

मुख्य कारखाना प्रबंधक का कार्यालय
सवारी डिब्बा कारखाना, लालागुडा
सिकंदराबाद - 500017
रेलवे: 89451

ई-मेल: wpolgds@gmail.com



दक्षिण मध्य रेलवे
South Central Railway

O/o The Chief Workshop Manager
Carriage Workshop, Lallaguda
Secunderabad - 500017

Rly: 89451

e-mail: wpolgds@gmail.com

सं. No. SCR/P-LGDS/210(a)/M7/JE-Rankers/Mechanical

दिनांक /Date: 13.10.2025

अधिसूचना/NOTIFICATION

विषय/Sub: Selection to form a panel for the post of Junior Engineer in Mechanical Department of Carriage Workshop, Lallaguda against 25% Promotional Quota in Level- 6/G.P.4200.

<<<>>>

It is proposed to hold a Selection for formation of panel to the post of Junior Engineer in Level-6/G.P.4200 against 25% Promotional (Rankers) Quota in Mechanical Department of LGDS by calling volunteers from the integrated seniority of Senior Technicians of all shops including LOFP/SC in the ratio of 1:3.

BREAK-UP OF VACANCIES: Assessment period : 01.10.2025 to 31.12.2026

SC	ST	UR	Total	PwBD
01	NIL	02	03	NIL

1. SCHEME OF SELECTION:

The Selection will comprise of both written examination followed by perusal of service records. Since JE being a 'Safety' post, the employees are required to score 60% or more in the written examination and also 60% in aggregate for being empanelled. The panel is formed on the basis of seniority among the qualified candidates. The empanelled candidates will be directed for 13 weeks 'Induction Training' to STC/LGD. The employees who are declared passed in the said training only will be promoted to the post of JE duly giving the benefit of fixation of pay on promotion.

2. Zone of Consideration:

- List of senior most Senior Technicians who are in the field of eligibility in the ratio of 1:3 is indicated at **Annexure-A** enclosed and they have to submit their **WILLINGNESS /UNWILLINGNESS** for the selection in the format enclosed as **Annexure-C** on or before **22.10.2025**.
- A stand-by list of next senior most employees is indicated at Annexure -B enclosed and in case any employee from the Annexure-A submits his unwillingness, the next senior most Senior Technician from the standby list (Annexure-B) will be considered and so on until a total of 09 senior most employees give their willingness. The employees at Annexure-B should also submit their willingness/unwillingness on or before 22.10.2025.
- Staff on sick/Leave should also be intimated to their sick/leave address and obtain their acknowledgement.

3. Mode of Selection:

The selection will be based on written examination conducted through Computer Based Test (CBT) and perusal of record of service and final empanelment will be in the order of seniority from among those who are found suitable.

13/10
WPO/LGDS

- In terms of Railway Board's letter No. E(NG)I/2000/PM1/41, dated 20.08.2003, the positive act of selection to assess the professional ability of the candidate shall consist of written test only.
- As per Para 219(g) of IREM, those who secure 60% marks in the professional ability (Written Examination) and 60% marks of the aggregate (including record of service) will be empanelled as per seniority.
- As the post of Junior Engineer being classified as "Safety Category post", there is no relaxation in qualifying marks to employees belonging to the category of SC/ST and hence they are also required to secure 60% marks in the written examination and on aggregate.
- The names of the selected candidates will be arranged in the order of seniority but those securing a total of 80% or more marks in the aggregate will be classified as 'OUTSTANDING' and placed in the panel appropriately in the order of their seniority allowing them to supersede not more than 50% of total field of eligibility.

4. Pre-Selection Coaching:

In terms of instructions contained in Railway Board's letter No. 88- E(SCT)I/42/2, dated 08.04.1991 pre-selection/pre-promotional training to SC/ST employees is to be conducted covering the syllabus of the examination for selection to safety category post and will be imparted for a period of 3 to 4 weeks. In case, if any employee expressed his/her un-willingness for pre-selection coaching, a written declaration to that effect may be obtained and forwarded to this office for record. Pre-selection coaching is not necessary where there is no reserved vacancy (SC/ST) is available. After completion of the pre-selection coaching, a certificate has to be issued by the controlling officer to the effect that all the eligible reserved employees have been imparted pre-selection coaching for a period of 03 – 04 weeks covering the syllabus prescribed for the examination.

