EAST CENTRAL RAILWAY

Office of the
General Manager (P)
Hajipur

No. ECR-HQ0PERS(Gaz)/12/2023

Dated 21.02.2023

Secy. to GM/ECR: For kind information of GM
Dy.Secy. to AGM: For kind information of AGM
Secy. to PCPO:- For kind information of PCPO
SDGM & PCSTE/ECR/HJP
CAO(Con)(S&N)/MHX/ECR/PNBE
CAO/DLF/MEW, CAO/GELF/DMH, CAO/RWP/Bela, CAO/WPO/PNBE
General Manager (P)/NCR & CORE/PRYJ
CPD/RE/DNR, CSTE/Con/S&N/ECR/MHX/PNBE
CPO(A), CPO(IR)&, CPO/MPP & Law/ECR
CPD/RE/DNR, DRMs/ECR/DNR, DDU, DHN, SEE & SPJ
CSO/ECR/HJP, CWM/PD/DDU, WS/SPJ & CRW/HRT
Sr.DPOs/ECR/DNR, DDU, DHN, SEE & SPJ
Dy.CPO(Con.)/MHX/PNBE, Dy.CPO/WP/Patna
Sr. DSTEs/DSTEs/ECR/DNR, DDU, DHN, SEE & SPJ
Dy.CPO/HQ/MPP/IR&W/ECR/HJP & SPO/Con./MHX
Principal/ZRTI/E.C.Rly/Bhuli & MFP
APO/Rectt, APO/ESM & APO/M&E/HQ/HJP
APO/MPP/ECR/HJP : for uploading on WEBSITE
All Extra Divisional Units

Sub:- Selection for the post of Assistant Signal & Telecommunication Engineer (Group-'B') in Level-8 of Pay Matrix [Pay Band Rs. 9300-34800/- (PB-2) Grade Pay- Rs. 4800 as per 6th PC] against 30% quota.

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With the approval of General Manager, it has been decided to hold a selection LDCE for forming a **panel of 01 person** for the post of ASTE(Gr.-'B') against 30% quota over E.C.Railway, as per details given below:-

Selection	UR	SC	ST	Total
ASTE (Gr.'B')30%	00	01	00	01

As decided by Railway Board vide L/No. E(GP)2022/2/4 dated 28.06.2022, 06.09.2022 & 04.10.2022, that 30% selection for promotion to Group 'B' posts in all Organised departments in the vacancy cycle beginning from 01.01.2023 to 31.12.2024 are to be conducted through the Centralised Computer based Objective type examination by NAIR.

(1) (a) Tentative date of examination (CBT):- **14.05.2023**
(b) Venue of examination (CBT) & date of Viva Voce:- **will be notified in due course**

(2) **Eligibility:-(As on 01.01.2023)**

(a) All permanent Group-"C" technical staff working in Signal & Telecommunication Department including those working in other Railways/on deputation having lien and seniority on East Central Railway who have completed a minimum of 05 years of non-fortuitous service in Level- 6 of Pay Matrix (Pay Band Rs. 9300-34800 (PB-2) with Grade pay Rs. 4200/- as per 6th CPC) & above (including non-fortuitous service rendered in the corresponding pre-revised grades) as on 01.01.2023 are eligible to volunteer to appear in the selection against LDCE.
NB:- However, Those Gr.'C' employees who have been given financial up-gradation in Grade Pay 4200/- or above in PB-2 (9300-34800/-) under ACP/MACP are not eligible to volunteers for the above (LDCE) examination.

(b) **The cut-off date of eligibility for candidates for 30% LDCE is 01.01.2023.**

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Contd.... P/2

(c) As per Railway Board's letter No. E(GP)2005/2/74 dt.13.03.08(RBE 40/08) in case of persons transferred at his own request to a new unit in the same category of post and assigned bottom seniority therein, the service rendered by them in the previous unit may be reckoned for determining their eligibility wherever a minimum length of service is prescribed as a condition for promotion in the new unit, subject to the condition that the length of service which is so allowed to be counted does not exceed the length of service of their immediate senior in the new unit.

