arches, dismantling of arches. Details of common repair techniques - cement pressure grouting, epoxy grouting, shotcreting/Guniting. Maintenance of RCC & PSC super structures - periodical maintenance, common defects and repair / strengthening techniques; maintenance of super structure (steel) girders - loss of camber in steel girders, cracks in steel works, strengthening of weak girders, replacement of loose rivets; maintenance of HSFG bolts, corrosion and its prevention, protective coatings by painting - periodicity and precautions, patch painting, ordinary paints - for severe and no severe corrosion, metallising & epoxy based paints, Maintenance of welded girders; maintenance of composite girders. Various defects in bed blocks and their remedies; maintenance of bearings; Precautions while carrying out maintenance works on bridges.

b) Inspection of bridges: Classification of bridges - major, minor, important; Inspection of Bridges by Permanent Way and Works Inspectors, by Bridge Inspectors (SSE/JE- P. Way, Works, Bridges) – Periodicity/ schedule and details of inspection, record of bridge inspection, registers to be maintained by the Bridge Inspectors, Certificate of inspection. Inspection by Assistant Divisional Engineers - Bridge Inspection Register, Numerical Rating System (NRS), Unique Rating Number, Condition Rating Number, Overall Rating Number, Certificate by the Assistant Engineer. Details of Inspection of Bridge –foundations, Flooring, masonry in substructure, under-water substructure inspection, arch bridges, protection works and water ways, girder alignment and seating, structural condition of girders, track on the bridge and its approaches, trolley and safety refuges, foot paths, painting, marking HFL and danger level, providing foundation particulars and bridge name boards, flood records at important bridges, road over/under bridges, concrete bridges, special Inspection during Monsoon, equipment required for inspection of bridges. painting of steelworks, laying of bridge sleepers; replacing cracked bed blocks.

4. Rehabilitation of Bridges

Reasons for Rehabilitation, special Strengthening, Imposition of speed restriction, Priority for rehabilitation of bridges, Special Inspection, Site Data, Execution of rehabilitation works, Precautions when working on bridges; rebuilding or alterations to bridges - design and execution of bridge works; temporary arrangements; false work for erection of girders; assembly and erection of girders; cranes for erection of girders; testing of girders; proposal for strengthening existing girder spans: methods

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of regirdering major bridges, Strengthening of foundations, Strengthening/rebuilding of substructure, shaken/displaced/ cracked bed blocks, distressed arch bridges, replacement of nonstandard girders, replacement of pipe culverts, distress in parapets, replacement of small opening, distress in superstructure.

5. Rivers & Floods

Behavior of rivers; past history of bridges, danger level at bridges, watchman at important bridges, duties and equipment of bridge watchmen; special inspection during monsoon, action to be taken in the case of weather warning, pitching stone, boulder and monsoon reserve; vigilance during floods; flood records during and after the monsoon; survey of the course of river. Rivers and flood register, Flood Reports, rainfall data, provision of anemometer on bridges. River training works, Guide Bunds, Spurs (Groynes), Marginal Bunds, Closure Bunds, Assisted Cut-Offs, Boulder crates, Protection of approach banks, drop wall & curtain wall i.e. protection measures for minor bridges.

6. Inspection and Maintenance of Tunnels and Deep Cuttings:

a) Tunnels - Inspection by Engineering officials, items to be covered in the inspection, record of inspection, mobile staging for inspection, details of tunnel inspection, ventilation of tunnels, leakage in tunnels and methods of correction, works connected with the maintenance of tunnels.

b) Deep Cuttings - General, inspection register of vulnerable cuttings, points to be noted during inspection of cuttings, action to be taken in the case of boulder drops, action to be taken after inspection of cutting, guarding of vulnerable cuttings.

7. Inspection and Maintenance of Building and Structures (Other than Bridges)

a) Inspection & Maintenance of buildings & structures (including steel structures).

b) Building Registers

c) Periodical maintenance of Works including repairs to leaky roof/water proofing of roofs.

d) Standard Measurement Registers for Buildings.

e) Dismantling of buildings/structures.

f) Retro-fitting / structural repairs of existing weak buildings/structures.

