



दक्षिण मध्य रेलवे / South Central Railway

विजयवाडा मंडल / Vijayawada Division

मंरेप्र का कार्यालय DRM's Office,

कार्मिक शाखा/Personnel Branch,

विजयवाडा/Vijayawada

सं.No.SCR/P-BZA/209/2-Tr.D/JE-LDCE/Vol.V

दिनांक Date:27.11.2024

NOTIFICATION

Sub:- Formation of panel for filling up of vacancies in the category of JE(Tr.D) in Level -6 of VII CPC pay matrix against 25% LDCE quota in Electrical (Tr.D)Department – BZA Division.

It is proposed to form a panel for filling up of two vacancies in the category of 'Junior Engineer/TRD in Level-6 of VII CPC pay matrix against 25% Limited Departmental Competitive Exam (LDCE) quota in Electrical (Tr.D) department of Vijayawada division. The communal break-up of vacancies is as detailed below:

Category	SC	ST	UR	Total
JE(Tr.D)	Nil	01	01	02

02. Eligibility and Service conditions of staff:

Employees having the qualification of ITI/Act Apprenticeship passed in the relevant trade or 10+2 in Science stream with minimum three years of service in skilled grades i.e., Technician Gr.III and above of Electrical(Tr.D) organization of BZA Division.

In terms of Rly.,Bd's Lr.No.E(NG)I/99/PM7/17 dated 25.08.2003, communicated under CPO/SC's S.C.No.172/2003, the qualification of ITI/Act Apprenticeship should be in trades relevant for eventual absorption in the category for which the selection is conducted i.e., trades relevant to the post of JE(Tr.D) in Electrical department.

In terms of Rly.,Bd's Lr.No.E (NG)I/99/PM7/17 dated 28.07.2003, communicated under CPO/SC's S.C.No.157/2003, if the employee otherwise eligible and have the qualifications of Degree or Diploma in the relevant branch of Engineering are also be eligible to volunteer to appear in the selection for induction as Intermediate Apprentices along with those with the qualification of ITI/Act Apprenticeship or 10+2(Science stream)

The volunteering staff should be below the age of 47 years in the case of general candidates and the upper age limit for SC/ST employees would be 52 years(CPO/SC's S.C.No.90/2010 & 92/2011).

In terms of Rly.,Bd's Lr.No.E(NG)I/2005/PM1/52 dated 22.08.2006, communicated under CPO/SC's S.C.No.131/2006, the cut-off date for determining the eligibility of the staff should be the date of issue of notification. As such, the volunteering employees should stand fulfil the service conditions of age and educational qualifications etc., as on the date of notification i.e., **as on 27th November 2024.**

The employees who qualified in the written examination, should undergo medical examination and pass in the prescribed medical Classification of Aye-Three (A3)as per para 517 of IRMM.They must have satisfactory service record with respect to application of work attendance and general conduct.

Amritha
27/11/24.

03. **Mode of Selection :**

In terms of Rly.,Bd's Lr.No.E(NG)I/2000/PM1/41 dt.07.08.2003, communicated under CPO/SC's S.C.No.144/2003, the positive act of selection to assess the professional ability of the candidate shall consist of written test only. In terms of Rly.,Bd's Lr.No.E(NG)I-2008/PM7/4 dated 19.06.2009,communicated under CPO/SC's S.C.No.95/2009,the candidate has to obtain a minimum of 60% marks in professional ability, i.e., in written examination, for being considered for further selection process of perusal of service record.

The selection will be based on written examination and assessment of record of service. The written examination will consist of one paper in professional ability as per syllabus enclosed as Annexure-B.

The Selection will be finalized entirely on "**MERIT**" basis obtained in the aggregate marks.

The post of 'Junior Engineer' being classified as "**safety category post**", there is no relaxation in qualifying marks to employees belonging to the category of SC/ST and hence they also required to secure 60% marks in the written examination.

In terms of Rly.Bd's Lr.No.E(NG)I/2018/PM1/4 dt 14.12.2018, communicated under CPO/Sc's S.C.No.212/2018,all the questions will be 100% objective type and will be of multiple choice only. There shall be negative marking for incorrect Answers. One third of the marks allotted for each question will be deducted for wrong Answers.

In case, some of the question(s)/answers(s) therein are incorrect , the procedure as prescribed in Letter No.210/E(RRB)/25/27 dated:09/06/2011 communicated under RBE Lr.NO 122/2023 is to be adopted only to the candidates who have attempt that/those incorrect question(s) or questions(s) with wrong answer(s).

04. **Syllabus :**

The syllabus prescribed for selection to the post of Junior Engineer against 25% LDCE quota is enclosed as Annexure-B and the same can be downloaded from the official website of www.scr.indianrailways.gov.in.

