

## EAST COAST RAILWAY

Office of the  
Principal Chief Personnel Officer  
Rail Sadan, Chandrasekharpur  
Bhubaneswar-751017

**No: -ECoR/Pers/10/S&T/Selection/JE(Signal)/20% IAQ/Notice    Date-08<sup>th</sup> January' 2025**

### NOTIFICATION

**Sub:** Notification for filling up of Junior Engineer (Signal) post in Level-06 in East Coast Railway/HQ/BBS against 20% Intermediate Apprentice quota of Signal and Telecom Department/HQ/BBS

**Ref:** This office cancellation of Notification, Dated-20.12.2024

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It is proposed to conduct a selection to form a panel for filling up of 02 (UR-01, SC-Nil & ST-01) vacancies of JE (Signal) in Signal & Telecom Department in Pay Level-6 against 20% Intermediate Apprentice Quota by calling applications from eligible Technicians (Signal Maintainer) of Signal & Telecom Department of ECoRly.

1	VACANCY	Category	Pay Scale	UR	SC	ST	Total
		<b>Junior Engineer (Signal) Against 20% IAQ</b>	Level-06	01	Nil	01	02
2	Eligibility Conditions for selection to the post of JE (Signal)	<p>a. All the regular Technicians (Signal Maintainer) of Signal and Telecom Department in Pay Level-2, Level-4, Level-5 &amp; Level-6 are eligible for JE(Signal) against 20% IAQ subject to the following conditions.</p> <p>b. <b><u>Length of Service:</u></b> Should have working as Signal Maintainer of Signal &amp; Telecom Department and have completed 03 years of continuous Railway service in skilled grade as on the date of notification.</p> <p>c. <b><u>Educational Qualification:</u></b></p> <p>i. Diploma / Degree in (i) Electrical/Electronics/Information Technology/ Communication Engineering/ Computer Science and Engineering / Computer Science / Computer Engineering OR (ii) a combination of any sub stream of basic streams of Electrical /Electronics/Information Technology/Communication Engineering/Computer Science and Engineering/Computer Science/Computer Engineering from a recognised University/Institute.</p> <p style="text-align: center;">OR</p> <p>j. Should have qualification of ITI/ACT Apprenticeship in one of the stream as listed at (a) above</p> <p style="text-align: center;">OR</p> <p>k. 10+2 in Science Stream.</p> <p style="text-align: center;">AND</p> <p>d. <b><u>Age:</u></b> The upper age limit for General candidate (UR) is 47 years &amp; for ST candidate is 52 years as on date of notification.</p>					
3	Cut Off Date for eligibility criteria:	In terms of Railway Board's Letter No.E (NG)I-2005/PM1/52, dated 22-08-2006 ( RBE No-117/2006), the cut-off date for determining the eligibility of staff should be the date of issue of notification. As such the volunteering employees should stand fulfil the eligibility conditions as on the date of issue of notification.					
4	Mode of Selection	a. Selection for filling up the vacancies of JE(Signal) against 20% IAQ will be on the basis of professional ability comprising of written Examination, followed by scrutiny of Service Records and last three years APARs. Only those employees who qualify in written examination by securing 60% marks and above will only be considered for subsequent stages of the selection. The panel will be					

