

**NORTHERN RAILWAY
(AMBALA DIVISION)**

No. 753-E/2/JE(C&W)/PQ/UMB/P-2
Dt. 04.08.2025

NOTIFICATION NO. JE/C&W/SELECTION/25%PQ/UMB/2025
(Ref: Northern Railway HQ office letter no. E-387/129/CBT/S-Cell/P Dt.00.07.2025)

SELECTION FOR PROMOTION TO THE POST OF JE/C&W IN PAY LEVEL-6 AGAINST 25% PROMOTES QUOTA IN MECHANICAL DEPARTMENT OF UMB DIVISION.

1. It has been decided to hold a selection for filling up 10 vacancies for the post of JE/C&W Pay Level- 6 against 25% Promote Quota in Mechanical Department of Ambala Division. Bifurcation of vacancies is as under:

UR	SC	ST	Total	PwBD (in terms of Railway Board's letter no. E (NG) II/2017/RC-2/1 Policy dt. 27.02.2019)
09	00	01	10	01

2. Eligibility and Service conditions:

(i) The list of senior most eligible staff working as Sr.Technician (MCM) of Mechanical department of UMB division in pay level -6 and who are in the zone of consideration in 1:3 ratio based on their seniority, is enclosed as **Annexure-I**.

(ii) A stand-by list of next senior employees is also enclosed as **Annexure-II**. Employees of this stand-by list will be included in the main list enabling them to appear for the written examination only in case of an employee/employees in the main list (**Annexure-I**) has/have expressed its unconditional unwillingness to appear for the selection on Performa attached (**Annexure-III**) and forwarded to this office on or before 14.08.2025 along with objection of any employee against the seniority, if any.

3. **Syllabus:** A syllabus for the above selection is attached as **Annexure-IV**. This is a common syllabus for the post as approved by the concerned PHOD and is applicable for all Divisions/Units over Northern Railway.

4. Procedure for CBT examination:

(i) The Computer Based Test will be conducted by Railway Recruitment Cell (RRC), Northern Railway through an Examination Conducting Agency to be provided by Railway Recruitment Board (RRB).

(ii) The CBT examination will be a Computer Based Test (CBT)/Tablet Based Test (TBT) where there will be no physical question paper. All the questions will appear on the Screen of computer/tablet and the employee will have to mark their responses/answers to the questions on computer/tablet.

(iii) RRC/NR will be issuing a formal admit card **online (through the website <http://rrcnr.org>)** to each and every eligible and willing employee for appearing in the CBT/TBT. Examination Venue and

time of reporting for the written examination will be there in the admit card. **As no physical communication will be made after issue of this vacancy notice, it will be the responsibility of the concerned employees to regularly visit RRC/NR's website as well as this Division's website for an update and to download the admit card as and when made available by RRC. Further, no supplementary/absentee examination shall be conducted on this ground.**

(iv) A link will also be made available on the above website (<http://rrcnr.org>) to the employees, explaining as to how the question will be appearing and how to mark the responses/answers in the actual examination. Employees can practice through that link any number of times.

(v) Both physical and biometric attendance will be marked at the examination venue.

(vi) 100% questions will be objective type multiple choice questions.

(vii) There will not be any negative marking.

(viii) There shall be questions in Official Language Policy and Rules upto 10% of marks. However, it is not mandatory to attend the same.

(ix) There will be 110 questions of objective multiple choice type with four answer options and the candidate has to answer a maximum of 100 questions. In case the candidate answers more than 100 questions, first 100 attempted questions are to be taken for evaluation.

(x) The written examination will be of 02 (two) hours duration.

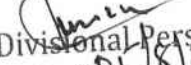
(xi) There will be computerized evaluation.

5. Notifying to the employees:

The Senior Subordinate/Supervisor concerned has to furnish a certificate that "the eligible employees have been duly notified of the holding of the Computer based examination and asked to submit their applications duly giving their willingness. They have also been informed about availability of any further information on RRC/NR's website (<https://rrcnr.org>) regarding availability of admit card and link for demo test." Such certificates should be forwarded to Personnel Branch addressed to Sr. DPO/UMB. It will be the personal responsibility of the Senior Subordinate/Supervisor to complete the formality in this respect. It is further advised that any other communication received in respect to the selection should invariably be intimated to all the eligible employees. In case of non-receipt of any communication the same may be obtained from the Personnel Department or from the Controlling Officer. Any laxity in this regard will be viewed seriously as it will adversely impact the above selection which is being conducted simultaneously for all Divisions/Units over Northern Railway. The supervisory concerned should forward the willingness/unwillingness of employees in a bunch to this office on or before 14.08.2025. No applications should be sent through the employees in a piece meal manner. Application received after the due date will not be entertained and will be samarily rejected.

