

Metro Railway / Kolkata

Office of the  
Principal Chief Personnel Officer  
Date:20/09/2024

No. MRTS/E.328/2/Promotion/JE(LDCE)

PCEE / PCME / CEE/RS / CEE/Con / CEE/HQ / CEE/Project  
Metro Railway, Kolkata

### NOTIFICATION

**Sub :** Selection for the post of Junior Engineer / Electrical in Level-6  
in the Electrical Department against 25% Intermediate Apprentice quota(LDCE)

**No. of vacancies = 18 (UR-12, SC-04, ST-02, PwBD-01)**

It has been decided by the competent authority to hold a selection to form a panel for filling up of 18 vacancies (UR-12, SC-04, ST-02 & PwBD=01) of Junior Engineer/Elect. in Level-6 in the Electrical Department, Metro Railway, Kolkata against 25% Intermediate Apprentice quota(LDCE). Accordingly options are invited from the eligible willing candidates of Electrical Department fulfilling the following terms & conditions.

#### **Eligibility Criteria and service conditions:**

1. Employee must have completed at least 03(three) years non-fortuitous service as Tech.III or in higher grade post of Electrical Department as on date of notification i.e. as on **20.09.2024**.
2. Employee must be below 47 years of age as on date of notification. (Five years relaxation is allowed for SC/ST candidates).
3. All serving employees having qualification of ITI/Act Apprentice pass in the relevant trade or 10+2 in Science stream from a recognized Board as prescribed by the Railway Board. The qualification of ITI/Act apprentice should be in trade relevant to the post of Junior Engineer/ Electrical.[RBE No.127/2003, 145/2003]
4. The employees possessing the qualification of Degree or Diploma in the relevant branch of Electrical Engineering are also eligible to appear in the selection for induction as intermediate apprentice.
5. The cut of date for determining the eligibility of the employees will be the date of issue of this notification. As such, the employees should fulfill the service conditions i.e age, educational qualification etc. as on date of notification i.e as on **20.09.2024**.

**NB:** In case of the employees who came on transfer to Metro Railway on bottom seniority, the period of service rendered in the old unit will also be reckoned to determine their eligibility whenever the minimum length of service is prescribed as a condition for promotion .However, this will be subject to condition that the service so allowed to be counted does not exceeds the length of service of his/her immediate senior in the new unit(Metro Railway Kolkata). The benefit of service will be applicable only in those cases where the staff joined the new unit on own request transfer in the same category of post[RBE No.34/2006] .

#### **Mode of Selection:**

**6. Professional ability:** The Professional ability will be adjudged through a Written Test. The candidates must secure a minimum of 60% marks in the written test for being considered for further selection process. The post of Junior Engineer/Elect. has being classified as Safety Category Post ,hence there is no relaxation in qualifying marks for any employee belonging to the SC/ST category. There will be no provision of ad-hoc promotion under "Best among fail scheme" for reserved category candidates against reserve vacancies.

7.The mode of written test will be 100% objective type multiple choice question having four options. The answers are to be marked on OMR answer sheet.

8.There will be 110 questions ,out of which the candidates will have to answer 100 questions. 10% of the total marks will be from Official Language policy which will be optional.

9.In case a candidate answers more than 100 questions ,the first 100 attempted questions will be taken for evaluation.

10.Cutting, overwriting, erasing or any type of alteration in the answer will not be accepted. Zero mark will be given for any answer having erasure or correction or overwriting. For each correct answer one mark will be given. For every wrong answer 1/3 mark will be deducted. No credit will be given to unattempted question.

11.Blue colour ball pen is to be used in the examination.

12.The duration of the examination will be 120 minutes.

13.The above test may be conducted either in pen paper mode (through OMR) or through computer based test(CBT ).

