

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16011/2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Junior Engineer/Works (Level-6)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025

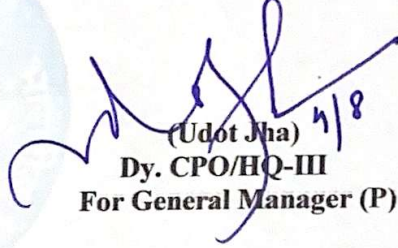
(ii) Dy. CE/Stn. Dev. letter No. SD/Misc dated 08.07.2025.

In reference to above subject, the syllabus for selection to the post of Junior Engineer/Works (Level-6) 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


(Udot Jha) 4/8
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus for JE / Works

S.No.	Topics
1.	General functioning of Railways and organization of various departments
2	Establishment: Payment wages Act, Hours of employment Regulations. Discipline and Appeal Rules Rule regarding leave, salary and passes, maintenance of service records, muster sheets, etc.
3	Duties of JE/SSE / works
4	Inspection and maintenance of Building and steel structure
5	Planning, Layouts of various Building
6	Sanitary arrangement and Hygiene conditions, Laying & maintenance of sanitary arrangements
7	Passenger Amenities
8	Water supply
9	Estimate & contract
10	Knowledge of SOR, Specifications, Works Manual, codes and Other Manuals related to civil engineering
11	Surveying
12	Plantation & Horticulture
13	Management of Land
14	Earthwork and formation
15	Action during accidents, breaches and emergencies
16	Rain water harvesting
17	Safety at work sites Precautions during dismantling of Structures, machinery and vehicles working near to track, etc.
18	Concrete Technology
19	Introduction of Permanent-way , Bridges and tunnels
20	Schedule of maximum and minimum dimensions (SOD)
21	Rules for working of trolleys
22	Office Work – General correspondence, submission of returns, accountal of stores and Building Materials, Imprest tools, Plant and Machinery, Stock verifications. Classification and disposal of surplus material and MAS account
23	Rajbhasha (Hindi) & General Knowledge.

अवर अभियंता/कार्य के लिए पाठ्यक्रम

1. रेलवे का सामान्य कामकाज और विभिन्न विभागों का संगठन
2. स्थापना: भुगतान मजदूरी अधिनियम, रोजगार के घंटे विनियम। अनुशासन और अपील नियम, छुट्टी, वेतन और पास, सेवा अभिलेखों का रखरखाव, मस्टर शीट आदि के संबंध में नियम।
3. अवरअभियंता/कार्य /वरिष्ठ खन्ड अभियंता/ कार्य के कर्तव्य
4. भवन और इस्पात संरचना का निरीक्षण और रखरखाव
5. विभिन्न भवनों की योजना, लेआउट
6. सेनेटरी व्यवस्था और स्वच्छता की स्थिति, सेनेटरी व्यवस्था का बिछाने और रखरखाव
7. यात्री सुविधाएं
8. जल आपूर्ति
9. आकलन और अनुबंध
10. एसओआर, स्पेसिफिकेशंस वर्क्स, कोड और सिविल इंजीनियरिंग से संबंधित अन्य मैनुअल का ज्ञान
11. सर्वेक्षण
12. वृक्षारोपण और बागवानी
13. भूमि का प्रबंधन
14. मिट्टी का काम और फोरमेशन
15. दुर्घटनाओं, उल्लंघनों और आपात स्थितियों के दौरान कार्रवाई
16. वर्षा जल संचयन
17. कार्य स्थलों पर सुरक्षा संरचनाओं, मशीनरी और ट्रैक के पास काम करने वाले वाहनों आदि के निराकरण के दौरान सावधानियां
18. कंक्रीट प्रौद्योगिकी
19. स्थायी-मार्ग, पुल और सुरंगों का परिचय
20. अधिकतम और न्यूनतम आयामों (एसओडी) की अनुसूची
21. ट्रॉलियों के काम करने के नियम
22. कार्यालय का काम – सामान्य पत्राचार, रिटर्न प्रस्तुत करना, भंडार और निर्माण सामग्री का लेखा-जोखा, संयंत्र और मशीनरी, संयंत्र और मशीनरी, स्टॉक सत्यापन। सरप्लस सामग्री का वर्गीकरण और निपटान तथा एमएस खाता
23. राजभाषा हिन्दी राजभाषा नियम-1976 एवं रेलवे में इसकी उपयुक्तता एवं सामान्य ज्ञान

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16012/2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Tech-III/Works (Carpenter, Painter, Welder, Blacksmith, Mason, other Misc category) (Level-2)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025
(ii) Dy. CE/Stn. Dev. letter No. SD/Misc dated 08.07.2025.

In reference to above subject, the syllabus for selection to the post of Tech-III/Works (Carpenter, Painter, Welder, Blacksmith, Mason, other Misc category) (Level-2) 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>

English version will follow.

Please acknowledge the receipt.

