



SOUTH CENTRAL RAILWAY

Office of the
Divl. Railway Manager,
Personnel Branch, 4th Floor,
Sanchalan Bhavan,
Secunderabad.
Date: 25.01.2022

No.SCR/P-SC/210 (a)/JE/ (Tele)/LDCE

Sr. DSTE/SC, Dy. CSTE/SN/SC, Dy. CSTE/RE/SC, Dy.CSTE/Proj/Tele/SC
Dy. CSTE/Proj/SC, All SSE's of Tele

NOTIFICATION

Sub: - Formation of panel for filling up of the post of Junior Engineer/Tele in Level-6 of 7th CPC against 20% LDCE quota in S&T Department of Secunderabad Division - Reg.

1. It is proposed to conduct a selection for formation of panel for promotion to the post of JE/Telecom in Level-6 of 7th CPC against 20% Limited Departmental Competitive Exam (LDCE) quota in S&T Department of SC Division. The details of vacancies are as under:

Category	UR	SC	ST	Total
JE (Telecom)	04	01	NIL	05

2. Eligibility and Service conditions of staff:

- 2.1 All the Technicians (Telecom) in Level-2 and above with minimum three years of regular service in S&T Department of SC Division having the following qualification shall apply:
- i) ITI/Act Apprenticeship pass in the trade relevant to the post of Junior Engineer/Telecom or 10+2 (MPC) stream in terms of Railway Board's letter No. E(NG)I/99/PM7/17 dated 25.08.2003 (PCPO/SC's SC No.172/2003). (or)
 - ii) Degree or Diploma in the relevant branch of engineering required for the post of Junior Engineer/Telecom in terms of Railway Board's letter No. E(NG)I/99/PM7/17 dated 28.07.2003 (PCPO/SC's SC No.157/2003) are eligible to submit applications to the post of JE/Telecom.
- 2.2 The volunteering staff should be below the age of 47 years in the case of General/OBC employees and 52 years in the case of SC/ST employees (PCPO/SC's SC No. 90/2010 & 92/2011)
- 2.3 In terms of Railway Board's letter No. E(NG)I/2005/PM1/52 dated 22.08.2006 (PCPO/SC's SC No. 131/2006) the volunteering staff should fulfill the service conditions, age and educational qualifications and all other conditions as on the date of notification i.e. as on **25.01.2022**.

Note: In respect of employees who have reported/joined on this Division on Inter Railway Request Transfer/Inter Divisional Request Transfer on bottom seniority the service rendered in the Technician category of old unit will also be counted for the purpose of qualifying service for promotion in the new seniority unit provided that:

- i) He/she is otherwise eligible to be considered for the selection to the post of JE/Telecom as per extant rules; and

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- ii) The category in which he/she was working in the old unit is an eligible category for the selection/post in the new unit also. [Authority PCPO/SC's SC No. 41/2006 & 117/2006].

3. MODE OF SELECTION AND QUALIFYING MARKS

- 3.1 Professional Ability: The professional ability of the employees in the field of selection will be adjudged through written test (maximum marks 100). The employees must secure 60% of marks in professional ability.
- 3.2 The post of JE/Tele being a safety one, there will be no relaxation in qualifying marks, for candidates belonging to SC/ST community and they have to obtain minimum of 60% in written test & 60% in aggregate.

Factors / Headings	Max. Marks	Qualifying Marks
Professional ability	50	30
Record of Service	30	-
Total	80	48

- 3.3 Distribution of marks under head of Record of Service.

15 marks	On the basis of grading of APARs/Working Reports of last 3 years
10 marks	For Awards/Punishments
5 marks	For Academic/Tech. Qualifications

- 3.4 The final panel will be drawn up in the order of merit based on aggregate marks of 'Professional ability' and 'Record of Service'. However, the employees must secure a minimum of 60% marks in 'Professional ability' and 60% marks in aggregate, for being placed on the panel. There will be no classification of candidates as 'Outstanding'. The final panel will also be subject to their being fit in medical classification of A-III.