5. Procedure for Written Examination:

- The written examination will be a Computer Based Test (CBT) as per the prescribed standard and the syllabus and there will be no physical question paper. All the questions will appear on the computer and the employee will have to mark their responses/answers to the questions on computer itself.
- The examination will be conducted tentatively during the 2nd week of December'2025. In terms of IREM Para 223(1) (i) (a) to (c), Supplementary written examination will be conducted only for those employees who are not able to attend the main examination due to following circumstances.
 - Those who could not be relieved due to administrative reasons (or)
 - Sickness(RMC) of the employee (or)
 - Any other reason which is beyond the control of the employee.
- 100% questions will be objective type multiple choice questions.
- As per Railway Board's letter no. E(NG)I/2018/PM1/4, dated 14.11.2019 (PCPO/SC's circular no.159/2019) there will be **NO NEGATIVE MARKING** in the selection where panel is arranged in the order of seniority from those qualified.
- There shall be questions in Official Language Policy and Rules up to 10% of marks. However, it is not mandatory to attend the same.
- There will be 110 questions of objective multiple-choice type with four answer options and the candidate has to answer a maximum of 100 questions. In case the candidate answers more than 100 questions, first 100 attempted questions are to be taken for evaluation.
- The duration of examination under objective type multiple choice questions will be 90 to 120 minutes (RBE No.97/2019).

6. Syllabus & Question Bank:

Syllabus as approved by CWE/SC is enclosed at Annexure - D.

In terms of Railway Board's letter No.E(NG)I-2006/PM1/34 dt 06.11.2006, updated sample questions covering the syllabus will be provided to staff concerned. It is further advised that there will not be any mandatory limit of questions from sample questions.

13/10

The sample questions are only indicative but not exhaustive. The indicative question bank will be available on website and can be accessed at the following address:-

<https://scr.indianrailways.gov.in> → About US → Workshops/Loco Sheds → Lallaguda Workshop → Question Bank → JE Rankers(Mechanical)2025.

Question Bank is also made available at BTC/LGDS for information and guidance.

7. Training:

The empanelled candidates will be directed for 13 weeks 'Induction Training' to STC/LGD. The employees who are declared passed in the said training only will be promoted to the post of JE duly giving the benefit of fixation of pay on promotion.

8. Notifying to staff:

- The controlling Officer/Supervisor shall give wide publicity of the notification to all the eligible staff working under their control and has to furnish a certificate that "the eligible candidates were duly notified of the holding of the written examination and asked to submit their applications duly giving their willingness/unwillingness". Such certificates should be forwarded to Personnel Branch addressed to WPO/LGDS. It will be the personal responsibility of the Senior 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.
- Any laxity in this regard will be viewed seriously as it will adversely impact the above selection which is being conducted simultaneously for all Divisions/Units over South Central Railway.
- The willingness/unwillingness received from the employees is to be forwarded to WPO/LGDS on or before **24.10.2025** (Annex-C).

Note:

- The employees who are alerted in this notification should not be sanctioned long spell of leave at a time and employees who are on sick/leave should be notified of the selection to the last known address duly displaying a copy of this notification in the notice board of the respective shop/office.
- The notification is to be treated as alert notice for the selection and no separate notice will be given, alerting the eligible employees. It is the responsibility of the concerned supervisory officials to serve a copy of this notification to the employees in their control and obtain acknowledgment and preserved in the office and relieve them to attend the written examination well in time, without fail.
- If any of the above instructions are modified/altered at a later date by the Rly. Board/Headquarters, the administration reserves right to amend the above notified instructions to that extent to give effect of the same.