DA/as above

(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

टेक्नीशियन-III पद के लिये पाठ्यक्रम

सामान्य

1. रेलवे विभाग का सामान्य परिचय एवं इंजीनियरिंग विभाग का विस्तारपूर्वक परिचय।
2. रेल सेवा (आचरण नियम, पास नियम तथा अवकाश नियम, डी एंड ए आर आदि नियमों की जानकारी।
3. सामान्य सुरक्षा दुर्घटना और अग्निशमनयंत्र की जानकारी।
4. प्राथमिक उपचार की जानकारी
5. सामान उठाने वाले व ले जाने वाले उपकरणों का प्रयोग
6. कार्यस्थल पर साफ सफाई का महत्व।
7. कार्यस्थल पर सावधानियां एवं सुरक्षा।
8. राजभाषा नियम-1976 एवं रेलवे में इसकी उपयुक्तता एवं सामान्य ज्ञान

पेन्टर पद के लिये अतिरिक्त पाठ्यक्रम

1. पेंटिंग का परिचय, पेंटिंग में प्रयोग किये जाने वाले औजारों व उपकरणों की जानकारी एवं रख रखावा।
2. पेंट के प्रकार व उसे सुरक्षित रखने के उपाय, पेंटिंग के समय प्रयोग में आनेवाले अन्य पदार्थों के बारे में जानकारी।
3. सतह तैयार करने की विधि, दीवार पेंटिंग, लकड़ी ओर धातु की सतहों पर पेंटिंग व सजावटी पेंटिंग सतह तैयार करने की विधि
4. इंजीनियरिंग विभाग में किए जानेवाले इंजीनियरिंग पेंटर के कार्यों के बारे में जानकारी।

लोहार पद के लिये अतिरिक्त पाठ्यक्रम

1. धातुओं की पहचान, लोहार में प्रयोग किये जाने वाले औजारों व उपकरणों की जानकारी एवं रख रखावा।
2. हस्तचालित तथा अन्य औजारों का प्रयोग, हथोड़ा चलाने की विधियां भट्टी का संचालन व गर्मी उपचार
3. सामान्य दोष ओर उनका सुधार
4. इंजीनियरिंग विभाग में किए जानेवाले लोहार के कार्यों के बारे में जानकारी।

राज मिस्त्री के लिए अतिरिक्त पाठ्यक्रम।

1. भवन निर्माण सामग्री की पहचान, सीमेंट, रेत ओर मोरंग की जानकारी
2. ईंटों की किस्में ओर गुणवत्ता, चिनाई तकनीकी, ईंटों की चिनाई, प्लास्टरिंग और फिनिशिंग, वाल लेवलिंग और लाइनिंग
3. कंक्रीट मिक्सिंग और कास्टिंग
4. इंजीनियरिंग विभाग में किए जानेवाले राज मिस्त्री के कार्यों के बारे में जानकारी

वैल्डर के लिए अतिरिक्त पाठ्यक्रम।

1. वैल्डिंग उपकरणों के रखरखाव की प्राथमिक जानकारी, धातुओं के जोड़ व वैल्डिंग का महत्व
2. विद्युत आर्क वैल्डिंग का प्रारम्भिक ज्ञान, विद्युत आर्क वेल्डिंग तकनीक, आर्क वैल्डिंग इलेक्ट्रोड्स आधुनिक वैल्डिंग विधियों व प्रतिरोध वैल्डिंग की जानकारी, गैस वैल्डिंग व गैस कटिंग की जानकारी
3. वैल्डिंग से पहले की जाने वाली तैयारी वैल्डिंग के लिए करंट का चुनाव व प्रयोग में होने वाले औजारों की जानकारी।
4. विशिष्ट धातुओं की वैल्डिंग, विविध वैल्डिंग मैकेनाइज्ड एवं ऑटोमैटिक वैल्डिंग, वैल्डिंग के दोष वैल्डिंग जॉइंट तथा फिक्सचर की जानकारी, विभिन्न आकारों के इलेक्ट्रोडों की विद्युत वाहकता शक्ति, इंजीनियरिंग विभाग में वैल्डिंग का प्रयोग

कारपेंटर के लिए अतिरिक्त पाठ्यक्रम।

1. कारपेंटरी का परिचय, कारपेंटरी में प्रयोग किये जाने वाले औजारों व उपकरणों की जानकारी तथा रखरखाव।
2. लकड़ी तथा कारपेंटरी के प्रयोग में आने वाले अन्य पदार्थों के बारे में जानकारी। कारपेंटरी में प्रयोग किये जाने वाले कलपुर्जों की जानकारी।
3. लकड़ी की पहचान, लकड़ी जोड़ने की तकनीक आरा मशीन एवं अन्य मशीनों का संचालन
4. फर्नीचर का निर्माण दरवाजा खिड़की अलमारी बनाना फिनिशिंग और पोलिशिंग कार्य
5. इंजीनियरिंग विभाग में किए जाने वाले कारुणकारी कार्यों के बारे में जानकारी।

