



No. E/ELT/1025/7/1 (INSTRUCTOR-TRD) 708414

मंडल रेल प्रबंधक का कार्यालय
मुंबई सेंद्रल
दिनांक : 18-05-2026

NOTIFICATION/अधिसूचना

Sub: Filling up the Ex-cadre posts of Sr. Instructor TRD (OHE-PSI) in Level-7 at the Electrical Training Centre(ETC-VR), Electrical Traction Department.

- Ref: 1 Railway Board's Letter No.E(MPP)/2018/3/5 dtd. 19-06-2018(RBE No. 93/2018)**
2. Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-05-2019(RBE 79/2019)
3. Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-01-2021(RBE 104/2023)
4. Railway Board's letter No. E(NG) 1/2018/PM-1/4 dtd. 14.11.19 (RBE No. 194/2019)

It is proposed to fill up the following Ex-cadre posts of Sr. Instructor TRD (OHE-PSI) in Level-7 at the Electrical Training Centre(ETC-VR), Electrical Traction Department through a process of Selection by inviting the applications from the employees working in the category of SSE TRD (OHE-PSI) in Level-7 fulfilling the following eligibility criteria:-

1. No of Posts proposed to be filled:

SN	TRAINING CENTRE	NAME OF THE POST	PAY SCALE/LEVEL	NO OF POSTS
1	ETC-VR	Sr. Instructor TRD (OHE-PSI)	Rs. 9300-34800+4600 GP, Level-7	02 (TWO)

2. Eligibility Condition:

- (a) The applicants should not have crossed the age of 58 years as on the date of Notification.
[Authority : Railway Board's Letter No. E(MPP)2023/3/6 dtd. 04-09-2023(RBE 104/2023)]
- (b) For the post of Sr.Instructor TRD (OHE-PSI) in Level-7, SSE TRD (OHE-PSI) in Level-7 working on regular basis on Suburban are eligible to apply. If staffs in Identical Grade Pay are not available, then staff in next below GP i.e. 4200, Level-6 may be considered and then the post will be operated in GP 4200/Level-06. MACPs granted in Level-7/GP Rs. 4600/- will not be allowed to determine the eligibility.

3. Selection Process:

- (a) Selection consists of CBT test (75 marks) and Classroom Lecture trial(25 marks).
- (b) Selection Committee Constitution to be in terms of Railway Board's Letter No. E(MPP)/2018/3/5 dtd. 19-06-2018 (RBE No. 93/2018). Principal/Head of the Training Institute shall be associated in the class room trial. Thus, the above selection process will evaluate the knowledge as well as communication skill of the candidates as both are required for the post of Instructor.
- (c) Maximum Marks-100, Qualifying Marks-60%.
[Authority : Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-05-2019(RBE 79/2019)]
- (d) In terms of Railway Board's Letter No. E(NG)I2018/PM14 dtd. 14-12-2018(RBE No. 196/2018), the Question paper will be 100% Objective type.
- (e) In terms of Railway Board's letter No. E(NG) 1/2018/PM-1/4 dtd. 14.11.19 (RBE No. 194/2019) there will be negative marking @ 1/3 mark for a wrong answer.
- (f) The above examination will be held through CBT (Computer Bases Test)as per Railway Bd's letter No.2025/E(RRB)/25/14 dtd-21.08.2025.

4. Tenure:

Tenure will be of 5 years in the Training Institute.

[Authority : Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-01-2021(RBE 04/2021)]

5. Teaching Allowance:

Selected candidates for the post of Sr.Instructor TRD (OHE-PSI) are entitled to draw Teaching Allowance As admissible from time to time and the allowance will not form part of pay, but will count for the purpose of leave salary. Present rate of Teaching allowance is 12% Basic Pay.

[Authority : Railway Board's Letter No. E(MPP)2012/3/28 dtd. 06-10-2017(RBE 145/2017)]

6. Since the post of Instructor is an Ex-cadre post and filled on volunteer basis, no rule of reservation is applicable.
7. The post of Instructor is Ex-cadre post, tenure of which will not exceed more than 5 years. As such selected candidates will be posted for maximum of 5 years. On completion of their tenure they will be repatriated back to their original stream/post where their seniority and lien is maintained.
8. Lien of the selected employees will be maintained in their parent cadre/department.
9. No supplementary CBT test is permissible, since the selection is conducted calling volunteers.
10. Those Instructors who have already repatriated may apply again only after a reasonable gap of at least one year. Once the candidate is selected and posted as Instructor on the basis of his empanelment, his refusal for the same will not be entertained as well as is liable for being dealt with under DAR. This should be got noted carefully by the staff applying for the posts.
11. The employees posted as Instructor will be repatriated to the parent cadre at least six months prior to the date of his superannuation.