Encl.: -As above

- Annexure-A: Eligible List, b. Annexure-B: Standby List.
- Annexure-C - Proforma for Willingness and Unwillingness to appear for selection.
- Annexure-D - Syllabus.

This is issued with the approval of the competent authority.

(एन. संतोष कुमार रेड्डी/N. SANTOSH KUMAR REDDY, IRPS)
कारखाना कार्मिक अधिकारी/Workshop Personnel Officer

C/-PCPO/SC & SDGM/V/SC for information.

C/-PS to CWM for kind information of CWM/LGDS.

C/- All Officers of CWM/LGDS for information.

C/-All Shop SSE's of Mech. Dept. for information and necessary action.

C/- Ch. OS/Conf. for information and necessary action.

C/- Secy- SCRES/SCRMU/SC&ST/OBC- Mechanical Branch.

ANNEXURE – A

Senior Technicians in the field of eligibility for selection to the post of Junior Engineer in Level-6 against 25% Rankers quota in Mechanical Department of LGDS as per S.C.No. 31/2005.

Last date for submission of Willingness/Unwillingness (Annexure – C) : **22.10.2025**

S.No	T. No.	Name	Com	Desig	Shop	Remarks
1	42500	R. Venkateswarlu	ST	Sr. Tech.	Millwright	
2	48770	D Parashuram	ST	Sr. Tech.	CB&UF	
3	42767	N. Raju	ST	Sr. Tech.	Paint	
4	42627	K. Venkateshwara Rao	ST	Sr. Tech.	Corrosion	
5	47900	T.Satyanarayana	ST	Sr. Tech.	CTR	
6	48836	T. Venkateshwar Rao	ST	Sr. Tech.	Corrosion	
7	53110	M Srinivas	SC	Sr. Tech.	Paint	
8	41647	M Thulasi raj	SC	Sr. Tech.	CB&UF	
9	43632	A.P.Rajaratnam	SC	Sr. Tech.	Corrosion	

Annexure-B

Stand-By list of Senior Technicians working in Mechanical Department of LGDS for selection to the post of Junior Engineer in Level-6 against 25% Rankers quota.

Last date for submission of Willingness/Unwillingness (Annexure – C) : **22.10.2025**

S.No	T. No.	Name	Com	Desig	Shop	Remarks
1	48642	P. Sambaiah	ST	Sr. Tech.	Component	Standby
2	42512	B. Kasinadham	ST	Sr. Tech.	Trimming	Standby
3	43050	K. Yedukondalu	ST	Sr. Tech.	Tinsmith	Standby
4	4552120	Kishan Naik	ST	Sr. Tech.	LOFP	Standby
5	56936	A. Nageswar Rao	ST	Sr. Tech.	Millwright	Standby
6	42858	B. Bikku	ST	Sr. Tech.	Welding	Standby
7	21223	M.Naga Raju Naik	ST	Sr. Tech.	Carriage	Standby
8	48514	A.K. Rari	OC	Sr. Tech.	Carriage	Standby
9	46682	Shahul Hameed	OC	Sr. Tech.	Carriage	Standby
10	56950	K Pandu	ST	Sr. Tech.	Paint	Standby
11	57023	B.Siddiah Naik	ST	Sr. Tech.	Trimming	Standby
12	48850	K Srinivas	SC	Sr. Tech.	Welding	Standby
13	43796	M. Vinod Kumar	SC	Sr. Tech.	Tinsmith	Standby
14	42895	U. Ramulu	ST	Sr. Tech.	Welding	Standby
15	42159	N.Srinivas	OC	Sr. Tech.	Paint	Standby
16	57011	B.Murali Naik	ST	Sr. Tech.	Paint	Standby
17	56559	K. Bheema	ST	Sr. Tech.	Corrosion	Standby
18	36366	Deva Raj	OC	Sr. Tech.	Corrosion	Standby
19	48484	R.Surender Raj	OC	Sr. Tech.	Paint	Standby
20	42548	Shaik Chand	OC	Sr. Tech.	Paint	Standby
21	48459	A. Chandrà Sekhar	OC	Sr. Tech.	CB&UF	Standby
22	48502	K. Srinivas	OC	Sr. Tech.	CB&UF	Standby

Annexure-B

Stand-By list of Senior Technicians working in Mechanical Department of LGDS for selection to the post of Junior Engineer in Level-6 against 25% Rankers quota.