प्लम्बर पद के लिये अतिरिक्त पाठ्यक्रम

1. प्लम्बिंग का परिचय, प्लम्बिंग में प्रयोग किये जाने वाले औजारों व उपकरणों की जानकारी एवं रख रखावा।
2. प्लम्बर के प्रयोग में आनेवाले पानी की पाइपलाइन, नल ,पानी की टंकियों, सीवेज पाइपलाइन, वाल्व एवं अन्य पदार्थों के बारे में जानकारी ,
3. पानी और सीवेज सिस्टम को स्थापित करना, मरम्मत करना, पाइपलाइन बिछाना, नल और शौचालय ठीक करना, और पानी की टंकियों की सफाई करना और इमारतों में पानी और सीवेज सिस्टम का संचालन
4. इंजीनियरिंग विभाग में किए जानेवाले प्लम्बिंग के कार्यों के बारे में जानकारी।

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16023/2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Junior Engineer/Bridge (Level-6)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025

(ii) Dy. CE/BD-II/HQ letter No. Dy. CE/Br/HQ/A-4/Pt-III dated 16.06.2025.

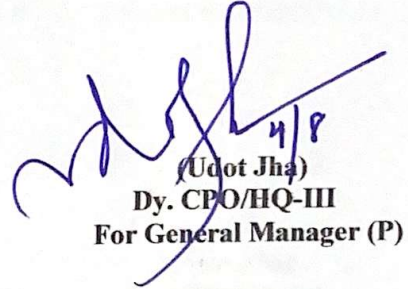
In reference to above subject, the syllabus for selection to the post of Junior Engineer/Bridge (Level-6) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus of JE/Bridge Exam

SN	Topics
1	General functioning of the Railways and the organizational structure of various departments.
2	Establishment: Payment of Wages Act, Hours of Employment Regulations, Discipline and Appeal Rules, rules regarding leave, salary, and passes, maintenance of service records, muster sheet etc.
3	Duties of bridge staff i.e. Technician Bridge Gr. I, II, Sr. Technician Bridge & JE/Bridge.
4	Knowledge of codes, manuals, and standard operating procedures.
5	Personal safety and safe working methods, particularly in electrified sections, administration of first aid, action in case of emergencies, tools and tackles, protection of staff working on bridge structures, and ensuring the safety of travelling public and railway property.
6	Bridge terminology, types of bridges, service girders including vertical clearances, freeboard, HFL, FSL, danger level, and bridge name boards, etc.
7	Erection of bridge girders and Callender-Hamilton spans and other steel structures, formulation of launching schemes (side slew method, end launching, and using road crane)
8	Inspection and maintenance of bridges and steel structures, including prestressed concrete girders, composite girders, trolleys, safety refuges, and footpaths. Numerical rating technique, examination of girder alignment and seating, structural condition of girders, distortion, condition of steelwork, types of bearings and their oiling and greasing, rivet testing, loose rivet diagram, welding techniques, painting, preparation of steel surfaces for painting, painting schedule of bridge girders, metalizing, maintenance records, and flood level marking.
9	Preparation of Bridge Inspection Register and other registers. Basics of BMS (Bridge Management System)
10	Schedule of maximum and minimum dimensions (SOD).
11	Track protection rules: works of short duration & long duration, knowledge of engineering indicators, etc.
12	Rules for working of trolleys and lorries.
13	Actions during accidents, breaches, and emergencies, and restoration of through running.
14	Acquaintance with rationalized steel sections available in the market along with their sectional properties, standard bridge spans with their dimensions and schedule.
15	Fabrication of bridge girders and other steel structures such as platform shelters, foot over bridges, tank staging, steel cribs, pantries, overhead cranes, turntables, microwave towers, etc.
16	Maintenance of tools, plant, and machinery.
17	Rehabilitation of bridges, strengthening techniques & temporary speed restrictions.
18	River behavior and flood management – river hydrology, flood history, afflux calculation, flood protection structures, guide bunds, spurs, marginal bunds, monsoon actions. Basics of Soil Mechanics.
19	Office work – general correspondence, submission of returns, account of stores and bridge materials, imprest, tools, plant and machinery, stock verification, classification and disposal of surplus material, and MAS account
20	Rajbhasha (Hindi) & General Knowledge of India.

This has the approval of CBE/NR vide PP no. 20 File no. 04 C.E/BR-HD/A-4/Pt-III

XEN/100-II - 8
10/12/25
16.06.25
DY. C.E/BR-II

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16024 /2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Tech-III/Bridge (Level-2).

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025

(ii) Dy. CE/BD-II/HQ letter No. Dy. CE/Br/HQ/A-4/Pt-III dated 16.06.2025.