14.Distribution of Marks: Professional ability of the employees will be adjudged through written test only. Candidates who will secure minimum 60% marks in the written test will be considered for further selection process ( scrutiny of Service Records & APARs). Record of Service will be assessed based on entries in the service record and the personal file regarding academic and technical qualifications, awards/punishment etc.

15.The total distribution of marks under different heads will be as follows :-

Feature	Full Marks	Qualifying Marks
Written Test	70	42
Educational Qualification	10	18
Awards / Punishment	05	
APAR	15	
Total	100	60

16.The base marks under the heading of service record will be taken as 03 for all candidates. For any Award / Merit certificate at the level of PHOD/GM/Board in the last three years, maximum 01 mark for each award will be taken. In case of penalty during the last three years under consideration, 01 mark to be deducted for each major penalty and ½ mark to be deducted for each minor penalty. Maximum marks under this head will not exceed 05.

17.Marks will be allotted for educational qualification as under:

Educational Qualification	Marks allotted
Post Graduate in any stream / Master Degree	10
Degree in Engineering / Graduation(Pass / Hons.)	09
Diploma in Engineering	08
HS(10+2) / Intermediate	07
Matriculation / ITI	06

18.The final panel will be drawn in the order of merit based on aggregate marks out of 100 as indicated at item no. 15 above.

19.There will be no classification of candidates as Outstanding [RBE No.113/2009].

20.Empaneled candidates in the above selection will be required to undergo medical examination.

21.The eligibility of the candidates will be subject to their passing of Medical standard of A-3(Aye three) category.

22.Candidates will have to undergo in service training for a period of 13weeks[RBE No.10/2020] as prescribed. During the training period ,they will get the salary on the basis of their substantive cadre

pay of the post held before being sent on training. Candidates who will pass the final examination after completion of the above training will be promoted as JE/Elect in Level-6 and posted as per vacancy.

**23. Syllabus:** The syllabus for selection for the post of Junior Engineer/Electrical against 25%IQ (LDCE) is enclosed at Annexure-B.

**24. Date of Examination:** The date, time & venue of the examination will be intimated separately. However, the volunteering employees are requested to be in readiness and also note that there will be no supplementary examination if any employee is absent for any reason.

**25. How to apply:** The employees should submit application in prescribed format(Annexure-A) through proper channel. They should fill up the application in their own writing with blue ball point pen only. All relevant columns of the application should be filled completely .

**26. Last Date for submission of application:** The last date for submission of application by the willing employees is **21.10.2024**. All applications should be sent by the employees from their own email to the personnel department directly in the **e-mail** ([selectionpersonnel.mrk@gmail.com](mailto:selectionpersonnel.mrk@gmail.com)).

**Applications sent in physical mode( hard copy) will not be entertained.**

**27. Notifying to the staff:** The Supervisors / In-charge/ Controlling Officers are requested to give wide publicity to this notification wide publicity amongst the staff working their control

**28.** The concerned employees who intend to apply for the above selection are advised to keep themselves in readiness to appear in the written test at short notice.

**29.** Any application received after **21.10.2024** through email will not be entertained.

**30.** The written examination is likely to be held in the month of November 2024.

**Encl:** Annexures A & B

  
20/9/24

( K Chatterjee )  
Assistant Personnel Officer / IC  
for Principal Chief Mechanical Engineer  
[Email-selectionpersonnel.mrk@gmail.com](mailto:Email-selectionpersonnel.mrk@gmail.com)

Copy to:

OS/Confidential: is requested to kindly form a selection committee for conducting selection for the post of Junior Engineer/Electrical against 25% Intermediate Apprentice quota.