(d) Those Railway employees who have come own request transfer/mutual transfer and joined E. C. Railway after the cut off date i.e. 01.01.2023 will not be eligible to appear in this examination.

(3) Eligible staff who desire to volunteer for the above LDCE may submit their application through proper channel to their respective Personnel Branch officer where they hold their lien.

(4) Eligible staff working in the Construction/Project Organization on deputation, training and any Ex-cadre Organization and having lien and seniority in ECR, who desire to volunteer for the above LDCE may also submit their application through proper channel i.e. their respective Personnel Branch officer, where they hold lien. The concerned Divisions/Units should send copy of notice to the staff who are on deputation after being released from that Divisions/Units.

(5) When an employee is holding an ex-cadre post, details of his/her post in regular cadre with the grade and date of entry as a regular measure should be furnished. This may also be brought to the notice of all concerned. It may be ensured that wide publicity is given to this notification amongst all the eligible staff. It is the personal responsibility of the personnel Officers/Controlling Officers of the Units to ensure that the notification reaches to all the eligible employee well in time.

(6) All the volunteers who fulfill the above mentioned conditions of eligibility will get the chance to compete in the said LDCE, without any restrictions to the number of eligible candidates to be allowed for appearing in the examination.

(7) The above LDCE will be based on the candidate's performance in Written examination, viva-voce & record of service. Only the candidates, who qualify in the examination and found medically fit for Safety category of ASTE(Gr.B) as prescribed in Indian Railway Medical Manual will be called for Viva-voce test. The placement of the candidates in the panel will be based on their performance in Written examination, Viva-voce test and Record of service as per extant instructions of Railway Board and will be strictly as per merit.

(8) **Pattern of Examination:**

(i) The Examination will be conducted as per guidelines/instructions contained in Railway Board letter No. E(GP)2018/2/31 dated 19.03.2019 (RBE No. 53/2019), E(GP)2022/2/4, dt. 28.06.2022, 06.09.2022 & 11.11.2022.

The CBT/Written examination shall comprise of only one paper which shall have 100% objective type multiple choice question only. The paper will be of 150 marks and the distribution will be as under:-

a) Technical (Professional) subject:	80 marks
b) General knowledge including optional questions of 15 marks on official language Policy & Rules:	40 marks
c) Establishment and Financial rules:-	30 marks
d) Qualifying marks:-	90 marks
e) Duration of examination:-	03 Hours

All Objective type questions will carry equal marks. There shall be negative marking for incorrect answers. One-third of the marks allotted for each question will be deducted for every wrong answer.

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Contd.... P/3

(ii) Total marks and qualifying marks under the heading "Viva-Voce and Record of service" are as under:-

Head	Maximum Marks	Qualifying Marks
Record of Service -	25 } Total	30 in which 15 marks for Record
Viva-voce test -	25 } 50 marks	of service will be essential.

(9) **Syllabus: In terms of Rly. Bd's Letter No. E(GP)2022/2/4 dated 07.11.2022, copy of syllabus for above selection is attached as Annexure-'B'.**

(10) (a) The Controlling Officers should give the wide publicity of this notification amongst the eligible staff under their control and ensure submission of applications by the candidates in the prescribed Proforma (Specimen Copy enclosed as **Annexure-"A"**).

(b) **The last date for submission of the application by candidates is 13.03.2023.**

(c) The Controlling officers are also advised that applications submitted by the candidates (in prescribed proforma) must be forwarded to concerned Personnel Branch/Unit office by 15.03.2023.

(d) The applications should be scrutinized properly in Personnel Branch with the Service Record to avoid any factual errors and further complications. The applications should also be signed by the Controlling Officer with official seal and should have the counter signature of the concerned 'Personnel' Branch Officer to avoid any factual errors.