Last date for submission of Willingness/Unwillingness (Annexure – C) : 22.10.2025

S.No	T. No.	Name	Com	Desig	Shop	Remarks
23	53455	R. Vasanth Rao	OC	Sr. Tech.	Millwright	Standby
24	59913	R G Devanand	SC	Sr. Tech.	CB&UF	Standby
25	42718	Md.Younus	OC	Sr. Tech.	Paint	Standby
26	46967	S Srinivasa Rao	OC	Sr. Tech.	CB&UF	Standby
27	47005	P Hanumantha Reddy	OC	Sr. Tech.	CB&UF	Standby
28	52694	B. Venkateswarlu	SC	Sr. Tech.	Power Car	Standby
29	34709	Govinda Naik	ST	Sr. Tech.	CB&UF	Standby
30	36410	B.R.Ravinder	SC	Sr. Tech.	CB&UF	Standby
31	21296	D.Narender	ST	Sr. Tech.	CB&UF	Standby
32	43668	P Srinivas chary	OC	Sr. Tech.	CB&UF	Standby
33	46700	P Narasinga Rao	OC	Sr. Tech.	Paint	Standby
34	52955	G. Umadevi	OC	Sr. Tech.	Tinsmith	Standby
35	51483	S. Rajesh Khanna	OC	Sr. Tech.	Welding	Standby
36	43700	P Gopal	OC	Sr. Tech.	CB&UF	Standby
37	57527	N Raja Shekar	SC	Sr. Tech.	CB&UF	Standby
38	52025	C. Bhasker Rao	OC	Sr. Tech.	Millwright	Standby
39	48526	P.Sudhakar	SC	Sr. Tech.	Millwright	Standby
40	56389	Kafeel Ahmed	OC	Sr. Tech.	Power Car	Standby
41	21454	V.Anjaiah	OC	Sr. Tech.	Carriage	Standby
42	47923	Hussain Khan	OC	Sr. Tech.	Power Car	Standby
43	21028	A.Ashwini Kumar	SC	Sr. Tech.	Carriage	Standby
44	56407	Ramesh Babu	SC	Sr. Tech.	Power Car	Standby
45	56602	S.Md.Yousuf	OC	Sr. Tech.	Carriage	Standby
46	21004	M.Srinivas	OC	Sr. Tech.	Carriage	Standby
47	48782	V.Kousal Kumar	SC	Sr. Tech.	Carriage	Standby
48	25599	B. Srinivasu	ST	Sr. Tech.	Carriage	Standby
49	53212	D.I.Samuel	OC	Sr. Tech.	Tinsmith	Standby
50	48745	A.Madhan	SC	Sr. Tech.	Tinsmith	Standby

WPO/LGDS

Selection to form a panel for the post of Junior Engineer in Mechanical Department
against 25% Rankers Quota in Level- 6/G.P.4200.

Declaration of willingness / unwillingness to appear for the selection in response to this office notification issued vide letter No. SCR/P-LGDS/210(a)/M7/JE-Rankers/Mechanical dt. 13.10.2025

DECLARATION

I am in receipt of Notification issued under letter No. SCR/P-LGDS/210(a)/JE/Rankers dt. **13.10.2025** alerting me for Selection to the post of Junior Engineer in Level-6/GP.4200 against 25% Rankers Quota.

I am **WILLING / UNWILLING** to appear for the above Selection. (to tick whichever is applicable).

I am also aware that if I fail to give this declaration on or before **22.10.2025** it will be deemed that I am not willing to appear for the above Selection.

I have seen the syllabus and the Question Bank which has been uploaded in the website.