Note:-Since no post is reserved for SC, hence pre-Selection coaching only for eligible ST Candidates.

DA/ As above


For Sr. Divisional Personal Officer
Northern Railway, Ambala Cantt.

Copy to:

1. Sr.DME/C&W/UMB & Sr.DME/ENHM/UMB: for information and necessary action please.
2. DS/NRMU, URMU
3. DS/OBC & SC/ST Association.
4. OS/Prime Cell: - for uploading the notification on website.
5. OS/Confidential. All WLI's for circulation in their section.
6. All SSE/C&W In charge of UMB Division

NORTHERN RAILWAY

Performa for Willingness & unwillingness for Selection to the Post of JE/C&W in Level-6 of 7th CPC against 25% Promote Quota.

Ref: Notification No. JE(C&W)/Selection/25% PQ/UMB/2025 dated 4.08.2025

1. In reference to above referred letter, I _____ (name of staff) S/o Sh. _____, design. _____ Station _____ is hereby given my _____ (willingness/unwillingness) for appearing in the written test for selection to the post of JE/C&W in mechanical department against 25% promote Quota.
2. I have no objection against the inter se seniority issued vide above referred letter dated 04.08.2025 regarding selection to the post of JE/C&W in mechanical department against 25% Promote Quota.
3. Option once exercised will be treated as final.

Signature of Employee: _____

Name of staff: _____

Father's Name: _____

Design/Stn. _____

PF Number: _____

Mobile No: _____

Signature and Stamp of Sr. Subordinate (In-charge)

Annexure-I

S. No	Name/Fathers Name	STN.	D.O.B.	DOP as Sr. Tech	Cat.
1	Mohar Singh Meena/KM	UMB/Sr.Tech/Fitter	02.07.1967	27.08.2004	ST
2	Samunder singh Meena/TSM	UMB/ Sr.Tech/Fitter	11.05.1968	29.07.2010	ST
3	Jugal kishore Meena/JR	UMB/ Sr.Tech/Fitter	04.07.1968	29.07.2010	ST
4	Hillarues Topoo/A.Topoo	UMB/ Sr.Tech/Fitter	16.03.1966	29.07.2010	ST
5	Chandravir Singh/Babli Singh	SRE/ Sr.Tech/Fitter	15.03.1967	28.07.2011 as LPG 10.04.2023 as Sr.Tech	UR
6	Subhash /Gyasu	UMB/ Sr.Tech/Fitter	04.09.1968	01.01.2013	SC
7	Navneel Kishore /Suwa Lal	KJGY/ Sr.Tech/Fitter	01.07.1967	01.01.2013	ST
8	Ramesh chand meena/Ram Sahai Meena	UMB/ Sr.Tech/Fitter/Loco	04.02.1968	01.11.2013	ST
9	Mahesh Badaik/Hari Badaik	UMB/Sr.Tech/Fitter	06.10.1965	01.11.2013	ST
10	Hari Mohan Meena/PL Meena	KJGY/ Sr.Tech/Fitter	17.02.1968	06.05.2014	ST
11	Jagdish Singh/Hakam Singh	CDG/ Sr.Tech/Fitter	23.03.1966	03.02.2016	UR
12	Sarwan Kumar/Kali Charan	UMB/ Sr.Tech/Fitter	05.01.1970	03.02.2016	UR
13	Ram Chander/Sant Ram	UMB/ Sr.Tech/Fitter	08.10.1970	03.02.2016	OBC
14	Raju/Hari Ram	BTI/ Sr.Tech/Fitter	05.04.1971	03.02.2016	SC
15	Jai Kishan/Hari Singh	UMB/ Sr.Tech/Fitter	31.12.1966	03.02.2016	SC
16	Avtar Singh/Hari Singh	UMB/ Sr.Tech/Fitter	20.08.1968	03.02.2016	SC
17	Pawan Kumar/Amar Nath	CDG/Sr.Tech/Fitter	05.05.1969	03.02.2016	SC
18	Roshan Lal/Arjun Dass	UMB/ Sr.Tech/Fitter	08.04.1967	03.02.2016	SC
19	Rakesh Kumar/A.S. Kataria	UMB/ Sr.Tech/Fitter	18.05.1970	03.02.2016	SC
20	Gurmeet Singh/Darshan Singh	SRE/ Sr.Tech/Fitter	12.05.1967	03.02.2016	SC
21	Rajbir Singh/Jhutha Ram	UMB/ Sr.Tech/Fitter	08.07.1967	03.02.2016	SC
22	Rajender Kumar/Ram Swaroop	UMB/ Sr.Tech/Fitter	23.03.1966	03.02.2016	SC
23	Gulshan Kumar/Jagdish Rai	BTI/ Sr.Tech/Fitter	13.08.1968	03.02.2016	UR
24	Gobind Singh/Chaman Singh	UMB/ Sr.Tech/Fitter	07.03.1966	03.02.2016	UR
25	Shyam Lal Sharma/Bansi Ram Sharma	SML/ Sr.Tech/Fitter	10.08.1967	03.02.2016	UR
26	Chaman Lal/ Hari Singh	UMB/ Sr.Tech/Fitter	10.06.1969	03.02.2016	UR
27	Gurcharan Singh Saini/Prem Singh Saini	CDG/ Sr.Tech/Fitter	05.05.1972	03.02.2016	UR