(Railway Board's Lr. No.E (NG) I/2000/PM1/41, dated 20-08-2003, S.C.No.144/2003)

4. Syllabus:

- 4.1 Syllabus for the written test is enclosed as Annexure 'A'.
- 4.2 Sample Questions are available on official website – www.scrindianrailway.gov.in.
- 4.3 There shall be questions on official language policy & Rules up to 10% of marks. However, it is not mandatory to attempt the same.

5. Procedure for written examination:

- 5.1 In terms of Railway Board's letter No. E(NG)I/2018/PM1/4 dated 14.12.2018 (RBE No.196/2018), PCPO/SC's SC No. 212/2018, the written examination consists of 100% objective and all the questions will be of multiple choice only.
- 5.2 There shall be negative marking for each incorrect answers, 1/3rd of marks allotted for each question will be deducted for wrong answer.
- 5.3 Cutting, over writing, erasing or alteration of any type in the answer will not be accepted. Zero marks will be given for answer having correction or overwriting.
- 5.4 The written examination will be conducted on OMR sheet.

6. Sample Questions:

- 6.1 In terms of Railway Board's letter No. E(NG)I-2006/PM1/34 dated 06.11.2006 (PCPO/SC's SC No.196/2006) Sample Questions are available to the staff concerned on official website of SC Division on www.scr.inidanrailways.gov.in.

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- 6.2 It is further advised that there will not be any mandatory limit of questions from the Sample Questions.
- 6.4 Sample Questions are only indicative in nature but not exhaustive. The examinees are advised to update their knowledge with latest Rules/circulars/policies.
- 6.5 The Sample Questions so prepared should be updated regularly in accordance with the changing technology and job requirements.

Date and Venue of Examination:

7.1 Important dates:

Last date of submission of applications in Sr.DSTE/SC office.	24.02.2022
Date of publication of eligibility list	11.03.2022
Tentative Written Examination date	Will be intimated later
Note: There shall be no Supplementary Exam. Since on voluntary basis.	

- 7.2 The 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.

8. Notifying to the staff:

- 8.1 The controlling officer/supervisor shall give wide publicity of the notification to all the eligible staff of S&T Department of SC Division and notification should be displayed at notice boards and conspicuous place. It is the responsibility of controlling officer/supervisor to circulate the notification among the staff concerned.
- 8.2 In terms of Railway Board's letter No. E(NG)I-72/PM1/166, dated 26.06.1972, PCPO/SC's SC 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/O/SC. 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 will be viewed seriously.

9. How to apply:

- 9.1 The employees should submit the application in the prescribed format through proper channel enclosed as Annexure 'B'.
- 9.2 The application should be on good quality of A-4 size using one side only.
- 9.3 They should fill up the application form in their own writing with blue or black ball point pen only.
- 9.4 All relevant columns in the application should be filled completely & strike out the inapplicable columns and forwarded duly signed by the controlling supervisor/officer wherever required or otherwise same will not be considered.
- 9.5 Employee should paste the recent Photograph on the application which shall be attested by the concerned supervisor.

10. Pre-Selection Training:

Pre-selection training to the 'SC' reserved employees for a period of 3 to 4 weeks will be conducted in terms of PCPO/SC's SC No. No.41/98 and read PCPO/SC's SC

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No.No. 245/2001. Since, the vacancies are not meant for 'ST' category employees hence, they are not eligible for the pre-selection Training.

11. **Last date for submission of Applications :**

The willing and eligible volunteers has to submit their applications in prescribed proforma through their controlling officers along with Attested copies of Educational Qualification Certificates & Community Certificate (only for SC employees) to reach Sr.DSTE/SC office on or before **24.02.2022** and who will forward the applications in one bunch to the APO/M&EL on or before **28.02.2022**.

This issues with the approval of the competent authority.