05. **Question Bank :**

In terms of Rly.,Bd's Lr.No.E(NG)I-2006/PM1/34 dated 06.11.2006,communicated under CPO/SC's S.C.No.196/2006, updated Question banks covering the complete syllabus will be provided to the staff concerned or the same can be downloaded from the official website of www.scr.indianrailways.gov.in. It is further advised that there will not be any mandatory limit of questions from the question bank. The controlling officer/ supervisor has to ensure that the question bank is circulated to all the eligible staff and postponement of selection due to non-circulation of question banks will be viewed seriously.

The answers to the objective questions should be updated with latest instructions/amendments/modifications issued by the Railway Board/H.Qrs.,office.

06.**Procedure for written examination :**

In terms of Railway Board's Lr. No.E (NG) I-2018/PM1/4, dt.14.12.2018 communication by PCPO/SC's S.C.No.212/2018, the question paper will be 100% objective type and all the questions will be of multiple choices only. There will be 110 questions including official language policy. Employees are required to answer any 100 questions. If

Amundh
27/11/24

the candidate answers more than 100 questions, the first attempted 100 questions will only be evaluated. Cutting, overwriting, erasing or alteration of any type in the answer sheet will not be accepted. Zero marks will be given for answer having cutting / overwriting / erasing or alteration.

In terms of CPO/SC's S.C.No.47/96, questions on official language will form part of the professional ability for 10% of total marks. The questions on official language policy are compulsory but there shall not be any compulsion on the part of the candidate to answer such questions.

07. Procedure for drawal of panel :

In terms of Rly., Bd's Lr.No.E(NG)I-2008/PM7/4 dated 19.06.2009, communicated under CPO/SC's S.C.No.95/2009, the final panel shall be drawn in the order of merit based on the aggregate marks of 'professional ability' and 'record of service' since the zone of consideration is not confined to three times the number of staff to be empanelled and candidates being called from different categories from different department/within the same department, as the case may be.

08. Pre-Selection/Pre-Promotional training to eligible SC/ST employees:

Pre-Selection training to eligible 'ST' employees covering the syllabus of the examination will be imparted for a period of 3-4 weeks (PCPO/SC's SC No. 41/1998). In case any 'ST' employee is unwilling to undergo pre-selection training, a written unwillingness shall be obtained and sent to this office for record. After completion of pre-selection training, a certificate is to be issued by controlling officer that all the eligible 'ST' employees have been imparted pre-selection training for a period of 3-4 weeks.

09. Date of Examination :

The date, venue and time of examination will be intimated separately. However, it is to be advised to the volunteering staff that there will be no supplementary examination to the absentees in the main examination since the selection is by calling volunteers.

10. Additional information for guidance to the staff :

The apportionment of marks under the head of 'professional ability' and 'record of service' is 85 and 15 respectively to assess the suitability of the candidates for considering for empanelment to the post of Junior Engineer.

The assessment under 'professional ability' will be based on the marks secured by the individual employee in the written examination held as part of selection.

The apportionment of 15 marks under the head of 'record of service' will be assessed as per the entries available in the service register with respect to the educational qualifications, awards and punishments.

The marks will be added for each individual cash award/merit certificate issued during the Railway Week Celebrations preceding three years at divisional level, zonal level and at Rly., Board level i.e., at the level of DRM/HOD/PHOD/GM/Railway Board and to Educational qualification. Similarly, marks will be deducted for each minor/major penalty imposed preceding three years.

Amrindh
27/11/24

11.Training :

In terms of RBE No. 87/2022, on empanelment the employees have to undergo training at ETTC/BZA for a period of 52 weeks and on successful completion of training the competency certificate should be issued before their posting against regular post anywhere on BZA Division.

12.Notifying the staff :

In terms of Rly.,Bd's Lr.No.E(NG)I-72/PM1/166 dated 26.06.1972, communicated under CPO/SC's S.C.No. 213/72, the Senior Subordinate/ Supervisor concerned has to furnish a certificate that 'the eligible candidates were duly notified of the holding of the test and asked to submit their applications duly giving their willingness' and forward the same to Sr.DPO/BZA. It should 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 of 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 shall be viewed seriously.

Wide publicity of this notification should be given to all the eligible staff under your control including those who are on deputation, leave/sick, training etc, A copy of Notification should be displayed on notice board.

13.Last date for submission of Applications :

The willing and eligible volunteers have to submit their applications in prescribed proforma to their controlling **supervisors on or before 26.12.2024** who will forward the applications in one bunch to the **controlling officer on or before 02.01.2025**. The controlling officer has to forward all the applications in one bunch **to Sr.DPO/BZA together with DAR/SPE/Vig., clearance on or before 09.01.2025**. The candidate should necessarily fill all the relevant columns and strike out the inapplicable columns indicating as 'Not Applicable'. The incomplete/unfilled applications will not be entertained & shall be rejected.