सहायक कार्यालय अधिकारी
उत्तर रेलवे, अम्बाला छावनी।

Annexure-II (Standby List)

28	Savir Jetley/K.K. Jetley	KLK/ Sr.Tech/Fitter	08.10.1966	03.02.2016	UR
29	Raj Kumar/Chena Ram	SRE/ Sr.Tech/Fitter	01.03.1966	03.02.2016	SC
30	Anand Prakash/Nanwa Singh	UMB/ Sr.Tech/Fitter	10.10.1967	03.02.2016	SC
31	Sunil Kumar/Layak Ram	BTI/Sr.Tech/Fitter	21.08.1968	03.02.2016	SC
32	Sh. Baldev Singh/ Kapoor Chand	UMB/ Sr.Tech/Painter	01.01.1967	16.05.2016	UR
33	Yoginder Pal Singh/ Joginder Pal Singh	KJGY/Sr.Tech.welder	01.07.1966	01.09.2016	UR
34	Balbir Singh/ Giani Ram	BTI/ Sr.Tech/Fitter/welder	10.01.1966	01.09.2016	SC
35	Nar Singh Kumar/ Alagu Prasad	UMB/ Sr.Tech/Fitter	06.05.1966	01.09.2016	SC
36	Jasbir Singh/Inder Singh	CDG/ Sr.Tech/Fitter	19.11.1967	01.09.2016	UR
37	Karni Singh/Nihal Singh	BTI/ Sr.Tech/Fitter	17.01.1971	01.09.2016	UR
38	Gurdev Singh/Ratia Ram	UMB/ Sr.Tech/Fitter	02.04.1966	01.09.2016	SC
39	Daya Chand/Nihal Chand	KJGY/ Sr.Tech/Fitter	02.02.1966	01.09.2016	SC
40	Davinder Kumar/Manohar Lal	KJGY/ Sr.Tech/Fitter	11.12.1965	01.09.2016	UR
41	Sahib Singh/Kali Ram	UMB/ Sr.Tech/Fitter	28.03.1966	01.09.2016	UR
42	Ghanshyam/Ram Parshad	SRE/ Sr.Tech/Fitter	01.10.1966	01.09.2016	UR
43	Bakshish Nath/Gian Chand	UMB/ Sr.Tech/Fitter	15.02.1973	01.09.2016	UR
44	Sunil Kumar/Sher Singh	CDG/ Sr.Tech/Fitter	11.11.1973	01.09.2016	UR
45	Dinesh Kumar Tiwari/Surinder Kumar Tiwari	UMB/ Sr.Tech/Fitter	01.01.1966	01.09.2016	UR
46	Lalta Parshad/Babban	KJGY/ Sr.Tech/Fitter	27.10.1966	01.09.2016	UR
47	Sanjay Kumar/Gulab Singh	KJGY/ Sr.Tech/Fitter	07.03.1969	01.09.2016	UR
48	Rajinder Kumar/Algoo Ram	UMB/ Sr.Tech/Fitter	14.12.1967	01.09.2016	UR
49	Surinder Singh/Amrik Singh	UMB/ Sr.Tech/Fitter	01.04.1967	01.09.2016	UR
50	Daya Kishan/Gopal Dutt	KJGY/ Sr.Tech/Fitter	28.10.1966	01.09.2016	SC
51	Baboo Lal/Mangi Lal	UMB/ Sr.Tech/Fitter	01.09.1967	01.09.2016	UR
52	Pati Ram/Kula Nand	KJGY/ Sr.Tech/Fitter	15.07.1966	01.09.2016	UR
53	Rajender Ganguly/Anil Kumar Ganguly	KJGY/ Sr.Tech/Fitter	06.03.1968	01.09.2016	UR
54	Mohinder Singh/Pritam Singh	KLK/ Sr.Tech/Fitter	24.06.1966	01.09.2016	UR
55	Rajesh Kumar/Kaloo Ram	UMB/ Sr.Tech/Fitter	07.03.1969	01.09.2016	SC
56	Ram Partap/Surjan Ram	UMB/ Sr.Tech/Fitter	10.10.1966	01.09.2016	SC
57	Baldev Singh/Gian Chand	UMB/ Sr.Tech/Fitter	04.06.1969	01.09.2016	SC
58	Rajesh Kumar/Bachitter Singh	NLDM/ Sr.Tech/Fitter	10.07.1978	01.09.2016	SC
59	Ramesh Kumar/Sohan Lal	UMB/ Sr.Tech/Fitter	09.03.1967	01.09.2016	SC
60	Ramjee Rawat/Ganesh Rawat	UMB/ Sr.Tech/Fitter	01.07.1970	01.09.2016	SC

