



भारत सरकार / Government of India
दक्षिण पूर्व रेलवे / South Eastern Railway
खड़गपुर मंडल / Kharagpur Division

कार्यालय

मंडल रेल प्रबंधक (का) खड़गपुर

DRM (P)/ Kharagpur

दिनांक:- 08-07-2025

संख्या/No. SER/P-KGP/EL/209/JE(TRD)/IMAQ/Uniform Approved Syllabus /25

To,
The Sr. DEE/TRD/KGP
Kharagpur, South Eastern Railway

विषय /Sub:- Approved Uniform Syllabus for selection to the post of JE(TRD), L-6 against
25% IMAQ in Electrical Department over South Eastern Railway.

संदर्भ/Ref:- APO/HRMS/GRC 's letter No. SER/P-HQ/EL/ JE(TRD)/IMAQ/Syllabus/2025/
CN: 312631, Date: 07.07.2025.

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Enclosed please find APO/HRMS/GRC's letter under reference, which contains Approved Uniform Syllabus for selection to the post of JE(TRD), L-6 against 25% IMAQ in Electrical Department over South Eastern Railway, is forwarded herewith for information the staff concerned.

Encl:- 03 pages

सहायक कार्मिक अधिकारी

Asstt. Personnel Officer

कृते वरि. मंडल कार्मिक अधिकारी

for Sr. Divl. Personnel Officer

दक्षिण पूर्व रेलवे खड़गपुर

S. E. Railway/ Kharagpur

दक्षिण पूर्व रेलवे/SOUTH EASTERN RAILWAY

मुख्यालय/Headquarters
कार्मिकविभाग/Personnel Department,
11, गार्डनरीचरोड/11, Garden Reach Rd,
कोलकाता-43/Kolkata-700043

No. SER/P-HQ/EL/JE(TRD)/IMAQ/Syllabus/2025/CN: 312631

Dated: 07.07.2025

To,
The Divn. Personnel Officer,
South Eastern Railway/ADA/CKP/KGP/RNC.

The Workshop Personnel Officer,
South Eastern Railway/KGPW.

Sub: Approved Uniform Syllabus for selection to the post of JE(TRD), L-6 against 25% IMAQ in Electrical Department over South Eastern Railway.

In order to Standardize the Syllabus for conduction the selection to the post of JE(TRD), L-6 against 25% IMAQ in Electrical Department over South Eastern Railway through CBT, the Syllabus as enclosed in **Annexure-'A'** have been prepared and approved by the Competent Authority i.e. CEDE/GRC. This may be circulated to all concerned so as to enable all the probable candidates to prepare themselves for the forthcoming examinations.

It is therefore requested for wide circulation of the same and it is also available on the website-
www.ser.indianrailways.gov.in.

Encl: Annexure- 'A'

P BHASKAR
RAO

Digitally signed by P
BHASKAR RAO
Date: 2025.07.07
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(P.Bhaskar Rao)
Asstt. Personnel Officer (HRMS)
for Pr. Chief Personnel Officer

Copy forwarded for information to the:

1. Secy. to PCEE for kind information of PCEE/GRC.
2. PS to PCPO for kind information of PCPO/GRC.
3. CEDE/GRC.
4. Sr. DEE(TRD)/ADA/CKP/KGP/RNC.
5. APO(HQ)/GRC.
6. APO(Ruling)/GRC.
7. OS/HRMS for uploading in the official website.

for Pr. Chief Personnel Officer

Approved Uniform Syllabus for Selection through CBT towards promotion to the post of JE(TRD), Level-6 against 25% IMAQ in Electrical Deptt. over S.E.Railway.

(1.) OHE:

1. Types of OHE and its maintenance
2. OHE Components and parameters, maintenance schedule.
3. Various types of OHE mast , portals and foundations
4. OHE arrangement in tangent/ curved tracks- Versine, Super elevation, Span Lengths, Wind pressure, Blow off stagger-factors affecting the stagger, Sag & Tension in conductors.
5. Cantilever assembly, Types of overlaps. Jumpers, Droppers, section Insulator, Turn-out, Cross-over
6. Bonding and Earthing of OHE
7. Types of Auto tensioning device and anti creep arrangement
8. Basic principles of sectioning and Sectioning arrangements
9. Types of neutral section and their usage.
10. Electrical clearance: Horizontal & Vertical, Power line crossing, Over dimensional consignments, Precautions pertaining to movement of ODCs.
11. Pantograph entanglement, Obligatory mast and track separation.
12. Power block and traffic Block, Duties of CTPC & TPC
13. Types of Tower wagons, Tower cars and its schedule maintenance, Working rules of Tower wagon/car in section
14. Unusual Occurrences Breakdowns & their restoration/Remedial Actions, Safety Precautions.
15. TDMS and UDM for TRD assets

(2) POWER SUPPLY INSTALATION:

1. Lay-out plan of TSS and its components, Supply at Traction sub-stations, Feeding and sectioning arrangement
2. Maintenance of Traction Sub-station(TSS), Feeding post(FP),Sectioning and paralleling post (SP), Sub-sectioning and paralleling post (SSP) , Sub-sectioning post (SS), Circuit Breaker, Interrupter, Isolators, Traction Transformer, Current Transformer, Potential transformer, Auxiliary Transformer, Capacitor Banks & Series Reactors, Power factor, Bus bars and connectors , Lightning Arrestor, Earthing Arrangements.
3. Types of Protective relays and their uses
4. Batteries used in TRD & their schedule of maintenance
5. DG analysis of transformer oil and BDV testing of transformer oil, Insulation Resistance
6. Basic Principal of 2X25 kV Traction system
7. Electrical accident and action to be taken, Fire precautions

(3) REMOTE CONTROL EQUIPMENT

1. Principles of SCADA Systems
2. Remote Terminal Unit (RTU),RTU Functional details,
3. UPS at RCC

(4) Establishment:

1. Leave Rules
2. Pass Rules
3. HOER
4. D&AR Rules.

(5) **RAJBHASA**

1. Translation from English to Hindi & Vice versa
2. Categorization of Region on the basis of Rajbhasa Act
3. Recommendation as per section 3(3) of Rajbhasa Act

(6) **STORES**

1. Stock & Non stock items
2. LM-32, DMTR, DS-8, R-Note, GeM

(7) **GENERAL KNOWLEDGE & GENERAL SCIENCE**

1. States & Capitals of India & abroad, Regarding Indian Railways (Zones, Names of CRB, Members of RB, GM, DRM and parent Deptt.), General ideas about other departments of Railway.
2. Ohm's Law, Series and Parallel Resistance, Voltage, Current, Resistance, Conductors, Insulators, Force, Watt, Kilowatt, Capacitance.

This has the approval of the Competent Authority.