(e) All the scrutinized applications should be sent in a bunch through special messenger to **Dy.CPO/Gaz./ECR/ HJP on or before 22.03.2023 positively. Applications forwarded after the target date will not be entertained under any circumstances.**

It may also be noted that application other than in prescribed proforma, having incomplete information or without signed by controlling officer and countersigned by Personnel branch officer will not be entertained.

(11) In case the service particulars furnished by the volunteers and certified to be in order by the concerned authority are found incorrect/false subsequently, the candidature of the volunteer will be liable to be cancelled at any stage and suitable departmental action will be initiated against him/her.

(12) ACTION TO BE TAKEN ON RECEIPT OF APPLICATION BY CONCERNED PERSONNEL OFFICERS/CADRE CONTROLLING OFFICERS:-

(a) The Personnel Officer/Cadre Controlling Officer will check the correctness of all the particulars of the applications with the Service Records and other relevant records and certify the correctness of each column of the application. Without such certification, application received will summarily be rejected and the responsibility will be fixed for incorrect or incomplete certification against the Officer who will certify/verify. The Personnel Officer/Cadre Controlling Officer should invariably write "Checked and verified" in each and every application after checking and verifying the details duly attesting their signature and date of certification (the date of certification should invariably put in the application).

In case, the Personnel/Cadre Controlling Officers do not put the date after certification or merely forward the application without checking and verifying the details, the matter would be brought to the notice of PCPO and concerned PHOD for taking action against him.

(b) It may please be noted that Controlling Officers/heads of the Units have no discretion to entertain any application beyond the last date. **The applications of the employees who are eligible, should only be forwarded after verifying the other relevant particulars and ineligible application should not be forwarded.**

(C)The Personnel Officer/Cadre Controlling Officer should forward the scrutinized and checked applications in one bunch together under one covering letter furnishing **the details in the following proforma addressed to Dy.CPO/Gaz./HQ by 22.03.2023** indicating therein the total number of applications forwarded. (The details should be sent in soft copy in (MS Excel format also as in the form given in item-D below). The applications rejected may be intimated to the individuals giving reasons thereof by the concerned Unit/Divn where lien and seniority of concerned staff held.

Contd.... P/4

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(D) Proforma:-

Sl. No.	Particular/details of candidates	To be filled
1.	Name of applicant	
2.	IPASS Number	
3.	HRMS ID	
4.	Designation	
5.	Mobile No.	
6.	Email.ID (clearly)	
7.	Place of posting	
8.	Division/workshop/unit	
9.	Controlling officer	
10.	DOB (DD/MM/YYYY)	
11.	DOA (DD/MM/YYYY)	
12.	Community (UR/SC/ST)	
13.	Date of regular promotion to Grade pay (4200/- & 4600/-)	
14.	Total service in (GP) Rs. 4200/- & above in S&T Deptt. as on 01.01.2023	

(13) TRAINING OF SC/ST CANDIDATES:-

In terms of Railway Board's letter no. E(GP)2022/2/4 dated 18.10.2022, before conducting written examination, mandatory Pre-Promotional Training classes of 60 hrs./15 working days to all SC/ST eligible candidates will be arranged by the department concerned. PCSTE/ECR/HJP will nominate an JAG or above officer of S&T Department as an in-charge of Pre-Promotional Training for the SC/ST candidates. The in-charge of Pre-Promotional Training will intimate the date and venue of the Pre-Promotional Training classes to the eligible SC/ST candidates in due course.

If any SC/ST candidate refuse to undergo Pre-Promotional Training classes, a written undertaking should be obtained from him/her and the same may be sent to Dy.CPO(Gaz.)/ECR/HJP as well as PCSTE/ECR/HJP. The Controlling Officers should ensure that the SC/ST candidates under their control are spared without fail on time to participate in such training.

The SC/ST candidates are also advised to insist their controlling officers, in their own interest to spare them for the said training.

(14.1) Duty of the in-charge of Pre-Promotional training (Nominated by PCSTE):-

(i) To inform in writing through special messenger to the concerned SC/ST employee with details of date, time & venue of training classes.

(ii) To obtain in writing unwillingness for training, if any, from the concerned SC/ST employees.