सहायक अभियंता
उत्तर रेलवे, अम्बाला जंक्शन



NORTHERN RAILWAY
(Personnel Department)

Adm 28-7-25
Someles

Adm

Headquarters Office,
Baroda House,
New Delhi.

P.S. No. 16015/2025

NO. 752-E/Mech Policy/EIIC

DATE: 16/07/2025

Divisional Railway Manager/NR: DLI, FZR, MB, UMB, LKO & JAT
Chief Workshop Manager/NR: AMV-LKO, CB-LKO, JUDW, ASR & RCNK-SNP,
CWM/Signal Shop, GZB.
CAO/C: K. Gate DLI & Satyam Complex, Trikuta Ngr/JAT.
MD/NRCH.
Chief Manager (Ptg. & Sty) Punjabi Bagh, Delhi
Dy.CMM: SSB, AMV-LKO & JUDW.
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.

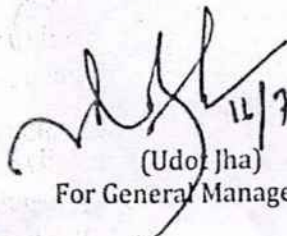
Sub: Syllabus of written examination for the post of Junior Engineer/C&W and Junior Engineer/Mech.
Ref: (i) PCPO/NR's letter no. PCPO/Sel./2025 dated 15/05/2025.
(ii) Dy.CME/HQ's letter no. Confdl.Mech/Group C Selection/266 dated 14/07/2025.

In reference to above subject, the syllabus of written examination for the post of Junior Engineer/C&W and Junior Engineer/Mech in Level-06, is enclosed herewith for your information and necessary action please.

The above PS.No. is available on the website given as under:-<https://nr.indianrailways.gov.in>

Please acknowledge the receipt

DA: As Above


(Udo Jha)
For General Manager (P)

Copy to:

1. All PHODs and All Officers of Personnel Deptt., HQ Office, Baroda House, New Delhi.
2. Genl. Secy./NRMU, 12 Chelmsford Road, New Delhi.
3. Genl. Secy./URMU, 166/2, P.K.Road, New Delhi.
4. Genl. Secy./AIOBC Rly Emp. Asso. 171/A3, Basant Lane, New Delhi.
5. Genl. Secy./All India SC/ST Rly Emp. Asso. North Zone Office, Baroda House, New Delhi.
6. Genl. Secy./NRPOA Room No.301, HQ Office, Baroda House, New Delhi.
7. Dy.CPO/IT, HQs Office, Baroda House, NDLS for uploading on the website.
8. Dy.CPO/R&P, HQs Office, Baroda House, NDLS being policy matter.