8. Maintenance of sanitary and hygienic conditions in station and railway Colonies; water supply, drainage and sewerage

a) Water Supply

I. Standards of Quality of drinking water- physical; chemical and bacteriological standards of water, Water-borne diseases, water demand-methods of forecasting, sources of water; Method of treatment of water – aeration; sedimentation; filtration (slow and rapid sand filters); disinfection; hardness methods of removal etc.

II. Conveyance and Distribution:-



Preparation of Schemes for New Water Supply/ Augmentation of Existing Water Supply; Estimating Requirements of Water, water supply from outside sources, Types; Selection & Installation of Pumps; Capacity of Pumping, Conveyance of Water Rising mains; systems of distribution, residual pressure; different types of pipes and fittings; testing of pipes, Pipe laying and Fittings of Valves and Meters, Storage tanks; Capacity, Maintenance and Cleaning of Storage Tanks, Water-Supply Plans, maintenance and operation of water supply installation - responsibilities of Engineering department, Mechanical department and Electrical Department.

III. Rain water harvesting – legislation, necessity; advantage; types; techniques; estimation of capacity of rain water harvesting pits/ salient methods of recharging subsurface aquifer etc.

IV. Water Audit and water Management :

Conservation of Water, water reuse, water recycling, water recycling plant, flow measurement system, identification of losses & leakages.

b) Sewerage:

Preparation of schemes for sewerage, sewage & water collection and carriage; design of sewers; house connection; storm water drains; maintenance of sewerage and drainage, conservancy and sanitary arrangements, disposal of sewage – river pollution and control; sewage treatment; land irrigation, septic tanks, primary clarifier, sludge and scum removal, trickling filters, activated sludge process, sludge digesting, principles of anaerobic digestion, sludge gas, sludge drying and disposal.

c) Sanitation:

Formation of sanitation committee ; Inspection by sanitation committee, sanitary arrangements in stations and colonies, drinking water wells-protection; Cleaning of wells; disinfection; prevention of Infectious diseases; disinfection of quarters.

9. Acquisition, management and disposal of land: General Codes, Manuals, rules:

Ownership of Railway land; sanctioning authority for acquisition and relinquishment; Principles of acquisition and relinquishment; Procedure for acquisition and relinquishment; Land plans and schedule; Documents of Handing over and taking over Railway Land; Land Records- Responsibility and procedure for demarcation, verification of railway boundary , land plan etc. Maintenance of right of way; religious structure. Management of railway Land leasing, licensing of land, way leave facility and easement rights, grow more food. Leasing licensing for merchants and vendors at stations, bulk oil installation. Encroachment and responsibly; rules for permission for construction of building near Railway land; instructions regarding cutting/trimming and sale of natural product like mature tree, dry trees within and outside railway boundary, near electric or telegraph lines , sale of grass right etc. Provisions of Land Acquisition Act, 1989, Right to fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

10. Preparation of Plans and Estimates:

(a) Preparation of plans:

General procedure; plan for other departments; size of drawings; titles and numbering of drawings; scale of drawings; details on drawings; symbols and colours in drawings; RDSO drawings; CE's plans; Plans of Divisional/ Asst. Engineer's/Inspector's Offices; completion drawings;

(b) Preparations of estimates:

Engineering code provisions, various types of estimates, technical details, rates and quantities; schedule of rates and price - listing of stores; report and justification; rent statement for staff quarters; special features of estimates for remodeling of station yards, track renewal works, deposit works: Urgency Certificate;

11. Contract and Execution of Work:

a) Contract:

Engineering code provisions, schedule of rates; analysis, non-schedules rates, tenders; types; tender documents, drawings and specifications, tender committees, acceptance of tenders, contracts; types, contract documents, General and special condition of contract; measurement and measurement books - code reference; recording measurements; 'on account' and final measurements; standard measurements books ; responsibilities of inspectors/JE/SSE) and Asst. Engineers for measurement of works; ballast measurement; computation quantities; preparation of abstract in measurement books; submission of bills; checking of bills; bill registers; Variations; PVC; Basics of Arbitration.

b) Execution of Work:

Engineering code provisions, agencies for executing works; responsibilities of executive officers; deposit works; excess and savings on estimates; attention to public interests; prevention of accidents; planning - activity, milestone, bar charts, critical path networks, PERT; departmental execution of work - record; progress reports, charges for stores and labour, execution of works In Engineering workshops; contracted works; issue of work orders; completion documents; zonal works.