Encl: Syllabus (Annexure- 'A') & Application Pro-forma (Annexure- 'B')


(D.NARASIMHA)
APO/M&EL 25/01/22
for Sr.DPO/SC



ANNEXURE-B**Application for selection to the post of Junior Engineer (Telecom) with Level-6 against 20% LDCE quota in S&T Department of Secunderabad Division.**

(letter No. SCR/P-SC/210/S&T/ JE/Tele/LDCE dated: 25.01.2022)

1. Name of the Employee :

2. PF No. :

3. Designation / Station :

4. Date of Birth (In Christian era) :

5. Age as on (25.01.2022) :

Affix recent
photograph
duly attested
by controlling
supervisor

Years	Months	Days

6. Community [UR/OBC/SC/ST] :

(Write the relevant community in Bold letters in the box)

(Certificate to be enclosed)

7. Date of Initial Appointment/Station/Dept./Divn./Rly:

Category	Date of Appt	Station	Dept	Division	Railway
As Technician Gr.III(Tele)					
As Technician Gr.II (Tele)					
As Technician Gr.I (Tele)					
As Sr. Technician (Tele)					

8. Total Length of service in Technician Gr.III and above: __ Years __ Months __ Days.

9. Educational Qualifications :

Copies of Certificates to be enclosed

10. Awards conferred during the last three years (if any):

Awards conferred during the last three years.	2018 - 2019	2019-2010	2020-2021
Divisional Level(DRM Level)			
Headquarters level/PHOD/HOD			
GM/Railway Board's level			

11. Penalties imposed during last three years (if any)

Penalties imposed during last three years.	2018 - 2019	2019-2010	2020-2021
Minor			
Major			

12. Any other relevant information:

13. Contact Number:

(Office) _____ (Mobile) _____

Declaration: I hereby declare 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, incorrect or I do not satisfy/ fulfill the eligibility criteria, my candidature/ appointment on promotion is liable to be cancelled besides liable for disciplinary action as per rules. I have read contents of the notification and agree to abide by the rules, regulations and procedure prescribed for promotion to the post of Junior Engineer(Tele).

Date:
Station:

Signature of the Employee
Name:
Designation:

(for the use of the Controlling Supervisor of the employees)

Letter No.

Date:

It is certified that the particulars furnished by the employee are verified with the records available in this office and found to be correct. He/She fulfills the eligibility criteria as stipulated in the Notification.

The application is forwarded to Sr.DSTE/SC for further necessary action please.

Date:
Station:
Seal:

Signature of the Controlling Supervisor
Name of the Supervisor
Designation

(for the use of the Controlling Officer of the employees)

Letter No.

Date:

Forwarded to Sr.DPO/SC for further necessary action

1.Verified and counter Signed.

2.Certified that there are no DAR/SPE/Vig. Cases pending /contemplated against the above employee.

(In case any DAR/SPE/Vig. Cases pending against the above employee the details shall be indicated)

Date:
Station:
Office Seal

Signature of the Controlling Officer
Name :
Designation and stamp



वरिष्ठ मंडल सिगनल व दूरसंचार इंजिनियर कार्यालय,

सिकंदराबाद मंडल दक्षिण मध्य रेलवे, सिकंदराबाद- 500 025

OFFICE OF THE SENIOR DIVISIONAL SIGNAL & TELECOM ENGINEER, SECUNDERABAD DIVISION,
SOUTH CENTRAL RAILWAY, SECUNDERABAD – 500 025

संख्य.C/SG/155/2/3/ JE/Sig

दिनांक Date:10.01.2022

Sr.DPO/SC

विषय/Sub:- Filling up of vacancies of JE/Tele in level -6 of 7th CPC pay matrix in S&T Department of SC
division against 20% LDCE

संदर्भ/Ref:- Sr.DPO/SC Lr.No.SCR/P/SC/210(a)/ N.10/S&T Cadre Dt.29.12.2021.

With reference to the above letter, the syllabus and question bank (Soft & Hard copy) for Filling up of
vacancies of JE/Tele in level -6 of 7th CPC pay matrix in S&T Department of SC division against 20% LDCE is enclosed
herewith for information and further necessary action.

संलग्न: ऊपरोक्त अनुसार

Encl: As above.


वरि.मसीदूइनी/सिकं
Sr.DSTE/SC

Syllabus for selection to the post of Junior (Tele) in LEVEL-6 of 7th CPC pay matrix in S&T Dept of SC Division against 20% LDCE.