*for*  
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		<p>declared purely in order of merit on aggregate marks only in terms of RBE No-113/2009. There is no relaxation for reserved community for safety category post.</p> <p>b. <b>PROCEDURE FOR WRITTEN EXAMINATION / EVALUATION:</b> In terms of Railway Board's letter No E9NG/I/2018/PM/4 dated 14.12.2018 (RBE No-196/2018), the question paper for written examination will be 100% Objective Type.</p> <ol style="list-style-type: none"> <li>All the questions are objective type and multiple choices only.</li> <li>There will be 110 questions (including 10% of the questions on official language policy &amp; rules, Rajbhasa) of objective multiple choice types with four answer options. Candidates have to answer maximum of 100 questions. In case the candidate answers more than 100 questions, first 100 attempted questions are to be taken for evaluation.</li> <li>The question paper of the written exam will be bilingual i.e. English &amp; Hindi. The question of the written exam will be 100% objective multiple choice type with four (04) answer options as A, B, C &amp; D. The answers are to be marked with black/blue ball point pen on OMR answer sheet by way of blackening the circle completely in supplied OMR sheet and the OMR answer sheet will be evaluated manually in terms of RBE No-122/2023.</li> <li>To ensure authenticity of the answers, cuttings, over-writings, erasing or alterations of any type in answer will be considered as wrong answer. Zero mark will be given for answer having correction/over writing.</li> <li><b>There shall be negative marking in the written examinations conducted under LDCE/IAQ as per Railway Board's letter No. E (NG)I/2018/PM1/4 dated 14.11.2019</b> instructions contained in RBE No.194/2019. One third of mark allotted to each question will be deducted for every wrong/incorrect answer to that question.</li> <li><b><u>The duration of written examination is 02 (Two) hours.</u></b></li> <li>No electronics gadgets are allowed into Examination Hall. The candidates are not allowed to leave their seat during the two hours of Examination period. They should be prepared so as not to leave during two hours' period after entering into Exam Hall.</li> </ol> <p>Viii. <b><u>TRAINING AND MEDICAL STANDARD:</u></b> The promotion to the post of JE(Signal) in Level-6 is subject to being declared medically fit in medical category of A-3 (Aye-three) and passing the mandatory promotional course of training, wherever applicable.</p>
5	Other Conditions	<p>a. <b><u>OBJECTION TRACKER</u></b></p> <p>Further, the eligible candidates may be informed that the provisional answer key will be uploaded in east coast railway website [(<a href="http://www.eastcoastrail.indianrailways.gov.in">www.eastcoastrail.indianrailways.gov.in</a>)] – <b><u>About Us – HQ Departments – Personnel Department – Notification</u></b> after completion of written examination. Candidates who appeared in the said examination can only submit objections. They may submit their representation through email to email ID- (<a href="mailto:ngcadrepersonnel@gmail.com">ngcadrepersonnel@gmail.com</a>) if any, in respect to the provisional answer key within 07 days from the date of Publication of provisional answer key with documentary proof &amp; along with their copy of release memo. Objections received by the candidates will be examined by the Competent Authority. No further correspondence about any wrong answer/question will be entertained after above stipulated period.</p>

*Signature*  
8/11/24



		<p>b) The Junior Engineer (Signal) have their own channel of promotion. Hence, those who are selected and posted as Junior Engineer (Signal) on the basis of this selection should seek their promotion in the channel only.</p> <p>c) After their posting as Junior Engineer (Signal), they will no longer have lien in their old unit or claim for transfer back to their erstwhile Cadre/Department/Unit.</p> <p>d) Volunteering staff, who accept these conditions only need to apply.</p> <p>e) Any other provisions of IREM or circular issued by Railway Board regarding terms and conditions of Junior Engineer (Signal) selection and other conditions applicable inadvertently omitted in this notification should be treated as valid and operative.</p> <p>f) Any candidate found using unfair/indiscipline means of any kind in the examination, <b>SPE/VIG &amp; D&amp;A action will be initiated against him/her as per extant rules.</b></p> <p>g) Electronic gadgets like mobile phones, blue tooth device, pen drive, laptops, calculators, wrist watches or any other communication devices, wallet/purses are strictly NOT allowed inside the exam hall. <b>If during the exam period any of the electronics items are found from the candidate, disciplinary action will be initiated against him/her.</b> So, candidates are advised not to bring any of the electronics gadget including mobile phones etc. to the venue of the examination, as arrangements for safe keeping cannot be assured.</p> <p>h) If the employee is <b>unwilling to appear the written Examination, he/she may submit unwillingness to this office in writing through his /her</b> controlling officer within 10 days from the date of publication of eligibility list which is to be published, otherwise it will be presumed that all the staff under zone of consideration are willing to appear in the selection.</p> <p>i) Railway administration reserves all rights to cancel or amend the notification partly or wholly at any time without any prior notice or assigning any reasons thereof and also cancel/re-conduct the examination at any stage.</p> <p>j) If any discrepancy is found at any stage in regard to the applicant the candidature is liable to be cancelled at any stage of selection without any information.</p> <p>k) The candidates may be advised to be in readiness to appear for the written examination at short notice treating this notification as alert notice.</p> <p>l) Copy of syllabus is enclosed as <b><u>Annexure-II.</u></b></p> <p>m) <b><u>Pre-Selection Coaching:</u></b> There is 3 to 4 weeks of mandatory pre-promotional training for ST employees at the nominated training centres or any other method in their divisions/units under their controlling officers. Concerned Department Head will decide their pre-promotional training among the ST employees. On completion of their Pre-promotional training, the same may be intimated to this office for further process.</p>
6	Date of Written Examination	The Date, Venue and time of written examination will be intimated in due course. Candidate will have the option for examination either in English or in Hindi.
7	Procedure for drawl of Panel:	<p>i) As the subject of selection is conducted by calling volunteers, no supplementary written examination will be held under any circumstances.</p> <p>ii) The Panel will be formed strictly in order of merit with reference to marks obtained by the candidates in written examination &amp; record of service from amongst all the employees who are adjudged suitable by the committee, to the extent of vacancies notified duly observing reservations.</p>