(iii) To arrange sparing of the candidates and liaison with respective Controlling Officers/Supervisors.

(iv) To chalk out training schedule and adhere to it.

(v) To ensure maintenance of daily attendance of SC/ST candidates on the attendance sheet, who attend the training.

(vi) After completion of such training, the in-charge of the Pre-Promotional training classes will give a written report along with all supporting documents/papers including attendance sheet of SC/ST participants to Dy.CPO(Gaz)/ECR/HJP immediately after completion of Pre-Promotional training classes for records and further action. On receipt of compliance report of Pre-Promotional training classes, written examination will be conducted.

(14.2) Duty of Controlling Officer:-

To spare the candidates under their control without fail in time with direction to participate in the Pre-Promotional training classes as well as to appear in the written examination also.

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Contd.... P/5

(14.3) Duty of concerned SC/ST applicant:-

(i) To arrange their sparing from duty by insisting their Controlling Officers in their own interest.

(ii) If any problem occurs in sparing, the candidate should report in writing to concerned in-charge of Pre-Promotional training classes on the same date. No representation will be entertained in case of failure to report to the concerned in-charge of Pre-Promotional training classes and it will deemed to be refusal for the same.

(iii) Failure of concerned SC/ST employees to avail Pre-Promotional training classes on any account including leave etc. will be considered on their part and no supplementary training will be organized in any circumstances.

(iv) No appeal will be entertained by GM(P)/ECR/HJP after completion of Pre-Promotional training.

(v) After completion of Pre-Promotional training, the in-charge of the Pre-Promotional training classes will give a written report along with all supporting papers including attendance sheet of SC/ST participants to Dy.CPO/Gaz/HJP latest by 03.05.2023 for records and further action.

(15) The eligible staff should also be advised that no absentee written examination would be held for the absentees under any circumstances. As per rule, there is no provision of absentee exam in LDCE.

(16) The concerned Personnel Branch Officer & Controlling Officers should ensure the submission of service records and ACRs/APARs of last 05 years and DAR/SPE/Vigilance clearance in respect of staff declared qualified for the viva-voce in due course/immediately after publication of the result of written examination through special messenger to SPO/Gaz/ECR/HJP.

(17) The above selection will be held as per procedure laid down in Master Circular No. 68, governing promotion from Gr. 'C' to Gr. 'B' issued by Railway Board and the instructions issued time to time. The said Master Circular is available on website www.indianrailways.gov.in....>ministry of railway...>railway board .....>Railway Board Directorates... >Establishment...>E(GP)circular → Master Circular. The department/division/unit should ensure the compliance of instructions of item 15 of Master Circular- 68.

(18) Application received after the target date should not be entertained and the same should be disposed off at the Division/Extra Divisional level by rejecting them on account of late receipt under advice to this office.

Please acknowledge receipt.

DA:- (i) Proforma of application (Annexure 'A').
(ii) Syllabus (Annexure 'B')

21/2/23

(Alok Srivastava)
SPO/GAZ
For General Manager(P)/HJP

Annexure 'A'

PROFORMA OF APPLICATION AGAINST NOTIFICATION FOR THE POST OF ASTE (Gr.'B') 30% QUOTA.

1. Information regarding candidate:

Sl. No.	Particular	Filled by candidates
01	Name of applicant (In Block letter)	
02	IPASS Number	
03	HRMS ID	
04	Designation	
05	Mobile No.	
06	Email.ID	
07	Place of posting	
08	Division/workshop/unit	
09	Lien at	
10	Controlling officer	
11	DOB (DD/MM/YYYY)	
12	DOA (DD/MM/YYYY)	
13	Educational Qualification	
14	Community (UR/SC/ST) (if SC/ST, a copy of caste/Tribe Certificate duly attested by a Gazetted officer should be enclosed with application	