Signature : _____

Name : _____

Ticket Number : _____

Designation : _____

Community : _____

Shop : _____

Date : _____

Mobile No. : _____

Signature of the Supervisory official with stamp and date.

Signature : _____

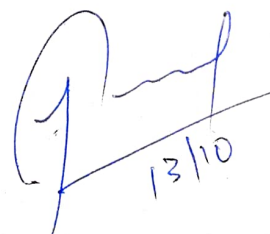
Name: _____

Design: _____

Shop: _____

Stamp: _____

Date: _____


13/10

TINSMITH SHOP

1. Layout water tanks and pipe connection in ICF and BEML Coaches, with sketches capacities of different types of water tanks.
2. A) Details of plumbing work during POH on ICF and BEML Coaches-Repair practices of pipe flanges/joint
B) Methods for obtaining leak proof piping system. Points to be observed for avoiding public complaints
3. Procedures for renewal of water tanks, time required at each stage.
4. Soldering, threading and bending processes on water carrying pipes used in tinsmith work.
5. Overhauling and testing of water system, and its components like water tanks, flush valve, Jayson cocks etc.
6. Modifications in water system of AC and Non-AC coaches.
7. Tig welding of water tanks of AL & SS.
8. Bio toilets fitment and modifications for different types of coaches and study of drawings.
9. Vacuum Bio-toilets.

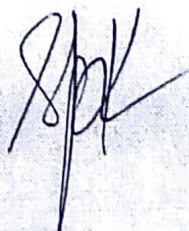


SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER

PAINT SHOP

Section -A

1. POH cycle of coaches.
2. a) Knowledge of painting schedule of coaches ICF/RCF, LHB & other coaches.
b) Procedure of coach painting in workshop (Exterior & Interior).
3. Defects developed on painting surfaces and reasons for the same.
4. Tests to assess the quality of paints.
5. Knowledge of mixing of paints.
6. Types of paints & its specification for different types of coaches (ICF/RCF & LHB Hybrid coaches)
7. Knowledge of screen printing of letters on coaches.
8. Powder coating on coach components.
9. Standard lettering to be available on the coach.
10. Types of brushes.
11. Difference in paint quality between interior and exterior paints of a coach.
12. Knowledge on Poly vinyl wrapping on coaches.
13. Knowledge on PU painting & procedure of application on coaches.
14. Tools & Plants used for painting in workshop.
15. Safety equipments for painting.
16. Knowledge of paint booth working procedure.
17. Quality assessment tools for painting.
18. Knowledge of ICF/RCF, LHB (Hybrid) BOGIE painting procedure



SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

CB&UF

Section-A

1. Bogie overhauling

- Types of bogies (ICF Bogie , EMU Power Car , DEMU Power Car Bogie ,EMU Bogie ,Tower Car Bogie and LHB Fiat ,Bogie) and their components.
- Lifting and Running out of bogies.
- Bogie dismantling and assembling and testing procedure.
- Lowering of coaches and Buffer height.

2. Air Brake system

- Bogie mounted Air brake system ,Overhauling of components, repairs practices and testing.
- Principle and operation of Air brake system.
- Air brake system of
 - ICF Coach
 - DEMU Power Car
 - Tower Car
 - LHB Coach (Disc Brake system)
 - EP Brake system (EMU Coaches)

3. Wheel and Axle arrangement ICF, LHB & Special Stock.

- Wheel tyre turning and working on wheel lathe machine
- Pressing of Wheels and working on wheel press
- Wheel disc bore and working on VTL, AJTB
- Overhauling of Axle box and Roller bearing

4. a) Draw gear, buffing gear , CBC and Schaku Couplers

- Vestibule repair practices.

5. RSP modifications, CAIs, TSOs and other RDSO modifications & Trial items Pertaining to bogie and Under frame of the coach.