This may be notified to all concerned immediately and staff desirous for the above post should apply ONLINE only on our official website [http://203.153.40.19/bct\(e-karmik\)](http://203.153.40.19/bct(e-karmik)) as well as through mobile app on E-karmik BCT(download through play store) on or before 15-06-2026 till 17:00 hrs. No direct application after due date will be entertained.

Syllabus of CBT test for filling up of above post is enclosed herewith as Annexure-I.

This issues with the approval of competent authority.

Encl: Annexure-I

Digitally Signed by Abinash

Kumar Kausal

Date: 18-05-2026 15:53:26

(Reason Approved
ABINASH KUMAR KAUSHAL)

APO/BILL/BCT

For DRM(E)/BCT

C/- GM(E)CCG, Sr. DEE/RS/BCT/VR,Sr.DEE/S/TRD/BCT,DEE/RS/BCT,AEE/RS/BCT/KILE/VR,SSE/HR-BCT,KILE,VR
C/-Divl.Secy.WREU-GTR, WRMS-BCT, Zonal SECY: SC-ST Association BCT, OBC Association PDGR

“ इस आर्डर की कॉपी इंटरनेट पर 203.153.40.19 address पर अथवा E/Karmik/BCT मोबाइल application के

Memo/Notification के अंतर्गत देखी व डाउनलोड की जा सकती है . भविष्य में कार्मिक विभाग द्वारा पब्लिश की जाने वाली सभी सूचनाएं के लिए उपरोक्त एप /पोर्टल देखें”।

Syllabus for Selection of Sr. Instructor (TRD) for Mumbai suburban section in scale Rs 9300-34800 (GP – Rs 4600/-) in Electrical department (Mumbai Division)

1. PSI :

- i. Feeding arrangements from Grid Sub-stations
- ii. Layout of 1x25 KV in TSS & Switching stations with names / ratings , technical details & maintenance schedule of various equipment
- iii. Lay out of 2x 25 KV AT traction system in TSS & Switching stations with names / ratings , technical details & maintenance schedule of various equipment like:
 - 110KV/25KV Isolators, 25 KV LAs, CTs, PTs
 - 110KV/25KV Traction Transformer
 - 110KV/25KV CBs (SF₆, Vacuum , Oil type) their merits & demerits.
 - 110KV/25KV Interrupters (SF₆, Vacuum) for suburban & non suburban section
 - Auxiliary transformers
 - Auto transformer (AT) in 2x 25 KV AC traction system.
- iv. Earthing layouts of TSS/SP/SP . Design of earthing
 - Improvement of power factor, calculation of KVAR, needed to improve power factor ,
 - Maintenance and trouble shooting of capacitor banks.
- v. Maintenance of TSS / Switching stations & require tools /equipment details.
- vi. Condition monitoring of equipment's.
- vii. **Traction Power Transformers:**
 - Working principle , construction of traction transformer, accessories, EMF equation, routine test and type test. Installation , testing & commissioning of traction transformer.
 - Parallel operation, special features of traction power transformer, tap changer,
 - Tests on transformer oils
 - POH of traction transformer & Auxiliary Transformer
- viii. **Circuit Breaker s & Interrupters :**
 - Principle of working, construction , special features of SF₆ , Vacuum , Oil type C.B.s their maintenance & routine test of CBs & interrupters
- ix. **Protective Relays :**
 - Fault level & relays setting calculations
 - Details of Protective relays provided in TSS & switching stations (In Mumbai suburban)
 - Types of relays Electromechanical,& static, Numerical type Micro Processor based relays provided at TSS /Switching stations their purpose & setting calculations.
 - Periodical testing of relays.
 - Insulation coordination
 - New suburban OHE protection system
- x. Protection scheme for TSS. Fixed and dynamic PF correction , Feeding stations, SSP /SP. 110 KV transmission lines, PSI equipment. Maintenance and failure investigation of PSI equipment.
- xi. 22KV feeding arrangement & 2.2 KV distribution system in Mumbai suburban for signal & domestic supply, station cubicle, equipment , maintenance schedule etc.
- xii. SCADA and miscellaneous items: Operation and maintenance of remote control, Traction Power Control organization , permit to work, emergency arrangements, coordination with operating and other departments. Liaison with supply authorities, maintenance & failure investigation of SCADA equipment.