Northern Railway

HQ Office,
Mechanical Branch

Syllabus for TQ/PQ examination for selection to the post of Junior Engineer (Mech.) /C&W

Part 1: General Knowledge

- 1.1 Important National & International Events, Authors, Places & Personalities etc.
- 1.2 Sports
- 1.3 "Who's Who"
- 1.4 Facts about Indian Railways & its Organization, Important events in Indian Railways
- 1.5 Current Affairs

Part-2: English

- 2.1 Antonyms and Synonyms
- 2.2 Idioms & Phrases
- 2.3 Tenses, Modals, Determiners, Prepositions
- 2.4 Active and Passive Voice
- 2.5 Direct and Indirect Speech
- 2.6 Unseen Passages

Part-3: Mathematics

- 3.1 Algebra
 - 3.1.1. Real Numbers
 - 3.1.2. Polynomials
 - 3.1.3. Pair of Linear Equations in Two Variables
 - 3.1.4. Quadratic Equations
- 3.2 Arithmetic
 - 3.2.1. Problems based on age, time, work, money, Profit and Loss, and Interest
- 3.3 Geometry
 - 3.4.1. Lines
 - 3.4.2. Triangles: Pythagoras' Theorem, Midpoint Theorem, Area, Congruence of Triangles, Angle Sum Property, Exterior Angle Property; Similar Figures, Similarity of Triangles
 - 3.4.3. Properties and area of Parallelogram
 - 3.4.4. Circles: Area and Perimeter of Circle, Angle Subtended by a Chord at a point, Perpendicular from the Centre to a Chord, Equal Chords and their distances from the Centre, Angle subtended by an Arc of a Circle, Cyclic Quadrilaterals, Tangent to a Circle, number of Tangents from a point on a Circle, Area of Sector and Segment of a Circle
 - 3.4.5. Surface Areas and Volumes of cuboid, cone, cylinder, and sphere; and Combination of Solids
- 3.4 Coordinate Geometry
 - 3.5.1 Basics of the Cartesian system
 - 3.5.2 Distance Formula

- 3.5 Introduction to Trigonometry
 - 3.5.1. Trigonometric Ratios
 - 3.5.2. Trigonometric Ratios of Specific Angles
 - 3.5.3. Trigonometric Identities
 - 3.5.4. Applications of Trigonometry: Heights and Distances
- 3.6 Statistics
 - 3.8.1. Mean, Mode, Median of Grouped Data
 - 3.8.1. Mean Deviation & Standard Deviation

Part-4: General Science

- 4.1 Matter in Our Surroundings: Physical Nature of Matter, Characteristics of Particles of Matter, States of Matter, Mixture, Solution, Concentration of a Solution, Compounds
- 4.2 Atoms, Molecules and Chemical Reactions, Structure of the Atom, Valency, Atomic Number, Mass Number, Isotopes, Isobars, Laws of Chemical Combination, Chemical Equations, Types of Chemical Reactions, Oxidation and Reduction, Acids, Bases and Salts, Name of salts and compounds, Types of Oxides, Properties and Laboratory Preparation of Oxygen, Hydrogen, and Nitrogen
- 4.3 Metals and Non-metals (Physical Properties, Chemical Properties), Ores of Metals, Corrosion and its prevention
- 4.4 Carbon and Its Compounds: Bonding in Carbon, Versatile Nature of Carbon, Chemical Properties of Carbon Compounds, Important Carbon Compounds – Ethanol and Ethanoic Acid, Soaps and Detergents
- 4.5 Force and Laws of Motion: Motion Along a Straight Line, Uniform Motion and Non-Uniform Motion, Speed with Direction, Acceleration, Equations of Motion, Uniform Circular Motion, Balanced and Unbalanced Forces, Laws of Motion, Inertia and Mass
- 4.6 Gravitation: Universal Law of Gravitation, Free Fall, Mass & Weight, Thrust and Pressure, Buoyancy, Archimedes' Principle
- 4.7 Work and Energy: Scientific Conception of Work, Forms of Energy, Potential Energy, Potential Energy of an Object at a Height, Law of Conservation of Energy, Power, Method of Heat Transfer
- 4.8 Sound: Propagation of Sound, Characteristics of a Sound Wave, Reflection of Sound, Echo, Reverberation, Range of Hearing, Applications of Ultrasound
- 4.9 Light: Reflection and Refraction, Spherical Mirrors, Sign Convention for Reflection by Spherical Mirrors, Refractive Index, Refraction through a Rectangular Glass Slab & prism, Atmospheric Refraction, Refraction by Spherical Lenses, Image Formation by Lenses, The Human Eye, Dispersion of White Light by a Glass Prism
- 4.10 Electricity: Electric Current and Circuit, Electric Potential and Potential Difference, Symbols of some commonly used components in circuit diagrams, Ohm's Law, Factors affecting the Resistance, Resistance of a System of Resistors, Heating Effect of Electric Current, Electric Power, Domestic Electric Circuits
- 4.11 Magnetic Effects of Electric Current: Magnetic Field and Field Lines, Magnetic Field due to a Current-Carrying Conductor, Force on a Current-Carrying Conductor in a Magnetic Field