*Signature*  
8/11/25



		<p>iii) Only those who secure the prescribed percentage of qualifying marks in the written test will be subjected to scrutiny of Records of Service/APAR.</p> <p>iv) Candidates have to secure minimum 60 % marks in written test and 60% in aggregate will be empanelled. There will be no relaxation in marks for SC/ST candidates in Safety Category of post and there will be no classification of candidates as "Outstanding".</p> <p>v) Final panel will be formed purely in order of merit based on aggregate marks of 'Written Examination, Records of Service/APAR subject to condition the clearance of SPE/VIG &amp; D&amp;AR cases of the eligible candidates.</p> <p>vi) The 'Record of Service' will be assessed as per the entries available in the Service Register/Personal records with respect of Awards, Punishments and Absents etc. and based on the grading reported in APARs/ACRs during the three years.</p>
8	LAST DATE OF SUBMISSION/FO RWARDING OF APPLICATION	<p>a. Willing candidates may submit his/her application in the format at <b><u>Annexure-I</u></b>. Applicants are advised to fill the application form after thoroughly reading the eligibility conditions and submit the filled in application form with enclosures to his/her controlling officer. Incomplete application form will be summarily rejected. The staff who are working in different unit keeping lien in other units of East Coast Railway should forward their applications through competent authority of lien unit.</p> <p>b. The last date of option application for submission by applicant to the respective controlling officer is <b><u>07.02.2025</u></b>. Applicants are advised to submit their duly filled up applications to their controlling officers in proper channel before cut-off date. Any advance copy submitted directly without forwarding through controlling officer will not be entertained.</p> <p>c. The controlling officers should send the applications to the respective Personnel Officer of Division/HQ latest by <b><u>11.02.2025</u></b></p> <p>d. The respective Sr. DPOs/SPOs/APOs should verify the correctness of the particulars furnished by the employee in his/her application and forward the same to PCPO's office/BBS on or before <b><u>18.02.2025</u></b> in one bunch with covering letter along with a list of eligible &amp; in-eligible applicants, separately in the format attached with this notification as Annexure-III</p> <p>e. In case of non-receipt of any application for the post, a 'NIL' report may be sent to this office by the concerned Sr.DPOs/SPOs/APOs.</p>

This notification shall be given wide publicity among the staff and copy of the notification may be pasted in the office Notice Board also. This notification is also available in East Coast Railway website at [www.eastcoastrail.indianrailways.gov.in](http://www.eastcoastrail.indianrailways.gov.in)

Encl: 1. Application Form (Annexure-I)  
2. Syllabus (Annexure-II)  
3. Format for Eligible/Ineligible List

  
 (Subash Chandra Hota)  
 Asst. Personnel Officer-I  
 for Principal Chief Personnel Officer

Copy to

1. PCSTE/ECOR/BBS & CAO(Con)/ECOR/BBS,
2. DRM (P)/ECOR/KUR, WAT & SBP,
3. Sr.DSTE/ECOR/KUR, WAT & SBP,
4. Dy.CPO(Con)/ECOR/VSKP,
5. APO (Con)/ECOR/BBS
6. The General Secretary/ECORSC, ECoRSU, AIOBCREA & AISCSTREA/ECOR/BBS
7. Notice Board of PCPO's Office ECoR/BBS