Encl : 01. Application Proforma (Annexure-'A')
02. Syllabus & question bank (Annexure-'B')


27/11/24.

(M.ANIRUDH) APO/Traffic
For Sr.Divisional Personnel Officer/BZA.

Copy to : Sr.DEE/Tr.D/BZA; SDGM/Vig./SC; Dy. CEE/Con/SC; Dy.CEE/Con/BZA;
SPO/Con/RE/SC;CAO/Core/PRYJ/JAIPUR;DRM(P)/SBP Div E.co.Rly
for kind information.

- " : All Supervisory officials of Electrical(Tr.D) department of BZA division;
- " : DSS of SCRES, SCRMU, AI SC/ST Rly,Employees Assn., & OBC Employees Assn.,

**PROFORMA APPLICATION FOR THE POST OF 'Junior Engineer(Tr.D)' IN ELECTRICAL
TrD DEPARTMENT OF BZA DIVISION IN LEVEL – 6 AGAINST 25% LDCE QUOTA.**

SI No	Description	Details
01	Name of the employee (in capital letters)	
02	Designation/Station/Unit	
03	Present Pay Band	
04	Provident Fund A/c No.	
05	Date of entry into the present grade	
a)	Regular	
b)	Ad hoc	
06	Date of Birth (words & figures)	
07	Age as on date of issue of notification	
08	Date of Appointment	
a)	Date of entry into Tech.Gr.III(Regular)	
b)	Date of entry into Tech.Gr.II	
c)	Date of entry into Tech.Gr.I	
d)	Date of entry into Sr.Tech.,	
09	Mode of appointment viz., RRB/CG/ Sports/Scouts/Cultural etc.,	
10	Whether belongs to SC/ST (copy to be enclosed)	
11	Educational/Technical qualifications (copies to be enclosed)	

Declaration : I hereby declared that the particulars furnished above are true, complete and correct to the best of my knowledge and belief. I understand that if at any stage it is found that the information furnished is false or incorrect or I do not satisfy/fulfill the eligibility criteria, my promotion is liable to be cancelled besides disciplinary action as per rules. I have read the contents of the notification and agree to abide by the Rules, regulations and procedure prescribed for promotion to the post of JE/Tr.D in Elect. Dept.

Place :

Date :

Signature of the Employee

The above particulars have been verified and found correct. Recent passport size photograph of the employee is pasted duly attested

Place :

Date :

Signature of the supervisory official
with Designation/Seal & Date

Amuriah
27/11/24.

SOUTH CENTRAL RAILWAY
VIJAYAWADA DIVISION

SYLLABUS TO THE POST OF JUNIOR ENGINEER IN TRD ORGANISATION through
25% LDCE Quota.

PART-A: TECHNICAL SYLLABUS OF TRACTION DISTRIBUTION

I. OHE Wing :

- i) General Supply and feeding arrangements – Sectioning arrangements, basic principles of sectioning.
- ii) Determination of copper section – Sag – tension in conductors – Temperature effects – Span lengths. Wing pressure – Blow off stagger – factors affecting the stagger.
- iii) OHE in curved tracks – versine – super elevation – limitations.
- iv) Schedule of dimensions – Basic principles of checking the OHE lay out plans – Survey pre-sagging plans.
- v) Types of overlaps – Jumpers – Droppers etc.,
- vi) Regulations OHE – Advantages – Anti creep – limitations for tension lines – mechanical advantage – X, Y measurements pulley block type and winch type ATDs.
- vii) Type of wiring in turn outs – crossovers, separation of turn out OHE from mainline OHE, Section insulators erection assembly details – adjustments.
- viii) Types of OHE termination and anchoring – types of neutral section and their usage.
- ix) Different types of supports – Masts, portals, TTUs – Loading of masts
- x) Electrical clearances – Horizontal, vertical for long time duration and short time duration. Workman safety – Discharge rod application, Over dimensional consignments, precautions pertaining to movements of ODCs in electrified area.
- xi) Attention towards breakdowns – accidents, relief train/Tower Car particulars, wiring train composition, movements of tower car, online failure of tower car, caution orders etc.,
- xii) Types of power blocks, emergency, local, shadow, pre-arranged, longitudinal protection, cross protection, dead section entry of locomotives.
- xiii) Bonding, earthing of structures – bonding and earthing code.
- xiv) Employment schedules – Foundation charts – Pegging plans – layout plans – Dropper schedules – SEDs – Tensioning charts, Erection of OHE – marking of foundation, Mast Erection, SPS erection, Cantilever erection and adjustments, ABCD dimensions, pre-commissioning test before energisation
- xv) OHE material – conductors – Tin bronze fittings – aluminium bronze fittings – insulators – stores collection and inspection and testing.
- xvi) Duties of TPC – Maintenance of log sheets – control charts – blocks – issue of PTW – cancellation – localizing the faults – emergency manning of posts – coordination with other departments.
- xvii) OHE maintenance – importance of foot patrol – schedule as per ACTM – accidents – breakdowns – panto entanglements – thefts – restoration – registers to be maintained – pollution and special checks – joint investigation with other departments – contact wire wear & tear and current collection tests- Oliver 'G' – Analysis of failures (A & B category) – Thermo vision check – Netra Car.