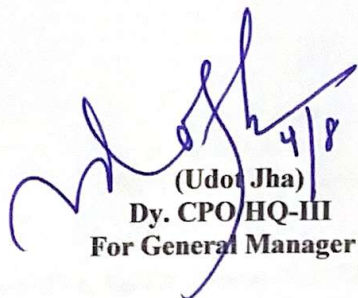
In reference to above subject, the syllabus for selection to the post of Tech-III/Bridge (Level-2) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus of Technician Grade –III Exam

S.N	Topics
1	General knowledge of the railway organization and its structure.
2	Rajbhasha- directives of implementation of rajbhasha.
3	General knowledge of establishment rules- Pass rules, Leave rules, D&AR (1968) Rules, various allowances and modules introduced in railway efficient working.
4	Bridges – their components and parts, detailed types of bridges, bearings (types and uses), clear span, effective span, and overall span. Service girders, including vertical clearances, freeboard, HFL, FSL, danger level, and bridge name boards, etc.
5	Duties of bridge staff i.e. Technician Bridge Gr. I, II, III.
6	General principles of schedule of dimensions in Railways.
7	Inspection and maintenance of bridges and steel structures including prestressed concrete girders, composite girders, trolley and safety refuges, footpaths, numerical rating technique ORN, CRN, examination of girder alignment and seating, structural condition of girders, distortion, condition of steel work, types of bearings and their oiling & greasing, rivet testing, loose rivet diagram, welding techniques.
8	Fabrications & erection of steel bridge girders & other steel structures, various shops in Bridge workshops and types of machines used. Use of HSFG bolts in Railways.
9	Corrosion & its preventive measures- painting, metallizing, epoxy based paints, riveting, welding & its procedure.
10	Safety – personal safety and track safety, use of temporary and permanent engineering signals, protection of railway lines during bridge work, and safe working practices in electrified and non-electrified sections.
11	Temporary arrangements and materials used for such arrangements, including CC cribs, steel trestles, winches, and various types of service girders. Working rules for operations involving cranes and different methods of girder launching.
12	Different unit systems – CGS, MKS, and SI unit systems, along with unit conversions.
13	General methods of carpentry work and the tools used. Knowledge of tools and equipment used in bridge works, including compressors, jacks, welding plants, generators, etc.
14	Rules for working of trolleys and lorries.

This has the approval of LBE/NR vide PP No. 30
File no. DY. LE / BR-HQ / A-4 / Pt -III

REN/BD-II

16/6/25

DY. LE/BD-II

16.06.25

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16025 /2025

No. 220-E/1826/EIIBI

Dated:- 4.07.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Junior Engineer/TMC (Level-6)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025

(ii) Dy. CE/TMC/HQ letter No. 219/S/1/TMC/General dated 01.07.2025.

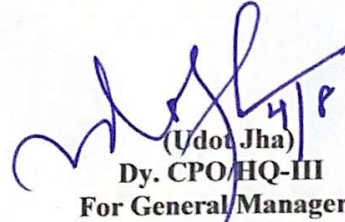
In reference to above subject, the syllabus for selection to the post of Junior Engineer/TMC (Level-6) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus of JE/TMC

Sr. No.	Topic	Brief Description
1	Track Machine	<ol style="list-style-type: none"> 1. Types of Track Machines 2. Main Components and Functions 3. Machine Outputs and Capabilities 4. Working Methods 5. Machine-Specific Technical Parameters 6. Safety Features and Equipment 7. Safety & Signalling etc.
2	Track Machine Manual	<ol style="list-style-type: none"> 1. Track Machine organization 2. Inspection of machines 3. Maintenance schedule 4. Duties of SSE/JE etc.
3	Electrical and Electronics System	<ol style="list-style-type: none"> 1. Basic Electrical Components 2. Electrical Components in Track Machines 3. Engine Electrical Systems 4. Sensors and Transducers 5. Control Systems 6. Safety Devices and Electrical Protection
4	Hydraulics System	<ol style="list-style-type: none"> 1. Fundamentals of Hydraulic Systems 2. Hydraulic Components in Track Machines 3. Hydraulic Fluids and Lubricants 4. Hydraulic Operations in Machines 5. Safety and Maintenance of Hydraulic Systems 6. Machine-Specific Applications
5	Pneumatics System	<ol style="list-style-type: none"> 1. Principles of Pneumatics 2. Pneumatic Components in Track Machines 3. Pneumatic Brake Systems 4. Safety and Maintenance 5. Applications in Track Machines 6. Troubleshooting and Best Practices
6	Mechanical System	<ol style="list-style-type: none"> 1. Fundamentals of Mechanics 2. Mechanical Components in Track Machines 3. Machine Structures and Configurations 4. Transmission and Drive Systems 5. Maintenance & Wear Monitoring 6. Machine-Specific Mechanical Features
7	IC Engine	<ol style="list-style-type: none"> 1. IC Engine Fundamentals 2. Engine Types in Track Machines 3. Fuel and Lubrication Systems 4. Engine Starting and Charging Systems 5. Cooling and Exhaust Systems 6. Maintenance and Safety
8	Workshop Technology	<ol style="list-style-type: none"> 1. Smithing & Forging 2. Welding & Related Processes 3. Bench Work & Fitting