  
 For Principal Chief Personnel Officer



**PROFORMA OF APPLICATION**

Application for calling volunteers from serving employees of East Coast Railway for filling up of Junior Engineer (Signal) in Level-06 in East Coast Railway/HQ/BBS against Intermediate Apprentice Quota vide PCPO/BBS's Notification No: - ECoR/Pers/10/S&T/ Selection/ JE(Signal)/20% IAQ/Notice, Date-08<sup>th</sup> January` 2025

1	Name (CAPITAL LETTERS ONLY)					
2	Father's Name					
3	Date of Birth					
4	Date of Initial Appointment / Designation or Capacity/ Pay Scale	Date	Capacity		Pay Scale	
	Date of Regular Entry to	Level-02	Level-04	Level-05	Level-06	
5	Community (UR/SC/ST/OBC)					
6	Present Department /Division					
7	Present Designation	Substantive				
		Officiating				
8	Date of Regular Entry to Present Scale	Substantive				
		Officiating / MACP				
9	Educational Qualification					
10	Lien Department / Unit					
11	Contact Number					
	Email ID (CAPITAL LETTER ONLY)					

I do hereby declare that I have gone through the above referred notification and I am volunteering for the post of Junior Engineer (Signal) in East Coast Railway/HQ/BBS after agreeing to abide all the conditions in the said notification. I am aware that my application will not be considered if it is deficient in any form or incorrect or not forwarded by the controlling officer / department / division/ unit to PCPO office. In case, anything is found to be incorrect, I shall be held responsible and my candidature may be cancelled.

Date:

Place:

**Signature of the Applicant**

Certified that the above employee has submitted the application before the cutoff date in this office.

Date:

**Signature of the Controlling Officer  
with seal**

Certified that the above service particulars of above named staff is found correct as per the service record maintained in this office. The total length of non-fortuitous service of the above employee as a regular railway servant is \_\_\_\_\_ (in words) (Years & Months)

**Signature of cadre Personnel Officer  
with Seal**

*Handwritten signature and date 8/1/25*

**Annexure-III**

Sl. No	Name of employee	Father's Name	PF No & HRMS ID	Community	Working Station Unit	Date of Birth	Date of Initial Apptt.	Capacity at the time of initial appointment
01	02	03	04	05	06	07	08	09

Present Designation		Educational Qualification	Lien Unit	Date of Entry to				Eligible / Ineligible
Substantive	Officiating			Level-02	Level-04	Level-05	Level-06	
10	11	12	13	14	15	16	17	18

**East Coast Railway**

Office of the  
Chief Personnel Officer  
Bhubaneswar - 751 017.

No.ECoR/Pers/R/Syllabus/Selection/3

Date: 28.11.2011.

To  
The Sr.DPO/DPO-KUR,WAT, SBP,  
WPO/MCSW & SPO/Con/BBS  
East Coast Railway.

Sub: Syllabus for 20% quota of vacancies for JE (Signal) & JE (Tele) through Limited Departmental Competitive Examination and Modality of Test Paper in the S&T Department.

Ref: This office letter No. ECoR/Pers/R/Syllabus/Selection/3, dated 23.11.2011 (Copy enclosed).

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In continuation of this office letter No.ECoR/Pers/R/Syllabus/Selection/3, dated 23.11.2011 on the above subject, it has been decided that the same syllabus may be followed for selection to the post of JE (Signal) 40% DPQ & JE (Tele) 30% DPQ.

This has approval of the competent authority.

(S.K.Mishra)

Sr.Personnel Officer (IR&G)  
for Chief Personnel Officer

Copy to: For information and necessary action.

1. CSTE/ECoR/BBS.
2. Sr.DSTE(Co-Ord)/KUR,WAT, SBP.
3. Dy.CPO(HQ)/ECoR/BBS.
4. APO(HQ)-I & II.

29.11.11



## East Coast Railway

Office of the  
Chief Personnel Officer  
Bhubaneswar - 751 024

No.ECoR/Pers/R/Syllabus/Selection/3

Date: 23.11.2011.

To  
The Sr.DPO/DPO-KUR,WAT, SBP,  
WPO/MCSW & SPO/Con/BBS  
East Coast Railway.

Sub: Syllabus for 20% quota of vacancies for JE (Signal) & JE (Tele) through Limited Departmental Competitive Examination and Modality of Test Paper in the S&T Department.