Part-5: Establishment Rules

- 5.1 Pass Rules
- 5.2 Leave Rules
- 5.3 Payment of Wages Act
- 5.4 Hours of Employment Regulations
- 5.5 D&AR (Disciplinary & Appeal Rules)
- 5.6 Workmen's Compensation Act
- 5.7 Factory Act
- 5.8 Basic Knowledge about HRMS, RESS, HIMS, NPS/UPS, and UMID web portals/App

Part-6 Stores

- 6.1 System of receiving and issuing goods from the store, local purchase, and inventory control
- 6.2 Stock and Non-Stock Items, PL Number
- 6.3 Basic Knowledge about UDM, GEM, IMMS, IREPS

Part-7 राजभाषा

- 7.1 संघ की राजभाषा नीति का सामान्य परिचय
- 7.2 राजभाषा अधिनियम 1963
- 7.3 राजभाषा संशोधन नियम 1976
- 7.4 राजभाषा संकल्प 1968
- 7.5 राजभाषा से संबंधित वार्षिक पाठ्यक्रम एवं प्रचलित शब्दावली

Part-8 Professional Knowledge

8.1 ICF Coach Maintenance

- 8.1.1 Salient features of ICF Coaches
- 8.1.2 Knowledge of safety and furnishing items
- 8.1.3 Pattern of Coaching maintenance as per RPC-IV
- 8.1.4 Draw and Buffing gear
- 8.1.5 Bogie components, load transmission, tractive/braking force transmission
- 8.1.6 Air brake system & its components, Bogie Mounted Brake System(BMBC)
- 8.1.7 Transportation codes for ICF coaches and coach numbering system
- 8.1.8 Maintenance schedules periodicity of ICF coaches (A, B, C, IOH and POH)

8.2 LHB Coach Maintenance

- 8.2.1 Introduction and salient feature of LHB coaches and comparison with ICF coaches
- 8.2.2 Pattern of Coaching maintenance as per RPC-IV
- 8.2.3 Examination of Coaching stock: Primary, Terminal and Secondary
- 8.2.4 Knowledge of safety and furnishing items in coaches
- 8.2.5 Transportation codes for LHB coaches
- 8.2.6 Design features of FIAT bogie, major sub-assemblies and components, LHB shell, tractive/braking force transmission, Load transmission, safety features
- 8.2.7 Air Spring bogies and various components of Air spring system. FIBA maintenance and troubleshooting
- 8.2.8 Maintenance schedules of LHB coaches. (D1, D2, D3, SSI, SSII, SSIII) and tools required for Schedule activities at pit line
- 8.2.9 Must change items during Shop schedule of coaches
- 8.2.10 Maintenance and troubleshooting of air brake system, DV, Brake Cylinder, ACP and process for Bypass of coach
- 8.2.11 Working principal of WSP system & its various components, WSP fault codes and corrective action, Wheel shelling
- 8.2.12 Maintenance of CCTV, Public Information system (PIS), Bio-vacuum toilets, Pressurized Flushing system (PFS), Electro-Pneumatic Pressurized Flushing System(EPPFS), Fire and Smoke Detection System(FSDS), Fire Detection and Suppression System(FDSS)
- 8.2.13 Basic knowledge of Bio-toilets: Maintenance, bacteria used and sample testing parameters

- 8.2.14 Causes of Brake binding and remedial action
- 8.2.15 CBC maintenance and causes for en-route uncoupling of CBCs with remedial actions to control CBC uncoupling
- 8.2.16 Basic knowledge of H-type CBC and its components
- 8.2.17 Basic Infrastructure for pit & sick-line maintenance of LHB, ICF and Vande Bharat trains