  
20/9/24

for Principal Chief Mechanical Engineer

## Proforma

To,  
Asstt. Personnel Officer / IC  
Metro Railway / Kolkata

(Through email only to selectionpersonnel.mrk@gmail.com)

**Sub:-** Application for selection to the post of Junior Engineer / Electrical against 25% against Intermediate Apprentice quota (LDCE) in Level-6 in the Electrical Department  
**Ref:-** Notification No. MRTS/E.328/2/Promotion/JE(LDCE) Date:20/09/2024

1	Name of the employee ( block letter )				
2	Employee Number				
3	Place of posting				
4	Date of Birth				
5	Age as on date of notification	Yrs	Months	Days	
6	Date of Appointment & Designation				
7	Date of Appointment /Promotion as Tech.III in Electrical department in M. Rly.				
8	Total length of service in Tech.III & above in the Electrical Department as on date of notification	Yrs	Months	Days	
9	Present Designation & Level ( if under MACP please mention )				
10	Educational Qualification: a) Academic				
	b) Technical				
11	Category ( please give tick mark )	UR/OBC	SC	ST	PwBD
12	Mobile number				
13	Document attached				

**Declaration:** I hereby declaration that the particulars given by me is true and correct to the best of my knowledge. If the above information given by me is found to be wrong / incorrect, then my candidature is liable to be cancelled and D&AR action can be taken against me. I have read the contents of the notification and agree to abide by the Rules, regulation and procedure for promotion to the post of Junior Engineer / Electrical in the Electrical Department.

Date:  
Place:

Signature of the Employee

Name of the employee

Syllabus for Selection of JE/Elect against 25% Intermediate Quota (LDCE)

**I. Shop Management**

1. Knowledge of incentive schemes, work order system, booking, booking of labour hours, etc. production planning and workshop documents processing.
2. Stock and non-stock and procedure for indenting and drawl of stores and return of serviceable and scrap items, Stores Depot.
3. Various registers maintained in shops and their need.
4. Stock verification authorities and periodicity.
5. Various safety measures to be followed on the shop floor in general and for various machines and equipment in particular.
6. Staff protective clothing and their entitlements.

**II. TECHNICAL KNOWLEDGE:**

**1. BASIC ELECTRICAL UNITS:**

Definitions and their relations, Volts, Amperes, Ohm, Capacitance, Impedance, Resistance, Series & Parallel connections.

**2. ELECTRICAL MEASURING INSTRUMENTS & MEASUREMENTS.**

Types and their applications, AC, DC instruments, their connections, arrangements, types, latest instruments.

**3. DC MACHINES:**

Motor, generators, their constructions, various parts, their functions and connections.

**4. AC MACHINES:**

Alternator, motors. types. constructions, Knowledge of various parts and functions, connections, starting arrangement & methods, application of various types of motors.

**5. TRANSFORMERS:**

Power transformers, distribution transformers, Parallel operation of 3 phase transformers, Current transformers, Voltage Transformers, Transformation ratio functions, simple calculations, capacity rating, current voltage ratios.

## **6. INSTALLATION:**

Precautions during erection, connections, earthing. maintenance schedules.

## **7. CABLES: –**

Types, Grades construction, usage, rating, capacity, methods of laying underground and overhead cables, Fault detection, Methods of laying cables across Railway tracks, testing and commissioning.

## **8. WIRING:**

Types and various accessories, testing types and various accessories, Quarter wiring/ Staircase wiring, commissioning, grades & capacity of wires used and safety equipment.

## **9. TRANSMISSION OF ELECTRICAL ENERGY:**

Knowledge of overhead and underground cables and junctions.

## **10. INSULATION MATERIALS:**

Knowledge of various insulation methods, grades, insulation, types, compounds, break down values and units of measurements.

## **11. LIGHTING FITTINGS:**

Their types, construction & connection.

## **12. TOOLS & PLANT:**

Knowledge of various tools used for electrical works and measuring testing instruments and knowledge of their use.

## **13. CONTROL SWITCHGEAR:**

Knowledge of various control equipment, their purpose. grade, rating, capacity, various types of switches for LT & HT circuit,

## **14. SUB-STATION:**

Types, erection, testing & commissioning, and maintenance of various equipment safety requirement. Protective equipment and maintenance schedule. Maintenance of Logbook in manned sub-stations, procedures for making entries in the Log Book procedure for arranging permit to work etc. safety procedure and records to be maintained, methods of testing electrical installation and prescribed safe values for various LT & HT installations.