Ref: Sr.DPO/KUR's letter No. P/E/Selection Cell/S&T/JE/Syllabus, dated 12.10.2011.

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Competent Authority has approved the Syllabus for 20% quota of vacancies for JE (Signal) & JE (Tele) through Limited Departmental Competitive Examination and Modality of Test Paper in the S&T Department of ECoR. The approved syllabus is as under:

1. Question paper will be in three parts: PART: "A", PART: "B" & PART "C" with Total marks: 100.
2. Format of question paper will be in accordance with the latest Railway Board guidelines.
3. Question paper shall be in bilingual form i.e. English & Hindi only.

Part - A	1.1 :	Contains English, General knowledge and current affairs, reasoning tests, simple arithmetical calculations	15 marks
	1.2 :	Establishment, Store & Technical correspondence, Project management	15 marks
	1.3 :	Basic Electrical and Electronics Engineering	20 marks
Part - B		Technical subject on various Railway signaling/ telecom systems	50 marks
Part - C		Rajbhasha (optional)	10 marks

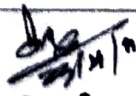
### Syllabus

A 1.1	English	Essay writing on general topics, Letter writing, Simple English grammar, Gender, Singular, Plural numbers, Antonyms, Synonyms, Direct, Indirect speeches.
	General knowledge	General knowledge, current affairs.
	Arithmetic	Arithmetical calculations (Standard up to 10+2 level) and reasoning tests.

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Senior Personnel Officer  
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A 1.2	Establishment	Establishment rules: HOER, Leave rules, Pass rule. Organizational set up in S&T department of Zonal HQ, Divisional HQ and way stations including cadre strength calculations based on ZISTU & DISTU.
	Store	Store DMTR, requisition of materials, IRS/TEC/RDSO specifications, stores manual, other store procedures. Tools & plants.
	Technical correspondence, Project management	Technical circulars, Inspection notes, Safety drives Project estimate, Tenders, contracts, Measurement book, Contractor bills.
A 1.3	Basic Electrical and Electronics Engineering	<p><b>DC Circuit</b> - Voltage &amp; Current sources, Loop and Nodal equations, Superposition theorem, Thevenin's theorem, Norton's theorem, Maximum power transfer theorem.</p> <p><b>Fundamentals of AC</b>- Average value, RMS value, form factor, crest factor, AC power and power factor, phasor representation of sinusoidal quantities. Simple series, parallel &amp; series-parallel circuits containing R-L, R-C, R-L-C parameters, Resonance in series &amp; parallel circuits. Star Delta transformations.</p> <p><b>Introduction to Electrical Machines</b>-Faraday's law of electromagnetic induction, Lenz's law, induced EMF, Working principle &amp; Basic constructional features of Transformer, different types, O.C. and S.C. tests of transformer, equivalent circuit and vector diagram, losses, efficiency and regulation, autotransformer. Basic constructional features of DC machines, working principle and classification.</p> <p><b>Power Supply</b> - Solar photovoltaic cell, primary and secondary cells, battery chargers, DG sets, voltage stabilizers, DC-DC converters, inverters, rectifiers.</p> <p><b>Earthing and Surge protection</b>- Maintenance free earth, single earth, ring earth, Class A, B &amp; C type surge protection devices, protecting against electrical surges and spikes including those caused by lightning.</p> <p><b>Protection to staff</b>: Acid, fire, safety requirements, proximity, precautions in AC electrified area, tools, gloves, belts, helmets, guards, covers, live circuit working, handling electrical equipment, radio equipment, safety first manual, first aid.</p> <p><b>Basic Electronics</b> - Characteristics of diodes, diode parameters, equivalent circuits, rectifiers, derivation for rectifier efficiency, ripple factor, filter circuits, power supplies. Principle of operation of transistors, Transistor Circuits and Integrated circuits.</p> <p><b>Introduction to common measuring equipment</b>: Cathode Ray Oscilloscope, multimeters, frequency meter, ammeter, voltmeter, clamp on meter.</p>

  
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 East Coast Railway/BBB

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**PART - "B" - Technical subject on various Railway signaling/ telecom systems 50 Marks**