CORROSION SHOPSection -A

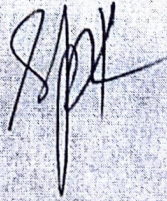
1. Knowledge of design and construction of ICF & RCF coaches under frame and shell.
2. Knowledge of corrosion and repairs practices carried out on coaches.
 - a) Knowledge of various types of welding processes (Arc welding, Co2 welding, Metal Arc welding, metal inert gas welding, Tungsten inert gas welding) including MS, stainless steel and cast iron welding.
 - b) Knowledge on various welding machines used in above process and their basic preventive maintenance.
3. Knowledge of PVC and compreg flooring.
4. IS specification and methods of prevention of Corrosion in coaching stock CMI I & CMI IV.
5. Procedure for laying vinyl sheets in coaches.
6. Preparation before welding, post treatment, HAZ etc.
 - a) Gas cutting equipment's flames used type of gas used and handling of Gas cutting equipments.
 - b) Knowledge of laser cutting process, laser cutting machining usage and basic preventive maintenance
7. Necessity for Corrosion repairs of steel bodied coaches and procedure for carrying out corrosion repairs at the following location on coaches.
 - a) Sole bar at lavatory ends.
 - b) Lavatories/bath rooms at critical locations like lavatory frames particular and floor members.
 - c) Trough floor in luggage compartment.
 - d) Buffer seats.
 - e) Side panels.
8. Knowledge on CIA's, TSO's AND OTHER CMG modifications which are to be carried out during Corrosion repairs.
9. LHB body and under frame construction.

SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

TRIMMING SHOP

Section -A

1. a) Description of various activities in Trimming shop.
b) POH cycle for repairable items in Trimming shop, Sequence of various trimming operations and time required at each stage.
2. a) Berth classifications, types and sizes ,Nature of damages and inspection .
b) Special features of Trimming work .AC two tier coaches AC first class coaches, chair cars and inspection carriages.
3. a) Knowledge of adhesives used for up-holstery work.
b) Specification of Rexine, curtain cloth and rubberised coir cushion etc.
4. Details of trimming work in connection with the furnishing of coaches.
5. Role of Trimming shop in providing i) Passenger amenities ii) Modifications on coaches iii)Standardization.
6. Working of seats and Berths on LHB coaches.
7. Attention towards AC chair car seats and back rests repair.



SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II**CARRIAGE SHOP****Section-A**

1. Targets for POH, Special repairs, cushioning, and revamping and alarm signal system etc., of the coaches.
2. Details of POH repairs of coaching stock of ICF TYPE AND Special stock (EMU, DHMU & DEMU, LHB, TC, RA & SPART)
 - a) Stages in the POH cycle and time required at each stage.
 - b) Details of work content at each stage and methods to be adopted for timely completion of work.
3. Passenger amenities in different types of coaches and the role to be played by Carriage shop.
4. Repair practices on Door, Windows, Shutters, sliding doors, toilets furnishing etc.
5. Present CAIs being carried out by the Carriage shop on ICF and BEML coaches.
6. RSP modifications and other modifications pertaining to carriage interior in view of passenger amenity and safety.
7. Knowledge of New coaches/Trains (Utkrisht, Deendayalu, Antyodaya, Tejas, Vande Bharath, Train 18)

SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II**COMPONENT SHOP****Section -A**

1. Various fabrication process like

a) Shearing and bending

b) Welding

c) Sheet metal working

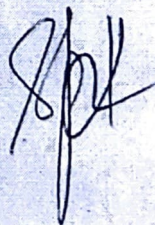
2. a) Repairs to carriage components like doors, windows, battery boxes etc.

b) Repairs to Bogie components.

3. Working principle of drilling, press tools.

4. a) Description and illustration of jigs and fixtures, Details of preparation of templates and profile gauges.

b) Various dies and punches used in metal cutting, FRP pressing dies and sheet metal pressing dies.