12. Track Machines:

a) Organizational structure, duties and inspection:

Duties of Executive (XEN)/Assistant Executive Engineer (AXEN)/TM/Line, Duties of SSE/TM/SDI, Duties of SSE/JE/TM Working on Machines, Duties of SSE/JE Machine In-Charge Duties of Machine Assistant, Duties of Assistant Divisional Engineer (Open Line) ADEN, Duties of SSE/JE (P.Way) Deployed with the Machine, Inspection Schedule of Track Machine Officials, Inspection Schedule of Open Line Officials

b) Tamping machine and dynamic track stabilizer:

Types of Tamping Machines, Tamping Mechanism, Tamping Parameters, ALC,

Lining System, 4 Point Lining Method, Corrections to be Applied in 4 Point Lining Method, Modes of Tamping using 4-Point Lining Method (Only for curves), 3 Point Lining Method, Corrections to be applied in 3- Point Lining, Determination of Target Versine Values for the 3-Point Lining Method, Mode of Tamping using 3-Point Lining Method, Comparison between 3 Point and 4 Point Lining System, Levelling of Track, Mode of working for levelling, General Lift, Input of the Lifting Values, Survey and working of Tamping Machines in Design Mode, Works required Before, During and After Tamping, Working Principle of Dynamic Track Stabilizer, Modes of working of Dynamic Track Stabilizer, Working of DTS.

c) Ballast cleaning and handling machines:

Ballast Cleaning Machines (BCM), Types of Ballast Cleaning Machines, Working Principle and Capability of Ballast Cleaning Machines, Works Required Before, During and After Deployment of Ballast Cleaning Machines.

d) Track relaying machines:

Track Relaying Machines, Working Mechanism and Capability of Track Laying Equipment, Pre-Relaying Operations, Operation During Block, Post Relaying Operations, Working Mechanism of TRT, Operations Prior to Deployment of TRT, Operations During The Block of TRT, Post Block Operations for TRT, Precautions During TRT Working

e) Rail Grinding Machines:

Rail Grinding Machine (RGM) (Purpose & Advantage), Grinding Strategy, Working Parameters of RGM, Monitoring Equipment for Grind Quality, Quality Inspection of Grinding, Preparatory Works for Introduction of RGM, Pre-Block Activity Before Deploying RGM, Operation During RGM Block, Post Grinding Operation

f) Planning and deployment of Machines:

Pre-requisites for Deployment of Track Machines on Construction Projects/Other Agencies, Minimum Duration of Blocks, Through Tamping and Spot Attention.

g) Rules for movement and block working:

Provision of G&SR, Operation and Working of Track Machine, Competencies of Track Machine Staff, Safety Equipment, Rules for Operation – General, Important Instructions and Precautions (Protection of Work Site, Fouling of Adjacent Lines, Information to Level Crossings etc), Failure and Accidents of Track Machines, Speed Certification for Track Machines, Special Precautions while working in Special Circumstances (Ghat Sections, Night Working).

h) Periodical maintenance and associated infrastructural facility:

Maintenance Schedule for Various Track Machine, Types of Workshops, Functions of Central Periodic Overhauling Workshop (CPOH), Functions of Zonal Machine Depot (ZMD), Functions of Satellite Depot, Functions of Mobile Workshop, Functions of Camping Coach Workshop.



i) Track Machine Manpower

Training (Officers, SSEs/JEs/TM(s), Technical Staff, Machine Assistant), Roster

13. Miscellaneous:

a) Engineering plant:

Control of plant and machinery, engineering plant reserve, plant register; valuation of plant; maintenance; storage and repairs; requisitioning of plants; use of plant at site; maintenance of log books; hiring out of engineering plant; examination of boilers of the engineering department.

b) Explosives:

Issue of Instructions on use of explosives; observance of rules, carriage of explosives, Protection of trains and Railway property, precautions to be observed during blasting, Misfire with electrical method of firing, explosives disposal, destruction of explosives

c) Management of Engineering Stores:

Reference to code and Rules; procurement of stores; requisition; receipt and issue of challans; claims of short receipts; etc.; custody of stores - classification, handling and storage, Account head of stores - operation, records and returns; disposal of released and surplus stores - return to stores Depot, disposal by auction; verification of stock and adjustment for shortage/excesses.

d) Law and Order

Railway Police; lodging complaints; cooperation with railway police; cognizable offences; non cognizable offences; powers of arrest by railway staff; warrant against railway staff; action by railway staff in case of attempted sabotage; answering of court summons; Prevention of trespass disposal of human bodies found run over; disposal of cattle found dead on the line.



Syllabus for promotion to Group- B posts - 70% selection and 30% LDCE.

Syllabus for Establishment Rules:

1. Organization of the Personnel Department in Railways objectives functions and policies of Personnel Department.
2. Recruitment and Training, Classification of Services, Recruitment in Different services, Railway Recruitment Boards & Railway Recruitment Cells Compassionate Ground Appointments, Initial & In Service Training, Refresher Courses, Central Training Institutes, Training Centers in Zones, Divisions & Workshops, Training Modules for different posts, Training under Apprentices Act, Online Training, APARs.
3. General conditions of service in Railways, Seniority, Lien, Inter Railway.& Inter Division transfers, Deputation, Promotion Policy & methods. Selection, Suitability, Trade Tests, Leave Rules, Pass Rules, Joining Time Reservation policy, HOER, Overtime, Payment of wages, current CPC Pay Rules, Advances in Railways.
4. Manpower planning, Rightsizing & Benchmarking, creation, extension and surrender of posts, creation of posts against new assets, different types of posts including workcharged posts.
5. The Railway Servants (Discipline & Appeal) Rules, 1968 and related instructions.
6. The Railway Services (Conduct) Rules, 1966 and related instructions.
7. Retirement benefits, qualifying service, pension, family pension, commutation gratuity, new pension scheme.
8. Staff welfare, SBF, Railway institutes, Railway schools, Ex-gratia payment, Incentive Bouns Scheme, Staff Grievances Redressal Mechanisms.
9. Industrial relations in Railways, recognized trade unions, industrial disputes. The Industrial Disputes Act, 1947. The Industrial Relations Code, 2020. The Trade Unions Act, 1926, PNM, PREM, JCM, Various Associations & Informal Meetings.
10. The Factories Act, 1948. The workmen's Compensation Act, 1923. Functions of Labour Enforcement Officers, Right to Information Act.
11. The scope of Information Technology in Railway e – office. HRMS, IPAS , LIMBS, ARPAN, CPGRAMS, ANUBHAV etc.



Syllabus for Financial Rules:

1. Parliamentary Control over Railway Finance, Public Accountability, Canons of Financial Propriety.
2. Railway Budget - Budgetary terms, Types of Budgets, Budget cycle, Demand of Grants, Budgetary and Financial Reviews.
3. Rules of Allocation - Classification of expenditure - Control of expenditure - Responsibility Accounting - Performance Budgeting - Exchequer Control - Financial Results of Working lines.
4. Works Programme - Financial justification of Works - Surveys - Preparation of Estimates - Capital Budget - Control over Capital Expenditure - Reappropriation of Funds.
5. Financial control over Stores Expenditure - Purchase and Stores Keeping Procedure - Inventory Control and ABC Analysis.
6. Financial & Cost Control in Railway Workshops/Sheds/Units.
7. Rules and procedure relating to Tenders and contracts for execution of works and Procurement of Stores, M&P Programme and RSP.
8. Procedure for Possessing and finalizing Audit Objections and Draft Paras.
9. Delegation of Powers.
10. Losses, Frauds and Embezzlements.
11. General Financial Rules
12. Government e-Market (GeM)
13. Classification of Railway Revenue (Earnings)
14. Information Technology in general with specific reference to Railway's IT Applications
15. Taxation matters with special focus on GST & Income Tax
16. Organization of CGA and C&AG
17. Any other topic felt necessary from time to time


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