B1	<b>SIGNALLING</b>	
	Basic concepts	Basic concepts of Signaling, GS & SR, SEM Pt- I & II.
	System of Block Working	Absolute Block System, APB System, Automatic Block Section
	Track Circuit	DC Track Circuits, Single and Double rail, Laying at Glued joints, importance of traction bonds, Cross Bonding, Earthing arrangement, Relay and feed end arrangement. Ballast Resistance, seasonal adjustments of DC track circuit, Excitation voltage on relay terminals of DC track circuits and preventive steps. Maintenance features of track circuits. Track relay shelf type and plug in type, its parameters, cutting in features.
	Signalling & Power supply system	Signaling arrangement and power supply systems in AC electrified areas. Protection measures to the operating and maintenance staff. Earthing and its importance, Visibility of signal aspects. Double pole & Triple pole lamps, signal screening, Ball token and token less block working. Mast implantation for clear visibility of signal aspects, Solar Power supply, Load calculation for PI, RRI station, IPS for typical PI/RRI/EI station.
	Cables	Laying of signaling cables, cable insulation resistance, Meggering of cables, Earth leakage detectors, Maintenance Free earth Clamp meter, Cable fault route locator & Electro Magnetic Interface Shielding. Earthing of signaling cables and equipments. Measurements of earth resistance. Steps to improve Localization of faults and repair. Burning of cables in AC traction areas, causes precautionary measures to prevent such hazards.
	Points and levers	Types of Lever, range of Point operation with Point rodding, wire operated Signals, Its range of operation, Rod and wire compensators, Methods of route holding. Catch and slip siding. Locking in lever frames, Locking tables and Dog charts.
	RRI/Panel	RRI and Panel interlocking systems. R.C.C, Aspect Control Chart.
	Electrical Signaling	Point Motors, In built features, Control and Operation Circuits, Signal machines, Signal reversers, Track locking, Back locking, Indication locking, Approach and Dead approach locking etc. Lever lock and its functions. EKT/RKT and its functions, Circuit breakers.
	Modern Signalling	Basic Concepts of Electronic interlocking, Data logger and its utility, Analog and Digital axle counters, AFTC, Electronic track circuits, IBS Systems, Block proving axle counter and LED Signals.
	Block Signalling	Neal's A type Ball /Tablet token instrument, Diado/HWH makes TLBI, SOE Double line block instrument (Lock and Block), Token less Push button instrument. UFSBI.

  
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 East Coast Railway/BBS

Contd.P/4.



Drawing office practice	Preparation of SIP, RCC, FPD, Locking table, dog chart, Circuit diagrams, contact analysis, cable coreage plan, cable route plan, As made (as at site) drawings. CRS application, Sighting committee report. Station working rule diagram.
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B2	TELECOMMUNICATION	
	Basic concepts	Basic concepts of Railway Telecommunication, Telecommunication engineering Manual
	Land Line communications	Parameters, trenching, laying, jointing, termination of quad cables, testing, Faults, Localization and remedies in 4 quad/6quad cables, block working, LC gate communication & emergency communication, maintenance schedules and periodical tests.
	Optic Fiber Communication system	OFC system, Principles of working (PDH & SDH), OFC Channel testing, Ring protection and NMS. Construction details of Fibers and OFC, Laying details, Splicing.
	Cable	Tele cabling, characteristics of Tele cables, Cable laying, Parameters, Loading coils, Condenser joints, Balancing of cables, Testing, Cable faults, Localization, Rectification, Annual maintenance of cables in RE and Non-RE areas.
	Train traffic control	DTMF Signaling, control office setup at HQ, different controls like TC, Dy. TC, TPC, TLC, SM's control working at way station, DTMF Equipments 2W, 4W, 2W/4W combination, control testing, radio patching, HQ and divisional telecom test room, earthing, Lightning protection.
	VHF / Satellite systems / Mobile	Communication, propagation methods, types of aerials, antenna, feeder/coaxial cable/connectors for 25Watts & 5 Watt VHF sets including power supply, uses, installation, programming, testing & maintenance of VHF sets, limitations of VHF. VSAT, Hub earth station, space link, remote earth station, interface equipment, network control centre, bandwidth management, satellite block diagram, network component details- hub configuration, remote configuration, remote indoor unit, INMARSAT Satellite, Mobile communication.
	Power Plant practice	Types of batteries, FCBC, SMPS chargers, Battery charging, Installation, Maintenance practices.