E-office No. 507396

4565787/2025/O/O CH.OS/(VC)/MECH CADRE/PCPO/HQ/SCR

289

SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

SMITHY (SPRING) SHOP

Section-A

1. Different types of springs used in various Coaching stock (ICF, LHB, & Special stock)
2. C-8419 (Rev-I)
3. CAI, TSO and other RDSO modifications related to springs.
4. Comparison between deflection ranges and color coding with pairing.
5. Difference type of springs steels use in Railways.
6. Cleaning procedure of springs.
7. Load testing.
8. Electro Magnetic Crack Detection (EMCD) testing.
9. Painting & Color coding.
10. Understand spring code.
11. Calculate age of springs.
12. Handling of measuring tools and working tools.
13. Shot Blasting, Shot Peening, Grit Blasting and Sand Blasting.
14. Record maintenance.
15. Cattle guard stripping, repair and fitment procedure.
16. Different types of cattle guard.
17. Screw coupling reclamation procedure.
18. LHB Springs, schedules and pairing



SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-IIWELDING SHOPSection-A

1. Knowledge of

- a) Welding process and equipments by electric arc method
- b) Cutting process and equipments by Oxy-Acetylene gas.
- c) Application of CO₂, TIG, Plasma cutting to different types of works on coaches i.e welding of body side panels, trough floor, buffer seats and sole bars, advantages over arc welding.

2. Welding of bogie components like

- a) Bogie frame
- b) Equalizing stay
- c) Lower plank
- d) Bolster etc.

3. Welding plant and electrodes specifications and application.

4. Knowledge about pre-heating HAZ and cooling.

5. Various welding joints and their advantages. (PA to PF & Direction of Welds)

6. Welding of cast iron, aluminum, shouldering and brazing

7. Handling and safety precautions of welding technology

8. Knowledge of TIG, MAG, MIG, PLASMA, MMAW and other non-conventional welding techniques.

9. S.S welding Techniques.

10. ISO 3834-2, WPS

11. Identification of metals SS to MS, SS to A1, by metallurgical Technique.



SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

MACHINE SHOP

Section-A

1. Types of machines available in Machine shop & Wheel shop.
2. Important specifications (capacity, length of the job can be done, accuracy, repeatability, resolution & different operations/processes can be done on the machine) of each capacity.
3. Safety precautions to be taken while a) starting b) working
4. Shutting down/stopping of each machine available in machine shop and wheel shop.
5. Working of wheel lathe, wheel press, AJTB.
6. Different types of operation and maintenance of tools used in machine operation, wheel lathe, AJTB, wheel press, centre lathe.
7. All types of measuring tools & gauges used in welding machine operation, wheel lathe, AJTB, wheel press, centre lathe.
8. Different types of machining operation which is being done in machine shop and wheel shop and their application to rolling stock.
9. Preventive maintenance schedules (daily and weekly/fortnightly) to be attended on various machines.
10. Coolants & consumables used in/on various machines.
11. Tolerance, allowance, fit, surface finish, least count, resolution, accuracy, repeatedly, various symbols/schematic representation for representing tolerance and surface finish on the drawing.
12. Gauges, calibration, jigs & fixtures.
13. Down time of the machine, mean time between failure (MTBF), reliability, availability, maintainability of the machines.
14. Various types of cutting tools their composition and use.
15. Speeds and feeds for cutting different types of materials and drills to be used on different machines.
16. Description and illusion of jigs and fixtures, Details of preparation of GO-NO gauges and profile gauges.
17. Knowledge of assessment of workload and requirement of machinery.



SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II**CENTRAL TOOL ROOM****Section-A**

1. Various measurement tools used in coaching workshop
 - a) Knowledge on Tolerance, Surface finish, Accuracy, Repeatability, Run out, Least count.
 - b) Knowledge on Calibration of various tools, Measuring Instruments & Gauges
2. Overhauling of DV, Brake cylinder
3. LHB: Air Brake system working, different components of Air brake system and their basic preventive maintenance system and POH of each component.
4. Tower Car Air Brake system working, different components of Air brake system and their POH maintenance system.
5. SPART/DHMU: Air Brake system working, different components of Air brake system and their basic preventive maintenance system.
6. DEMU: Air Brake system working, different components of Air brake system and their basic preventive maintenance system and POH of each component.
7. Working Principle of Hydraulic Shock Absorbers. Procedure for Overhauling of Various types of Shock Absorbers used on Coaching Stock.
8. LHB disc brake system: Working principle and various components of LHB disc brake system. Final testing procedure of WSP and Disc Brake system

SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

MILLWRIGHT SHOP

Section-A

1. Preventive maintenance & trouble shooting of machinery and plant.
 - a) CNC wheel, AJTB, Axle Turning centre lathes, Wheel press, VTL.
 - b) Road vehicles, platform trucks, fork lift truck, mobile cranes.
 - c) Air compressor, spray painting machines, pneumatic tools and cranes.
 - d) EOT cranes, Traverser.
 - e) Axle box cleaning plant, Roller bearing cleaning plant, in depth Heaters.
2. Testing of wire ropes and chains of Workshop (break down cranes and EOT cranes.)
 - a) POH of wire Ropes of EOT cranes
3. Maintenance of FLT and knowledge of screw coupling testing, Testing of load test & Draw hook and Draw bar.
 - a) Knowledge of material handling equipment employed in LGD shops.
 - b) Knowledge of Lifting Jacks, VTL, FLT, Plot trucks.
4. Heat treatments of steel-Hardening, case hardening, annealing, normalizing and tempering. Application of heat treatment to important components like gears, gear shafts, clutch plates etc.

SYLLABUS FOR THE SELECTION OF THE POST OF JUNIOR ENGINEER-II

COMMON TO ALL TRADES/SHOPS

Section-B

1. i) Organization of Mechanical Department on South Central Railway
ii) Various shops/ Sub –shops/Sections in Carriage Workshops, Lallaguda and their functions.
2. Duties and responsibilities of Junior Engineer.
3. Methods for maintaining /improving the productivity targets in both quantity and quality.
 - i) Tools & Plants used
 - ii) Ordinary measuring instruments : (1) Metric Rule (2) Outside Callipers (3) Inside Callipers (4) Feeler gauges and their principle and applications.
 - iii) Precision measuring instruments: (1) Micrometers (2) Vernier Callipers (3) Depth gauge (4) Bevel Protractor (5) Dial Indicator their principle and applications.
 - iv) Principles of work study and work simplification /rationalization for refining Workshop practices.
4. Fundamental Establishment Rules: Knowledge of a) Leave Rules b) Pass Rules c) Pay & Allowances.
5. Discipline and appeal rules
6. Working of Incentive System:
 - a) With special reference to utility of the various forms/sheets./cards(P.1 to P.15)
 - b) Procedure of calculating allowed time , knowledge of man hours on important POH activities pertaining to the concerned shop/Trade.
7. Knowledge of Mechanical code ,PCO, Workshop practice ,Accounts and Stores procedures.
 - a) Stock and non-stock items
 - b) Procedure for local purchase
 - c) PAC, AAC,SAF ,1313 and 1302 forms, Condemnation, Material assistance etc.
8. a) Factory Act with special reference of safety .welfare , Health , accidents and special rules , WCA etc., for workshop staff in Railways.
b) Safety precautions to be observed in the concerned Trade / shop
9. Knowledge of Integrated Management System, 5S, IS3834, Six Sigma.
10. Knowledge on Computers, Networking, applications, E-mail, FAX, Internet etc.
11. Rajbhasha
12. Knowledge on Destructive Test, Non-Destructive Test, Heat Treatment, etc.

Syllabus for POWER CAR

- AIR INTAKE & EXHAUST SYSTEM
- FUEL OIL SYSTEM
- LUBRICATION OIL SYSTEM
- COOLING WATER SYSTEM
- HYDRAULIC OIL SYSTEM
- TRANSMISSION OIL SYSTEM

Syllabus for LOFP

- APPLICATION OF OVAE FOR SIDE SEALING
- SIDE SEALING OF FILTER MEDIA
- INSERTION OF SPIRAL TUBE
- WRAPPING OF OPWS FOR FILTER SUB-ASSEMBLY
- DISPENSING OF OVC IN END CAPS
- FILTER MEDIA END SEALING


16/9/22