Anuradh
27/11/24

- xviii) Protection of ladder trolley on track – Types of fire extinguishers and their applications – Competency certificates.
- xix) G&SR relating to tower car movement – station working rules – safe working clearances as per IE rules/act.
- xx) Various types of tower cars – their operation, maintenance and common failures.
- xxi) Power Line Crossings – Rules and Regulations.

II) PSI Wing :

- i) Schematic arrangements of traction sub-stations – Spacing between two sub-stations – Traction Transformers details, various types of control posts – equipment details, circuit breakers – Interrupters and their working.
- ii) Earthing of Sub-Stations – Importance of buried rail & earth grid.
- iii) Protective arrangements for feeders – for transformers against lightning, various types of relays like Electro Magnetic, Static and Numerical Type with their merits and demerits – details of testing.
- iv) Current transformers – potential transformers – LT auxiliary transformers – Transformer oil – properties and collection of oil samples – filtration – switch gear oil etc.,
- v) Maximum demand – contract demands – load factors – tariff etc.,
- vi) Measuring and Testing instruments like Primary injection Kit, BDV test kit, relay testing kit, Power transformer bushing/oil tan-delta test kit, CB analyser, third harmonic leakage current (THRC) testing kit etc.,
- vii) Power Factor and its significance.
- viii) Scheduled maintenance of Power Transformers, CB's, BM's, CT's and PT's, capacitor Banks, Lightning arrestors and Battery sets. (Conventional and VRLA)

III. Remote Control Equipments :

- i) Remote control equipments in use of Indian Railways – different components of SRC equipment – Telecommands and telesignals – Display of indications of Mimic panel – power block – measuring instruments used in RC maintenance, schedules of RC equipments – Technique of soldering – working of SCADA, operation and maintenance, specifications.
- ii) Protective relay setting calculations of Feeder CB, Capacitor bank and Power Transformer.

IV. Special Maintenance instruction, TI and MI pertaining to OHE, PSI and RC.

Anuradh
27/11/24.

PART -B: GENERAL ELECTRICAL ENGINEERING

A) Basics of electricity

- 1) Study of Electricity, Ohms Law, Magnetism, Electromagnetic induction, Flemings R.H. Rule, L.H. Rule, Lenz's Law, self-inductance, Mutual inductance, Study of AC circuits i.e., RL, RC, RLC Circuits, Series Resonance, Parallel resonance.
- 2) Study of power factor and the improvement methods demand and economy in installation of electrical energy.
- 3) Measurements of Resistance, current voltage, power study of various types of meters and equipment used, Megger, diode tester, ammeter, Voltmeter etc., uses of shunts, multipliers.

B) Transformers:

Study of Transformers and concept of Mutual induction. Step down, Step Up transformers, Auto transformers, Current transformers and Potential Transformers. Applications of Transformers. Their role in Electricity.

C) Transmission and distribution networks:

Study of transmission lines and distribution lines and under-ground cables.

D) Importance of Earthing and Earth testing procedure:

Why earthing is to be done, PIPE earthing, Plate earthing, Maintenance free earthing, Study of Earth testing procedure, insulation test for various equipments and testing of insulators.

- E) Basics of Electronics, Diodes, Transistors, Amplifiers, Oscillators, GTOs, IGBTs and their properties.

- F) MCBs, Contactors, Fuses, selection of rating of MCBs, contactor, fuses based on current rating.

G) Electrical Safety and ACTS and Rules.

1. Electricity act and safe rules and Shock treatment, first aid and use of Fire Extinguishers.

PART -C

(i) Establishment Matters viz.,

Railway Organization Structure, Railway Quarters Policy, Hours of Work and period of Rest, Railway Services Conduct rules, Pension rules, Employee Compensation Act 1923, Leave rules, Pass rules, Railway Servants D&A rules 1968, Right to Information Act 2005.

(ii) Official language Policy and rules (RAJ BHASHA)

Rules and regulations about Official Language i.e., Hindi as Official Language. Knowledge on Hindi language.

Anuradh
27/11/24.