		<ol style="list-style-type: none"> 4. Measurement & Inspection 5. Lathe Machine Operations 6. Drilling, Boring, and Reaming 7. Shaping, Slotting, and Grinding 8. Milling & Gear Cutting 9. Jigs & Fixtures 10. Broaching & Threads 11. Quality Control
9	Permanent Way	<ol style="list-style-type: none"> 1. Introduction to Permanent Way 2. Rails and Rail Sections 3. Sleepers 4. Ballast and Formation 5. Track Geometry & Maintenance 6. Track Fittings and Fastenings 7. Points and Crossings 8. Track Recording & Monitoring 9. LWR/CWR and Rail Stressing 10. Safety in Track Maintenance
10	Indian Railway Organisation & Establishment	<ol style="list-style-type: none"> 1. History of Railways, Zonal Railways, Divisions 2. Railway Services Rules 3. Leave Rules 4. Disciplinary & Appeal Rules 5. Pass Rules & Privileges 6. Pension and Retirement Benefits 7. Service Records 8. Other Establishment Matters
11	Rajbhasha	<ol style="list-style-type: none"> 1. Constitutional Provisions 2. Official Language Act, 1963 3. Official Language Rules, 1976 4. Region-wise Classification 5. Railway Board Instructions & Policies 6. Hindi Typing, Drafting & Terminology
12	Basics of Computer	<ol style="list-style-type: none"> 1. Fundamentals of Computers 2. Computer Hardware & Software 3. Data Storage and Units 4. Operating Systems & File Management 5. Internet & Networking Basics 6. Cyber Security & Digital Safety 7. Indian Railway Online Portals
13	Stores Accounts	<ol style="list-style-type: none"> 1. Introduction to Stores System 2. Store Indents and Purchases 3. Types of Purchases 4. Tendering Process 5. e-Procurement System 6. Inspection and Acceptance 7. Stock Verification & Ledger Control 8. Write-off and Condemnation 9. Purchasing Preferences 10. Billing and Payments

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16026 /2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Tech-III/TMC (Level-2).

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025

(ii) Dy. CE/TMC/HQ letter No. 219/S/1/TMC/General dated 01.07.2025.

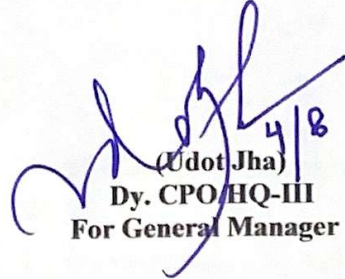
In reference to above subject, the syllabus for selection to the post of Tech-III/TMC (Level-2) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus of Tech-III/TMC

Sr. No.	Topic	Brief Description
1	Track Machine	<ol style="list-style-type: none"> 1. Classification of track machines (Tamping, DGS, BRM, TRT, PQRS, UNIMAT, SRGM, etc.) 2. Main Components and Working principles of key machines. 3. Machine Stipulated Outputs 4. Machine-Specific Technical Parameters 5. Safety Features and Equipment 6. Safety & Signalling etc. 7. Scheduled maintenance of Machines
2	Track Machine Manual	<ol style="list-style-type: none"> 1. Track Machine organization 2. Inspection of machines 3. Maintenance schedule 4. Duties of Tech etc.
3	Basics of Electrical and Electronics	<ol style="list-style-type: none"> 1. Basic Electrical Components sensors, solenoids, control panels 2. Electrical Components in Track Machines , DC/AC supply and machine electrical layouts, Relay logic and fuse systems, Battery, alternator, starter motor, basic wiring layout. 3. Control Systems 4. Safety Devices and Electrical Protection
4	Basics of Hydraulics	<ol style="list-style-type: none"> 1. Fundamentals of Hydraulic Systems & Hydraulic principles (Pascal's law, pressure vs. flow) 2. Hydraulic Components in Track Machines : pumps, valves, actuators, filters 3. Hydraulic Fluids and Lubricants 4. Hydraulic control systems 5. Safety and Maintenance of Hydraulic Systems 6. Machine-Specific Applications & Troubleshooting of hydraulic failures (noise, overheating, pressure drop,vibration,
5	Basics of Pneumatics	<ol style="list-style-type: none"> 1. Principles of Pneumatics 2. Pneumatic Components in Track Machines 3. Pneumatic Brake Systems 4. Safety and Maintenance 5. Applications in Track Machines 6. Troubleshooting (noise, overheating, pressure drop) and Best Practices