2. Date of appointment/promotion to the following grade on regular basis (6th PC):-

	DDMMYYYY
(b) In PB-II GP-4200	
(c) In PB-II GP-4600	

3. Length of non-fortuitous service (Regular Promotion) to the following grade as on 01.01.2023.

	As on	Year(s)	Month(s)	Day(s)
(b)In PB-II GP-4200	01.01.2023			
(c)In PB-II GP-4600				

4. Present pay & scale & Date of promotion to present scale. :-
5. Choice of language to answer the questions :-
(English/Hindi). The candidate should indicate his/her choice, either any one of the above two language.
6. **DECLARATION OF THE CANDIDATE:-**

I do hereby declare that the above particulars furnished by me are true to the best of my knowledge and belief. I further undertake that in the event of any entry above is found incorrect or improper, my candidature shall liable to be cancelled at any stage during pendency of the above selection.

SIGNATURE OF THE CANDIDATE (HINDI) SIGNATURE OF THE CANDIDATE (ENGLISH)

(A) **Forwarding of application (filled-up) furnished by the candidate to the Personnel Branch Officer by his/her controlling officer:-**

The application is in prescribed proforma duly filled-up by the candidate, Shri/Smt._____ Designation_____ received within the target date is hereby forwarded to his/her Personnel Branch Officer for verification with the service record available and for onward transmission to the General Manager (P)/ECR/HJP.

SIGNATURE OF CONTROLLING OFFICER
(With office seal & date)

(B) Certificate to be furnished by the Personnel Branch Officer:-

If the volunteer comes under the circumstances mentioned in Para 2 (c) of the notification the service rendered by immediate senior employee as on 01.01.2023 should be indicated invariably in the following format.

Sl. No.	Name(S/Shri) of immediate senior	Designation	Pay Band & GP	Year	Month	Day
			In PB-II GP 4200			
			In PB-II GP 4600			

It is certify that the Service Particulars/Bio-Data furnished by Shri/Smt. ....., Designation..... in the prescribed proforma (Bio-data) have been verified with his/her service record and found correct.

The above mentioned candidate is eligible to appear in the said selection as per Notification and his/her application is hereby forwarded to GM (P)/Hajipur for further necessary action.

SIGNATURE OF THE CADRE ('P' BRANCH)
OFFICER (With office seal & date)

Note:- The application with any column unfilled will be summarily rejected

21/2/22

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

No. E(GP)2022/2/4 **New Delhi, dt:07/11/2022**

The General Managers,
All Indian Railways/PUs.

(Kind Attn.:All PCPOs/PFAs/Dy.CPO(G) & Dy.CAO(G)

Sub.: Promotions to Group 'B' posts on Indian Railways - Introduction of Centralized Computer Based Multiple Choice Objective type examination (CBT) in all departments having Organised Services

Board has prescribed syllabus for written examinations held as part of 30% LDCEs for promotion to Group 'B' posts in all Organised Services. Besides this, syllabus for 70% Selection for promotion to Group 'B' post of APO has also been prescribed by Board. Now, in the context of introduction of Centralised CBT for 70% Selections and 30% LDCEs for promotion to Group 'B' posts, Board has prescribed syllabus of 70% Selections and have also modified the syllabus for 30% LDCEs for all Group 'B' posts in Organised Departments. Similarly, syllabus for Establishment & Financial Rules has also been prescribed.

2. A copy each of the Syllabus for professional subjects prescribed by Board for 70% Selections and 30% LDCEs for promotion to Group 'B' posts in all Departments having Organised services along with the syllabus for Establishment & Financial Rules is enclosed for information. These syllabi are applicable for Selections & LDCEs to be conducted w.e.f.1.1.2023.

DA:As above

M Saluja
07/11/22

(Meenakshi Saluja)
Dy. Director, Estt.(GP)-III
Railway Board
Ph. No. 233047250
E.mail ID- meena.1964@gov.in

ANNEXURE - 'B'

Syllabus for promotion to Group- B posts - 70% selection and 30% LDCE.

