



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

कार्यालय / Office  
मंडल रेल प्रबंधक (का) / खड़गपुर  
DRM (P) / Kharagpur  
दिनांक:- 09-07-2025

संख्या/No. SER/P-KGP/EL/209/2/Uniform Approved Syllabus/JE (Genl.)/IMQAQ/25

To,  
The Sr. DEE/G/KGP & SRC, ADEE/G/GRC

विषय /Sub:- Approved Uniform Syllabus for selection to the post of JE (Genl.), L-6  
against 25% IMAQ in Elect. (G) Deptt. over South Eastern Railway.  
संदर्भ /Ref:- APO/HRMS/GRC's letter No. SER/P-HQ/EL/JE(Genl.)/IMQAQ/Syllabus/2025/  
CN: 312820, 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 (Genl.), L-6 against 25% IMAQ in Electrical(G) Department over South Eastern Railway, is forwarded herewith for information the staff concerned.

Encl:- 02 pages

(L. Mohapatra)

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(Genl.)/IMAQ/Syllabus/2025/CN: 312820

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(Genl.), L-6 against 25% IMAQ in Electrical Department over South Eastern Railway.

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In order to Standardize the Syllabus for conduction the selection to the post of JE(Genl.), 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 CEGE/GRC. This maybe 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](http://www.ser.indianrailways.gov.in).

Encl: Annexure- 'A'

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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. CEGE/GRC.
4. Sr. DEE(Genl.)/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(Genl.), Level-6 against 25% IMAQ in Electrical Deptt. over S.E.Railway.**

**(A) Electrical & Math**

1. Current, Voltage, Resistance, Impedance, Power, Energy, Harmonics, Efficiency, Ohm's Law, Kirchoff's law of current, Kirchoff's law of voltage, Series & Parallel circuits.
2. Working principle & Fundamentals of Transformers, Motors, Alternators, Relays and Circuit Breakers, Air Conditioning System.
3. Heat load calculation.
4. Window, Split, Centralized chiller plant and VRF type air-conditioners.
5. Math-Time & Distance, Profit/Loss, arithmetic, fundamentals of algebra and Geometry. Logical Reasoning
6. IE rules, CEA Regulations, Energy Conservation Act, BEE codes, ECBC, ECBC Rules
7. Star rating of Products
8. Energy efficiency measures in electrical assets.

**(B) Electrical (G) Power**

1. Power supply HT & LT, Railway Station power supply scheme, Quarters power supply scheme, Substation lay out, overhead & underground distributions, operation of transformer, switchgears, protective devices and distribution line
2. Step to control maximum demand, measurement of power, power factor etc.
3. Water supply system, types of pumps used in Indian railway, VS & HS pumps, efficiency drive, electrical connection and protection, cavitations and priming of pumps, submersible pumps and their applications
4. Illumination level-yard lighting, street lighting, platform, concourse area and colony network. Drive for workshop machinery
5. Earthing and bonding.
6. UPS applications and maintenance.
7. Type of Power Cable and their utility and laying procedure.
8. Lifts and Escalators-operation and maintenance practice, safety precautions during operation.
9. Electrical measuring equipments working principles

**(C) Electrical (G) Coaching: For different type AC/Non-AC coaches (SG, HOG, EOG, Power car etc.)**

1. Familiarization and Electrical equipment Layout
2. All Electrical equipment including batteries, Light, Fan, Air-conditioning, Watering, protection etc.
  - i. Working principle, ratings, protection
  - ii. Maintenance schedules.
3. Fire preventive measures
4. Single line diagram of Train lighting, coach wiring, under frame wiring

**(D) Basic Knowledge of Railway Working**

1. Stores Matters: Procedure of procurement of stock item, non-stock item, distribution and accountability of store, receipt and custody of store. Sell of surplus stores. Schedule of power.
2. Contractual Matters : Work proposal, Estimate, LOA, Agreement, GCC, Measurements, Billing & SOP.

**(E) RAJBHASHA**

1. Rajbhasha.
2. Official Language Act 1963.
3. Official Language Rules 1976.
4. Translation English to Hindi & Vice versa.

This syllabus has been issued with the approval of Competent Authority.