1. Power plant	• Power supply requirements of various Telecommunication installations (OFC hut, EXCHANGE, Control office, way side station, VF Repeater etc.).such as AC power supply distribution arrangements, DC power plant system. i.e. Number of Battery Banks & Mode of Operation, type and Capacity of Battery and Load requirement. • Basic knowledge of Secondary cells LA, VRLA, Nickel Cadmium cells and other rechargeable cells, their advantages and disadvantages. • Maintenance and of Secondary cells, initial charging, float charging, trickle and boost charging of secondary cells. • Different types of battery chargers used, conventional and SMPS based and Voltage stabilizers. • Standby power supply arrangements like UPS, Solar power Supply arrangements, Generators and its applications. • Requirement of power supply room(s) and Records and Reports to be maintained.
2. Train traffic control system	• Circuits of various types of control communication including those used electrified areas. 4W/2W control telephones, Emergency portable field telephones, installation, maintenance and diagnostics and testing in electrified and non electrified areas. • HQ control office equipment including DTMF signalling equipment. • Way station selective calling DTMF equipment. Control Patching arrangements, control communication over OFC. • Different types communication systems in use for mid section LC gates and their power supply requirements.
3. Line plant practice	• Code of practice of various types of underground cables like PIJF multi pair, quad cables, OFC cables and their jointing procedure. • Cable laying practices and protection arrangements while crossing Track, Roads, Water logging areas, culverts and bridges. • Periodical tests and measurements of underground cables and maintenance practice. • Effects of Railway Electrification on Telecom circuits • Effects of 25KV 50 Hz AC Traction on Telecommunications • Mechanism of Induction • Screening factor • I.T.U-T. Recommendations • Psophometric noise • Effects of 25 KVAC Traction on Telecom cable may be reduced • Precautions to be taken for the protection of staff and equipment in 25 KV 50 Hz AC traction territory • Testing of Cables • Types of tests

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- Acceptance tests for 6 Quad PIJF cables
- Standard values of various tests
- Mandatory Check & Tests to be done before commissioning of BPAC/SSDAC/MSDAC applications on 4/6 Quad/PIJF cables
- Causes for cable failures & precautions
- Fault localisation tests
- Telecom Quad Cables
- Introduction
- Construction of PIJF Quad Cable
- Colour Code scheme for PIJF Quad Cable
- General specification of 4/6 PIJF Quad cable
- Specifications of 6 Quad Cable
- Present Status of 6 Quad System in Railways
- Quad cable along with OFC and without OFC
- Guidelines for the use of OFC system and 6 Quad cable in IR
- Difference between PIJF u/g Paired and Quad Cables

4. OFC and Digital Multiplexing	• Basic concepts of • OFC cable construction, laying, splicing, termination practices. • Installation, maintenance of OFC and system design concepts. • PDH and SDH digital multiplexing techniques. • Various Digital Multiplexing equipment used for PDH and SDH. • NMS path protection arrangements.
5. Telephone exchanges	• Basic knowledge of • Working principles of SPC exchanges, • Different types of exchanges like ISDN, WLL etc. for various applications and inter exchange connectivity in Railways. • Protective arrangements and line termination devices used in exchanges. • Knowledge of different types of telephones using Digital DECT, DKT and FCT/FWP etc.
6. Passenger Information systems	• Basic Knowledge of • Interactive Voice Response System (IVRS) • Pre recorded Announcement and Auto Announcement System • Train Indicator, Coach Guidance System, at a glance board and their related system hardware and software. Basic concepts of IPIS. • Clocks - Analogue, Digital and GPS based • POET interactive Touch Screen systems etc. • Type of PA system and its usages
7. Video Surveillance systems	• Basic Knowledge of • Hardware and software requirements like different type cameras, servers, backup and NMS • Installation and maintenance of IP based video surveillance systems, Video conference systems and their networking. • Over view of ISS

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8.