6	Basics of Mechanical	<ol style="list-style-type: none"> 1. Fundamentals of Mechanics 2. Mechanical Components in Track Machines Gears and Transmission, Bearings, Couplings 3. Machine Structures and Main Components: Cylinder, Piston, Crankshaft, Fuel Injector, Camshaft. 4. Transmission and Drive Systems 5. Maintenance & Wear Monitoring 6. Machine-Specific Mechanical Features
7	Basics of IC Engine	<ol style="list-style-type: none"> 1. IC Engine Fundamentals and Types , spark ignition, compression ignition ,Four-Stroke Diesel Engine Cycle. 2. Engine Types in Track Machines Important Terms: Horsepower (HP),Torque,RPM 3. Fuel and Lubrication Systems 4. Engine Starting and Charging Systems 5. Cooling, Lubrication System and Exhaust Systems 6. Maintenance and Safety
8	Workshop Technology	<ol style="list-style-type: none"> 1. Smithing & Forging 2. Welding & Related Processes 3. Bench Work & Fitting 4. Measurement & Inspection 5. Lathe Machine Operations 6. Drilling, Boring, and Reaming 7. Shaping, Slotting, and Grinding 8. Milling & Gear Cutting 9. Jigs & Fixtures 10. Broaching & Threads 11. Quality Control
9	Permanent Way	<ol style="list-style-type: none"> 1. Introduction to Permanent Way 2. Rails and Rail Sections 3. Sleepers 4. Ballast and Formation 5. Track Geometry & Maintenance 6. Track Fittings and Fastenings 7. Points and Crossings 8. Track Recording & Monitoring 9. LWR/CWR and Rail Stressing 10. Safety in Track Maintenance
10	Indian Railway Organisation & Establishment	<ol style="list-style-type: none"> 1. History of Railways, Zonal Railways, Divisions 2. Railway Services Rules 3. Leave Rules 4. Disciplinary & Appeal Rules 5. Pass Rules & Privileges 6. Pension and Retirement Benefits 7. Service Records 8. Other Establishment Matters
11	Rajbhasha	<ol style="list-style-type: none"> 1. Constitutional Provisions

		2. Official Language Act, 1963 3. Official Language Rules, 1976 4. Region-wise Classification 5. Railway Board Instructions & Policies 6. Hindi Typing, Drafting & Terminology
12	Basics of Computer	1. Fundamentals of Computers 2. Computer Hardware & Software 3. Data Storage and Units 4. Operating Systems & File Management 5. Internet & Networking Basics 6. Cyber Security & Digital Safety 7. Indian Railway Online Portals

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16027/2025

No. 220-E/1826/EIIBI

Dated:- 4.07.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Junior Engineer/Horticulture,Civil Engineering Department (Level-6)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025
(ii) ADEN/Horticulture/DLI letter No. 101-H/Syllabus & Ques. Bank/Hort. Dated 08.07.2025.

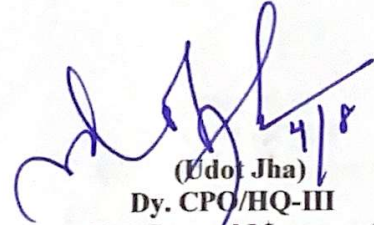
In reference to above subject, the syllabus for selection to the post of Junior Engineer/Horticulture, Civil Engineering Department (Level-6) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.

Syllabus for Junior Engineer/Horticulture

1. Floriculture and Landscape Gardening

History of Gardening in India, Area and Production of Flowers in the State and the Country, Rose, Chrysanthemum, Carnation, Orchids, Gerbera, Gladiolus, Tuberose, Anthurium, Lilium, Marigold, Jasmine, China aster, Crossandra, Lotus, Dahlia, Tulip, Bird of Paradise, Freesia, Gloriosa, Alstroemeria, Zantedeschia, Protected Cultivation, Breeding of Flowers and Ornamentals, Biotechnology in Floriculture, Post Harvest Handling of Flowers, Dry Flower Technology, Flower Perfumery, Value Addition in Ornamental Crops, Fresh Flower Arrangement, Landscape Gardening, Principles of Gardening, Styles of Gardening, Famous Gardens of India, Garden Adornments, Garden Elements and Principles of Garden Designs, Lawn, Bonsai, Water Garden, Annuals, Shrubs, Ornamental Trees, Climbers, Cacti and Succulents, Ferns and Selaginellas, Indoor Plants, Ornamental Palms, Bulbous Plants, Home Garden, Roof Garden, Nursery Management of Ornamental Plants, Vertical Gardening.

2. General Intelligence & Reasoning:

It would include questions of both verbal and non-verbal type. This component may include questions on analogies, similarities and differences, space visualization, spatial orientation, problem solving, analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning and figural classification, arithmetic number series, non-verbal series, coding and decoding, statement conclusion, syllogistic reasoning etc. The topics are, Semantic Analogy, Symbolic/Number Analogy, Figural Analogy, Semantic Classification, Symbolic/Number Classification, Figural Classification, Semantic Series, Number Series, Figural Series, Problem Solving, Word Building, Coding & de-coding, Numerical Operations, symbolic Operations, Trends, Space Orientation, Space Visualization, Venn Diagrams, Drawing inferences, Punched hole/ pattern- folding& un-folding, Figural Pattern-folding and completion, Indexing, Address matching, Date & city matching, Classification of centre codes/roll numbers, Small & Capital letters/numbers coding, decoding and classification, Embedded Figures, Critical thinking, Emotional Intelligence, Social Intelligence.