**15.** Precautions and action to be taken to avoid accidents. Action to be taken in case of accidents, artificial, renunciations, first aid, firefighting in case of electrical fires.

## **16. PUMPS:**

Knowledge of types of pumps, their construction, names various parts, material used for their construction, efficiency rating, capacity, suction, delivery head, erection, testing & commissioning, methods of starting, lubrication, advantage of various types of pumps, pressure gauges, control valves, strainer foot valve, precautions for starting, safety equipment & protection arrangement, trouble shooting and remedies.

## **17. Rolling Stock:**

Type of rolling stock available in Metro Railway network, their formation, different equipment fitted in rolling stock and their rating, fixation location, general feature, work / use etc., their functional checking procedure and troubleshooting.

## **18. AIR CONDITIONING & REFRIGERATION:**

Type of air conditioning equipment basic units, temperature humidity, velocity, tachometer, dehumidification, dry and wet bulb temperatures, thermometer reading, pressure gauges, thermometer, types of refrigerants used for refrigeration. Type of compressors, lubrication & grade of compressor oil used, suction & delivery pressures, oil pressure, refrigerator cycle and names and function of various equipment. Water cooling system. Line diagram of the refrigeration and water circulation and air delivery circuits.

Operations and maintenance of various AC/refrigeration equipment. Trouble shooting and their remedies.

## **19. SUPPLY & RETURN AIR-DUCT & DISTRIBUTION ARRANGEMENT:**

Insulation and insulating materials for air ducts and refrigerant pipes. Air filter etc types and cleaning safety equipment for AC plants, fire protection methods and their maintenance. Knowledge of electrical equipment and control of various equipment relevant to AC plant and their circuitry. Working knowledge of water softening plants, condensers their operations, regeneration etc. problem of sealing, chemical and mechanical methods of removing them, knowledge of various tools and instruments & instruments used in Air-conditioning and refrigeration.

## **20. BATTERIES:**

Type of batteries, construction, knowledge of charging and discharging their maintenance, checking of SPSRK gravity and other precautions for maintenance of batteries.

21. Reading of simple diagrams and circuit diagrams, reading of electrical and refrigeration circuit diagrams.

22. Knowledge of electrical safety regulations, I.E. Rules

### **III. STORES ACCOUNTS:**

Specifications, indenting procedures PL Numbers, Units, Stock/ Nonstock items. Direct Purchase, Procurement Procedures. Agencies, Withdrawal from Stores. Issue from Stores. Accountal of materials, Consumable / Non consumable items, T&P, M&P. preparation of requisition, various records to be maintained, Stock verification etc. storage of materials, safety and security of stores.

### **IV. ENERGY CONSERVATION:**

Various energy conservation measure. Power factor improvement, Energy Efficient fittings. Non-conventional energy sources fuel consumption on DH Set vis a vis load, photo electric switches, photo electric cells, electronics regulators etc.

### **V. General & Establishment matters**

1. Knowledge of Railway Servants Conduct Rules., Discipline & Appeal Rules.
2. Knowledge of Establishment Rules like Leave ,Pass/PTO entitlement etc.
3. D&AR Rules:- Various definitions, the applicability, suspension , issue of major and minor penalty charge-sheets. Disciplinary, Appellate and Revisionary authorities.
4. Rules for engagement and discharge of casual labours / substitutes and knowledge of relevant sections in the Industrial Disputes Act.
5. Workmen's Compensation Act.
6. Factory Act.
7. Hours of Employment Regulations.
8. General Knowledge about working of various departments in Railways.
9. Staff Council and Rules of its formation/ working.
10. Hierarchy of Railway organisation from divisional level to zonal level and further to Railway Board level