Syllabus for Establishment Rules:

1 Organization of the Personnel Department in Railways objectives functions and policies of Personnel Department.

2. Recruitment and Training, Classification of Services, Recruitment in Different services, Railway Recruitment Boards & Railway Recruitment Cells Compassionate Ground Appointments, Initial & In Service Training, Refresher Courses, Central Training Institutes, Training Centers in Zones, Divisions & Workshops, Training Modules for different posts, Training under Apprentices Act, Online Training, APARs.

3. General conditions of service in Railways, Seniority, Lien, Inter Railway & Inter Division transfers, Deputation, Promotion Policy & methods. Selection, Suitability, Trade Tests, Leave Rules, Pass Rules, Joining Time Reservation policy, HOER, Overtime, Payment of wages, current CPC Pay Rules, Advances in Railways.

4. Manpower planning, Rightsizing & Benchmarking, creation, extension and surrender of posts, creation of posts against new assets, different types of posts including workcharged posts.

5. The Railway Servants (Discipline & Appeal) Rules, 1968 and related instructions.

6. The Railway Services (Conduct) Rules, 1966 and related instructions.

7. Retirement benefits, qualifying service, pension, family pension, commutation gratuity, new pension scheme.

8. Staff welfare, SBF, Railway institutes, Railway schools, Ex-gratia payment, Incentive Bouns Scheme, Staff Grievances Redressal Mechanisms.

9. Industrial relations in Railways, recognized trade unions, industrial disputes. The Industrial Disputes Act, 1947. The Industrial Relations Code, 2020. The Trade Unions Act, 1926, PNM, PREM, JCM, Various Associations & Informal Meetings.

10. The Factories Act, 1948. The workmen's Compensation Act, 1923. Functions of Labour Enforcement Officers, Right to Information Act.

11. The scope of Information Technology in Railway e – office. HRMS, IPAS , LIMBS, ARPAN, CPGRAMS, ANUBHAV etc.

ANNEXURE - 'B'

Syllabus for Financial Rules:

1. Parliamentary Control over Railway Finance, Public Accountability, Cannons of Financial Propriety.

2. Railway Budget - Budgetary terms, Types of Budgets, Budget cycle, Demand of Grants, Budgetary and Financial Reviews.

3. Rules of Allocation - Classification of expenditure - Control of expenditure - Responsibility Accounting - Performance Budgeting - Exchequer Control - Financial Results of Working lines.

4. Works Programme - Financial justification of Works - Surveys - Preparation of Estimates - Capital Budget - Control over Capital Expenditure - Reappropriation of Funds.

5. Financial control over Stores Expenditure - Purchase and Stores Keeping Procedure - Inventory Control and ABC Analysis.

6. Financial & Cost Control in Railway Workshops/Sheds/Units.

7. Rules and procedure relating to Tenders and contracts for execution of works and Procurement of Stores, M&P Programme and RSP.

8. Procedure for Possessing and finalizing Audit Objections and Draft Paras.

9. Delegation of Powers.

10. Losses, Frauds and Embezzlements.

11. General Financial Rules

12. Government e-Market (GeM)

13. Classification of Railway Revenue (Earnings)

14. Information Technology in general with specific reference to Railway's IT Applications

15. Taxation matters with special focus on GST & Income Tax

16. Organization of CGA and C&AG

17. Any other topic felt necessary from time to time

ANNEXURE -'B'

Syllabus for 30% LDCE for Promotion to Group 'B' post of ASTE in Signalling & Telecommunication Department

Part – A - General

I. Current Affairs and General Knowledge

- This section would contain questions of general interest and importance, which is acquired by general observation or reading without specific text book study. Subjects of national importance as well as achievements of Railways are also to be covered. The standard of General Knowledge shall not be more rigorous than Matriculate level.