  
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Computer basics	Basic computer concepts, notebook computers (laptop computer), Personal Digital Assistant (PDA, also known as Palmtop computer), desktop computers (PCs), Work stations, Servers and Supercomputers. Memory, Peripherals including mouse, printers, interfaces, disks, drives, controllers, USB ports, power supply, operating system concepts- single user/multi user, GUI & application software. Web page concept, internet, worldwide web, e-mail and multimedia.
Data Networks	Types of networks, Network topologies, IP & non-IP based networks, NIC, hubs, nodes, clients, gateways, Routers, switches, modems, ISDN, DSLs, connectors/adapters, data cables. Installation, commissioning and maintenance of datacom equipment in various LAN, WAN networks like Railnet, internet (TCP-IP), data loggers, FOIS, COIS/ICMS, CMS, COA, MIS, IREPS, PRIME, VSAT, PRS, UTS etc., bandwidth requirements, broadband, path protections, standards, scalability, IP addressing, IP planning, network/sub-network masking, data security & encryption levels, software, firewall, intrusion detection & protection, convergence, traffic monitoring, BER, jitter, wander measurements, testing of data channels of 2Mbps & 64 kbps speed, telnet, HTTP, FTP, maintenance using NMS and Do's & Don't's.
Accident Communication	List of equipment in ART, testing, provision of accident/disaster management communication arrangements at site, divisional control room & Zonal HQ control room, Maintenance & inspection of ART equipment, Information to public.
Auto Telephony and Electronic Telephone Exchanges	Auto Telephone Systems, SPC, PCM-TDM principles, Electronic Telephone Exchanges, speech, voice, data communications, signaling types, ISDN, WLL, Trunk Boards, Telephone traffic and dealing with telephone traffic at peak and slack hour working, system requirements, MDF/IDF wiring, cabling, power plant and protections, maintenance and repairs.

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Passenger Amenities	<p>Sound distribution, acoustic survey, defects &amp; corrections, PA systems in yards, Platforms &amp; conference halls, Paging and talk back in yards, Types of Microphone, Amplifiers, Loudspeakers, Acoustic characteristics of a meeting hall, video/audio conferencing.</p> <p>Passenger Amenity care on Railways, Enquiry Telecom system, Interactive Voice Response systems, prerecorded &amp; PC based Auto announcing, train guidance/ indication boards, coach indication boards, touch screen kiosks, Voice Recorder, Passenger Reservation System, Digital Clocks, Fare display boards, Token Distribution System, Unreserved Ticketing System, PNR enquiry, accommodation availability, National Train Enquiry System, digital clocks (master-slave) , video surveillance system, various Faults, Localization of faults, all aspects of installation, commissioning and maintenance of the passenger amenities.</p>
Telecom Testing and Measuring instruments	<p>Insulation tester, meggar, Transmission measuring set, psophometer, X'talk measurement, CUM set, impedance balancing, cable fault locator, line tester, LAN/WAN analyser, frequency counter, power meter, programmable frequency scanner, field strength meter, different data analysers like communication, Ethernet, protocol analysers, BER meter, LAN meter.</p>
Telecom General	<p>Morning position, PTCC, Knowledge of PTCC manual, various standing committees at Central, State level, case clearance procedures from CEA &amp; SLPTCC members, SACFA/WPC clearances, recommendations &amp; standards CCIR/CCITT/IEEE/ITU.</p> <p>Inspections, maintenance schedules, records, reports, Drawings.</p>

**PART - "C" - Official Language/ Rajbhasha**

Copy to: For information and necessary action.

1. CSTE/ECOR/BBS.
2. Sr.DSTE(Co-Ord)/KUR,WAT, SBP.
3. Dy.CPO(HQ)/ECOR/BBS.
4. APO(HQ)-I & II.

*23/11/18*  
(S.K.Mishra)

Sr.Personnel Officer (IR&G)  
for Chief Personnel Officer  
वरिष्ठ कार्मिक अधिकारी  
Senior Personnel Officer  
पूर्व तट रेलवे, भुवनेश्वर  
East Coast Railway/BBS

*23.11.18*