8.3 Vande Bharat Maintenance

- 8.3.1 Introduction to Vande Bharat Train
- 8.3.2 Train Composition, Basic Unit(DTC, MC,TC,NDTC..)
- 8.3.3 Driver Desk Unit (DDU), TCMS
- 8.3.4 Braking System i.e. Electro-Pneumatic brake(EP), Regenerative Braking, Automatic brakes, Parking Brakes
- 8.3.5 Propulsion System, Pantograph, Traction Motors, transformer, Auxiliary Transformer etc.
- 8.3.6 Passenger amenities items i.e. Reclining and rotating chairs, Snack table, Hand dryer, Auto soap dispenser, Foot rest, bottle holder, Pantry etc.
- 8.3.7 Safety and security items i.e. Emergency Talk Back Unit(ETBU), FSDS, CCTV, Automatic Doors, Passenger information system(PIS) etc.

8.4 Wagons Maintenance

- 8.4.1 Salient features of various types of Freight stock i.e. Open wagon, Covered Wagon, Tank wagon, container wagon, Flat wagon, Hopper wagon, Well wagon, Brake van etc.
- 8.4.2 New Wagon Numbering system
- 8.4.3 Examination of Freight stock i.e. End to End, Premium, Close Circuit(CC) and special premium rake
- 8.4.4 Maintenance and troubleshooting of air brake system in wagons
- 8.4.5 Single pipe and twin pipe air brake system
- 8.4.6 Salient features of CASNUB bogie and under gear components
- 8.4.7 Basic knowledge of various types of CASNUB bogies used on Wagons
- 8.4.8 Types of Nut & Bolts, Riveting, & welding in various types of wagons
- 8.4.9 ROH and POH of freight stock

8.5 Operations

- 8.5.1 Rolling in and Rolling Out Examination at nominated stations
- 8.5.2 Watering in trains and basic infrastructure for Quick watering
- 8.5.3 Clean Train Station(CTS), Terminal Rake Cleaning(TRC) & Mechanized Coach Cleaning(MCC) activities at Depot
- 8.5.4 Basic knowledge of OBHS activities & analysis of feedback formats used in OBHS
- 8.5.5 Soft skills for OBHS staff and tools required for en-route attention
- 8.5.6 Details and Working of Mechanized Laundry. Linen holding and management of Linen for AC coaches. Condemnation of linen
- 8.5.7 Pest and Rodent control in Trains and Railway Premises
- 8.5.8 Concept of ODC and its classification for movement
- 8.5.9 Duties of C&W Supervisors regarding CTS, OBHS, Linen & Pest Control

8.6 General

- 8.6.1 Testing of air brake for Single coach/wagon by SCTR/SWTR and rake by RTR
- 8.6.2 Knowledge of minimum prescribed brake Power, brake power calculation, improving brake power and issue of BPC/GDR. Brake continuity test procedure
- 8.6.3 Examination of CBC, Buffer, Draw Bar assembly & Screw coupling in coaching and freight Stock
- 8.6.4 Types of wheel used in Rolling stock, wheel defects & its prescribed limits, Tyre defect gauge
- 8.6.5 Application of wheel distance gauge and dimensions
- 8.6.6 Pairing of Wheels, wheel changing procedure in sick-line and out station
- 8.6.7 General idea about types of bearing used in various C&W stocks
- 8.6.8 Working of Graduated release air brake system
- 8.6.9 Train Accidents and Golden hour
- 8.6.10 Basic knowledge of ART, SPART, ARMV, SPARMV, 140 ton crane & Duties of C&W supervisors on accident site
- 8.6.11 Fire types and Firefighting equipment used in coaches
- 8.6.12 Attention of Hot Axle box, Train parting, Primary/Secondary coil failure, Axle Lock
- 8.6.13 Basic knowledge of CMM, FMM, FOIS, ICMS, e-office
- 8.6.14 Basics of NMG Coaches
- 8.6.15 Basic knowledge of computer (MS Word, MS Excel, MS Power Point, working of computer and its peripherals)
- 8.6.16 Basic knowledge of Industrial Safety, Fire Safety, and First Aid
- 8.6.17 Duties of Escorting Mechanical Supervisors and staff

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