2. OHE :

8868552/2026/O/o SR DEE/RS/VR/MMCT/WR

- i. Principles for layout plans & sectioning arrangements in 25 KV AC traction
- ii. Different types of foundations employed in AC traction & their construction & usage.
- iii. Different type of masts portal employed in AC traction, their construction & usage.
- iv. Types of OHE , construction details, speed potential & usage. Design aspect of OHE
- v. General arrangements of OHE on tangent/ curve track, points/ crossing, neutral sections types , Overlap, regulating equipment, jumpers, Cantilever assembly, Insulators & various conductors used in suburban.
- vi. Various parameters of OHE , Span length, tension length, Encumbrance, gradient of contact wire, implantation, sag, stagger , new wind pressure zone, height of various OHE conductors, Records to be maintained in depot, competency , medical of staff
- vii. Safety rules for TRD , Engineering, S&T staff for working in electrified section. Safety precautions in electrified section as regards to fire, electrical accidents, electric shocks, power blocks etc
- viii. Maintenance schedule for OHE
- ix. Code for bonding & earthings
- x. Movement of ODC in electrified section.
- xi. Regulations for Electrical crossing of Overhead lines & underground cables
- xii. Various equipment / tools/ meters used in OHE. Periodical testing & schedule.
- xiii. OHE lay out, cross section, drawings, SED, SWR, sectioning diagram etc.
- xiv. Pantograph entanglement , investigation of causes, measures taken from TRD & LOCO/EMU side to avoid panto entanglement.
- xv. OHE maintenance Car (Tower wagon)Its operation, maintenance & trouble shooting.
- xvi. Special features of sub urban OHE & its maintenance practice
- xvii. High rise OHE & its parameters , High reach pantograph & characteristics

3. General Topics related to TRD:

- i. Advantage of 2x 25 KV AT systems over 1x25 KV AC convention traction system.
- ii. **Design aspects :**
 - a) Traction sub station: insulation coordination , spacing of substation, transformer & switch gear capacity.
 - b) OHE : Installation & checking of new OHE, detailed procedure of commissioning of new OHE.
 - c) NDT techniques, open Access, safety precautions for electrified sections, Latest development in TRD, MSG meetings, Instruction issued by Railway board, RDSO's TI/MI, Technical Circulars (TRD) , IRSOD, ACTM, GR & SR related to TRD. Indian Electricity Act-2003
- (iii) Energy conservation Act-2001
- (iv) **TRD Breakdown:**
 - a) Breakdown in OHE & PSI. Important failures/ breakdown cases in OHE & PSI.
 - b) Remedial measures and recommendation
 - c) Breakdown /Disaster Management
 - d) Battery (Lead acid & VRLA)
 - e) Condition monitoring of PSI & OHE equipment.
 - f) Inspection schedule of Officers, Supervisors check list, frequency & coverage of beat.

4. Establishment Rules :

Railway service conduct rules, Pass rules, Leave rules, D&A rules, detailed procedure for imposing major & minor penalty, HOER, Payment of wages Act, Factory Act, HRMS, Basics of RTI and Disabilities Acts. Industrial relations PNM, PREM and role of trade unions.

5. Stores Management :

- a) Types of stores
- b) Procurement of Stock & non stock items.
- c) Inventory management & ABC analysis
- d) Indents, material schedule, PL no, review of AAC, T & P items
- e) Knowledge regarding RDSO & BIS specifications of various TRD items
- f) Receipt, accountable, scrap disposal and periodical checking of stores.
- g) Knowledge of UDM, IREPS, Gems portal, Model SOP,
- h) IRS – condition of contract , store depot working.

6. Finance Management:

- a) Works programme, M&P & RS programme.
- b) Tender & works contract. Various steps involved from initiation of proposal to issued of LOA. estimate
- c) Stages of Budgeting.
- d) Primary units, demands & grants
- e) Stock verification and audit.

7. Basic Electricity:

- a) Basic principle of electricity and magnetism, AC and DC power, Conductor, Semi-conductor and insulators, voltage, resistance, capacitance ,inductance power etc
- b) Various laws of electricity : Ohm's Law, Faraday's law, Lenz'a law , Kirchof's law, Fleming's law etc.
- c) Voltmeter, Ammeter ,Millimeters' , earth tester & other equipment
- d) Various electrical machines – Working principle of transformer, Pumps, Motors and Generators,
- e) Basic electronic diodes, Transistors, Rectifiers, Voltage Stabilizer, Power electronics devices such as SCR,IGBT,GTO,MOSFET etc.

8. **राजभाषा** - संवैधानिक प्रावधान, राजभाषा अधिनियम 1963 (यथा संशोधित 1976), संविधान की आठवी अनुसूची मे शामिल भाषाएँ, राजभाषा कार्यान्वयन समिति, राजभाषा प्रोत्साहन / पुरस्कार योजनाएं, हिंदी प्रशिक्षण