Data communication

- Introduction to Data Communication
- Introduction
- Data representation
- Data components
- Fundamental characteristics of data communication
- Data flow
- Data Transmission
- Network
- Categories of networks
- Topology
- Standard organizations
- The OSI model (layered approach to data communications)
- Basic Knowledge of
- Data communication equipments like, Hubs, Switches, Routers, LAN extenders, media converters, Modems etc.
- Concepts of IP networking of UTS/PRS, FOIS, RAILNET, DATA LOGGERS.
- Concepts of Voice logging facilities for various applications.
- Internet Protocol version - 4,6
- Introduction
- IPv 4,6 Networks
- IPMPLS

9. Mobile Communication

Very High Frequency (VHF) Mobile Radio Communication

- Introduction
- Application of VHF Communication on IR
- Mode of Operations
- VHF Radio Specification (General)
- Guidelines for utilization of walkie-talkie/VHF sets on Indian Railways
- Frequency allocation for departments
- Frequency allocation of VHF sets with the SM
- Frequency allocation for block communication by using VHF sets during failure of Block Instrument.
- VHF sets provided to operating and maintenance staff
- VHF sets provided in ARTs
- Communication with level crossing gate
- limitations of vhf communication
- Installation of VHF communication
- Maintenance of VHF communication

Cellular Mobile Radio Communication systems

- Introduction of GSM -R, MTRC,
- Introduction of UHF Communication and usage in Railways,
- Introduction to LTE and usage in railways
- TCAS

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10. Basic Electronics theory & Digital Electronics, Basic Electrical Technology	• Oscillators, RF and AF amplifiers, modulation and demodulation, AVC, AGC and their characteristics. Basic concepts radio frequency wave propagation, antenna systems. • Logic gates, Various Memories, Logic Circuits • OHMS LAW, Kirchhoff's law • Transformers and various laws
11. Measuring Instruments	• General Introduction • Insulation resistance Measurement, Insulation tester, • Cable route Tracer • Cable Fault Locator • Digital Earth tester • Measuring units related with Telecommunication systems, • Decibels, absolute and relative measurement for Power, • Voltage and antenna systems • Transmission measuring set, transmission loss test, return loss and insertion loss measurements, Noise measurement, Psophometer and Crosstalk meter • Measuring Instruments used in OFC • General Introduction and instruments used • Visual fault locator • Optical Power meter LED and LASER Light source Power Meter, • Optical Power Measurement • Optical Time Domain Reflectometer Trace analysis of OTDR
12. TELECOM GENERAL	Rules applying to Railway servants • Rules applying to railway servants generally • Organisation of S&T department • Telecommunication in Indian Railways • Telecom systems in Indian Railways Duties of Telecom technicians and supervisors • Duties of Telecom technicians • Duties of Telecom technicians • Inspection and Testing Reports • Possession and Upkeep of Books of Reference • Accompanying important inspections • Additional instructions for SSE/JE (T) in-charge of Construction Inspections • Annual Inspection Programme • Adherence to Annual Inspection Schedule • Inspection Report • Submission of inspection report • Monitoring the inspection work • Compliance Report • Review of earlier inspections • Locating weak points • Quality of inspection • Inspection Register • Schedule of inspection • Inspection records and reports • Records and reports by DSTE/Sr.DSTE Important Telecom matters

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- BPAC
- EC Sockets
- New Installations
- Important organisations in Telecommunication
- International Standards
- Indian Standards
- PTCC
- WPC
- Railway Standards
- Telecom Directorate
- MTBF and MTRR
- Registers/documentation to be maintained at Telecom installations
- VHF frequency allocation
- Communication requirement for new stations
- Structured cabling
- AMC and ARC
- Requirements of telecom equipment power supplies at station
- Codal Life
- DESU, DETU and DISTU
- JPO and MoU
- Official Correspondence
- Total Communication Failure

13. General

- Establishment matters of day to day nature including Leave rules, Pass rules, Muster Sheets, DAR, Payment of wages act, Workman compensation act, WRILL, HOER, preparation of rosters for workers.
- The Official Languages (Use for Official Purpose of the Union) RULES, 1976
- Imprest stores, Monthly stores returns, preparation of Indents stock and non-stock, Materials at site account, Daily Transaction Register, Returned stores, S 1313 / S 1319 requisition and issue note, works estimates Tool and Plant for maintenance.
- Type of Estimates ,
- Types of tenders
- Various works programme. LSWP etc.
- Railway Budgets, Demand for grants.
- STOCK VERIFICATION
- AUDIT INSPECTION

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