3. General Awareness:

Questions in this component will be aimed at testing the candidates' general awareness of the environment around him and its application to society. Questions will also be designed to test knowledge of current events and of such matters of every day observations and experience in their scientific aspect as may be expected of any educated person. The test will also include questions relating to India and its neighboring countries especially pertaining History, Culture, Geography, Economic Scene, General Policy & Scientific Research.


ADEH/H/PLI

4. Quantitative Aptitude:

The questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be computation of whole numbers, decimals, fractions and relationships between numbers, Percentage, Ratio & Proportion, Square roots, Averages, Interest, Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and distance, Time & Work, Basic algebraic identities of School Algebra & Elementary surds, Graphs of Linear Equations, Triangle and its various kinds of centres, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles, Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square base, Trigonometric ratio, Degree and Radian Measures, Standard Identities, Complementary angles, Heights and Distances, Histogram, Frequency polygon, Bar diagram & Pie chart.


ADEN/H/PLI

NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16039/2025

No. 220-E/1826/EIIBI

Dated:- 4.08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Junior Engineer/P.way, Civil Engineering Department (Level-6)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025
(ii) Dy. CE/TO letter No. 108/Creation of Post/Genl/P{t.I/2025 dated

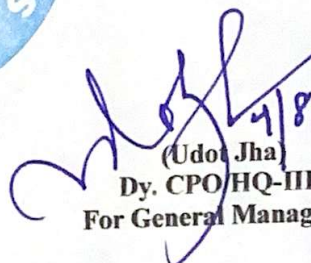
In reference to above subject, the syllabus for selection to the post of Junior Engineer/P.way, Civil Engineering Department (Level-6) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udot Jha)
Dy. CPO/HQ-III
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. Zonal. 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.
Dy.CPO/IT, HQs Office, Baroda House, NDLS for uploading on the website

Syllabus of JE/P Way

SN	Topic	Brief Description
1.	P.Way matters including IRPWM-2024 with up to date correction slips	<ol style="list-style-type: none"> 1. Duties of JE/P.Way, Gang Mates, Keyman, Patrolman, Gateman and Track Maintainers. 2. Record Keeping of gang work, Musters, Strength and Jurisdiction of gangs, Custody of gang tools. 3. Track structure and components. 4. Maintenance of the track in track circuited areas. 5. Maintenance of the track in electrified areas. 6. Construction and maintenance of Permanent way particularly Curves (realignment of curves, curvature, transitions, Super elevation of curves, safe speeds cant deficiency, speed on curves with turnouts), LWR/ CWR Track, Short Welded Rails, Sleepers, Fastenings, Level crossing, stations, Points and crossings, Laying of new track, Overhauling, Systematic through packing, Picking up slacks, Screening of ballast, maintenance of drains, lubrication of rail joints, adjustment of creep, yards and yard drainage, safe keeping of P Way material. 7. Loading and Unloading from Hopper Ballast wagons. 8. Track monitoring and tolerances, action to be taken after Track recording. 9. Track renewals- criteria and track laying standards. 10. Knowledge on Imposition of Engineering restrictions and indicators, works of short duration, works of long duration, temporary engineering fixed signals, working of trolleys, and dip Lorries and rail dollies, materials trains and, Patrolling of the Railway line during monsoon. 11. Pre-Monsoon precautionary measures. 12. Codes and Manuals. 13. Safety at worksite. 14. Rail/Weld failures, occurrence, action, restoration and prevention. 15. Action to be taken during Accident and Breaches. 16. Updating of details and use of features in TMS. 17. Knowledge of Land Management. 18. Training schedules and competency certificates. 19. Small track machine types and use in maintenance, working of MMUs, Working of material trains and Track Machines, pre tamping and post tamping activities, Duties of In charge SSE/SE/JE (P Way), Rated output of Track machines and Rules for Movement and Working of Track Machines 20. Provision of IRSOD- Standard dimensions (Chapter-I), Station Yards (Chapter-II).

2.	Northern Railway G & SR- 2025 edition.	<ol style="list-style-type: none"> 1. Rules applying to Railway servants Generally, Chapter-II 2. Use of hand signals and Detonating signals, Chapter-III-E & F. 3. Working of material trains, Chapter-IV-H 4. Permanent Way and Works , Chapter-XV-A 5. The Working of Lorries, Trolleys and Motor trolleys, Chapter XV-B 6. Level Crossings, Chapter XVI
3.	Indian Railway Organisation & Establishment And finance matters	<ol style="list-style-type: none"> 1. Organization of Railways, Zonal Railways, Divisions 2. Railway Services conduct Rules 3. Factories Act 4. Leave Rules 5. Disciplinary & Appeal Rules 6. Pass Rules & Privileges 7. Pension and Retirement Benefits 8. Service Records, leave records 9. Other Establishment Matters 10. Payment of Wages Act, Workmen compensation act and Hours of Employment Regulations 11. Training and promotion schedules and opportunities
4.	Rajbhasha	<ol style="list-style-type: none"> 1. Constitutional Provisions 2. Official Language Act, 1963 3. Official Language Rules, 1976 4. Region-wise Classification 5. Railway Board Instructions & Policies 6. Hindi Typing, Drafting & Terminology
5.	General Ability and Computer Awareness	<ol style="list-style-type: none"> 1. Technical terms used in P.Way and their meanings, significance and relevance to the work. 2. Messages for imposing and cancellation of (a) Speed Restriction (b) Line Blocks. 3. Certification of Track during unusual occurrences. 4. Nature and types of normal correspondence in English between a JE/P.Way and AEN. 5. Instructions in English relating to day to day working of a JE/P.Way. 6. General awareness: Contains questions based as to test the knowledge of candidates, which they would acquire by general observation/reading without a specific study or detailed knowledge of text books. The paper should 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. 7. Current Affairs. 8. Basic of computer knowledge.