II. General Mathematics

- Arithmetic and Statistical operations, Graphs, Fractions, Percentage, Sampling & Averages
- Geometry – Areas & Volumes up to Higher Secondary /12th Standard level
- Algebra, Simultaneous Equations etc up to Higher Secondary /12th Standard level

III. Physics & Basic Electricity

- Units & Measurements
- Mechanics – Newton's Law of motion, Velocity & Acceleration, Work, Energy, Power
- Mechanical properties of solids and fluids
- Heat & work, expansion of solids, liquids & gases
- Ohm's law, Coulomb's law, Faraday's Law, Voltage, Current & Resistance, Kirchhoff's Laws, Wet & Dry Batteries, Power Factor
- Fleming's Law, Lenz's Law, Simple Motors & Dynamos, Generators, Principle of working of Transformer, Relay, Fuse, Circuit Breaker
- Semi conductor devices – P-N diode, Transistors, FETs, Applications
- Power supply, AC & DC, Rectifiers

IV. Digital Electronics & Information Technology

- Principles of Digital Electronics – Boolean Algebra, Digital Devices and their applications
- Information Technology – Generations, PC specifications, Operating systems – Windows, Linux and Application Software.

Part – B - Professional Subjects

I. Signalling :

- Basics of Signalling
- Principles of Interlocking, Signal Interlocking Plan, Route holding principles, Table of Control
- Colour Light Signal concepts

- Signalling Elements – Relays, Cables, LED Signals, Point Machines, Track Circuits (DC, AC & AFTC), Axle Counters (SSDAC & MSDAC), Block instruments, Integrated Power Supply, Interlocked Level Crossing Gates and Data Loggers
- Automatic Signalling
- Intermediate Block Signalling, BPAC, UFSBI
- RE Modifications
- Relay Interlocking concepts - Metal to Carbon, Metal to Metal, Panel Interlocking and Route Relay Interlocking
- Electronic Interlocking – Principles, Configuration, Interface logic, Application logic, VDU logic, FAT, SAT, Technical System Approval
- Earthing, Lightning and Surge protection arrangements
- Train Protection Systems – TPWS, Kavach
- Centralised Traffic Control (CTC) , Train Management System (TMS)
- Execution of S&T Infrastructure works – Planning, Execution, CRS sanction, Documentation, Testing and Commissioning

II. Telecommunications

- Outdoor and Indoor Telecom cable system, jointing procedures, and maintenance and fault localisation methods, laying practices and precautions at work site
- Control Communication, OFC based, VoIP based, Emergency Control Communication, Voice Logger, COA
- Telephone Instruments, Signalling principles of Telephone Exchanges, Automatic, ISDN, and VoIP Telephone Exchanges
- PCM-TDM Principles, PD multiplexers, SDH principles and SDH equipments
- Modulation techniques and radio propagation
- VHF, UHF, Tetra, GSM-R, LTE-R
- OFC Communication systems, OFC Splicing, Measurements and laying practices
- Data Communication and IP networks, IP-MPLS, Data networks of IR, PRS, UTS, FOIS, TMS, NMS, Wi-Fi at stations, Firewalls/UTM, Cyber security and Wireless security
- Public address system, Passenger information systems and VSS

III. Codes & Manuals

- General Rules
- Railways (Opening for Public Carriage of Passengers) Rules
- Indian Railways Schedule of dimensions
- Indian Railway Signal Engineering Manual
- Indian Railway Telecom Manual
- Accident Manual
- Block working Manual
- Extracts of Operating manual for Indian Railways, Indian Railways manual of AC Traction Maintenance and Operation and Indian Railways Permanent Way Manual relevant for Signal & Telecom Engineers

ANNEXURE -'B'

IV Workshop Practices

- Raw material processing
- Workshop Machines and their utilisation
- Overhauling procedure and practices
- Inspection and testing of components
- Testing procedures of Block Instruments , Relays, Point Machines, IPS, EoLB, Track Feed Battery Chargers, EKTs, Control Panels and Mechanical Items.
- RDSO approval procedure and Renewal
- Production Management Plan
- Quality control and Safety Practices
- Calibration of instruments and machines
- ISO/IMS Certification for workshops
- Scrap disposal
- Workshop suspense
- Costing of products
- Incentive schemes

Part - C – Official Language

Official Language Policy, Act, Rules, Incentive Schemes etc