6.	Stores Accounts matters	<ol style="list-style-type: none"> 1. Introduction to Stores System 2. Store Indents and Purchases 3. Types of Purchases 4. Tendering Process 5. e-Procurement System 6. Inspection and Acceptance 7. Stock Verification & Ledger Control 8. Write-off and Condemnation 9. Purchasing Preferences 10. Billing and Payments 11. Scrap disposal 12. DMTR 13. MAC account 14. Field book.
----	-------------------------	--



NORTHERN RAILWAY

Headquarters Office,
Baroda House,
New Delhi.

P.S.No.16040/2025

No. 220-E/1826/EHBI

Dated:- .08.2025

DRM/NR-DLI, FZR, LKO, MB, UMB & JAT
CAO/C, K.Gate/DLI, CAO/C USBRL/Satyam Complex, TrikutaNgr/JAT.
CWM/CB-LKO, JUDW, AMV-LKO & ASR,
Dy. CMM/SSB, AMV-LKO & JUDW
DY.CE/TMC/Line, State Entry Road, New Delhi.
Dy.CE/Bridge, CB-LKO, JUC & TKJ.
AEN/Khalispur,

Sub: Syllabus for Selection to the post of Technician-III/P.way, Civil Engineering Department (Level-2)

Ref: (i) PCPO's letter No PCPO/Sel./2025 dated 15.05.2025
(ii) Dy. CE/TO letter No. 108/Creation of Post/Genl/P{t.I/2025 dated

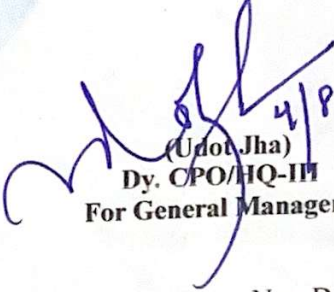
In reference to above subject, the syllabus for selection to the post of Technician-III/P.way, Civil Engineering Department (Level-2) is enclosed herewith for your information and necessary action please.

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

Hindi version will follow.

Please acknowledge the receipt.

DA/as above


(Udit Jha)
Dy. CPO/HQ-III
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. Zonal. 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.
Dy.CPO/IT, HQs Office, Baroda House, NDLS for uploading on the website

**Syllabus for Selection to the Post of Technician Grade-III
(P.Way) against LDCE Quota.**

I. Professional Knowledge:

1. Knowledge about the Engineering tools required for blacksmith work.
2. Knowledge and role of blacksmith working in Railways.
3. Knowledge of sizes and weight of Rails, Structural Steel Sections.
4. Knowledge of using Rail cutting including knowledge of hacksaw blade, drill bits and sizes, Jim crow, mending of tool, kinds of coals and blowers
5. Knowledge of marking, chiseling, punching and bending.
6. Knowledge of preparation of rivets for bridge riveting works
7. Knowledge on Rectification to the Failure of Lifting Barrier, Winch, etc., at Level Crossing and installation mechanism of Lifting Barrier.
8. Chamfering of holes.
9. Knowledge regarding drilling hole for gapless joint
10. Safety precautions during working on the track and Safety first rules
11. Emergency failure attention & Permanent restoration in case of RFWF
12. Functional and Repair Mechanism of Ballast Train (BOBYN)
13. Knowledge regarding various welding techniques - Arc welding, Gas welding, Thermit welding, electrodes etc for Welding of Rails, Structural Steel, etc.,
14. Knowledge regarding way, works and bridges connected with the trade
15. Basic Knowledge on Tools and Small Track Machines (Abrasive Rail Cutter, Drilling Machine, Grinding stones, Rail Tensor, etc.)
16. Keeping log/record of works done.
17. Basic understanding of TRD and S&T requirements in reference to Track works.

II. Track Technology

Points & Crossings

Functions & Important terminology Constituents of Turnout. Switch Angle, Flange way clearance.

Heel divergence, Throw of switch, Types of Crossings, Crossing number & Main constituents of Built-up Crossing, wear limits of components.

III. Protection of work site-Engineering Restrictions & Indicators

Emergency Protection of track: Single Line & Double Line.

Detonators & Flare Signals.

IV. Official Language Policy and Rules