

पश्चिम मध्य रेल ,
प्रधान कार्यालय
कार्मिक विभाग,
जबलपुर-482 001



West Central Railway
Headquarters Office
Personnel Branch,
Jabalpur-482 001

No WCR/PHQ/GAZ/Selection/AME/Gr 'B'/LDCE/2022

Dated 19.05.2022

PCME, PCEE, PCOM, SDGM, CWE, CRSE, CPME(D&R), CME(Planning)

CWM -CRWS/BPL, WRS/KTT

DRM(P)-JBP, BPL, KTT,

Sr.DME/JBP-BPL, KTT, NKJ, ET

Sr.DEM/Dsl-NKJ ET

DEE/Const.-KTT, SPO/RE-KTT

Sr.DEE/G-JBP BPL KTT

G.GM(I)-RITES LTD. Mumbai

Sub: Notification for Selection for the post of AME, Group 'B' (Level 8)/ GP- 4800
Pay Band 2 – Mechanical. Deptt. **(30% LDCE Quota).**

Ref: LGS Notification issued by this office letter No. WCR/PHQ /GAZ /Selection /AME
/Gr 'B'/LGS/2022 dated: 28.03.2022

Applications are hereby invited towards AME (Gr.B) **Limited Departmental Competitive Examination (LDCE)** for the purpose of promotion from Group 'C' to Group 'B' service in the Mechanical Department to empanel **02 (UR- 02)** employees against 30% of the vacancies as assessed with the approval of Competent authority, which is in continuation of reference letter dated 28.03.2022.

1. Eligibility:-

All the Group 'C' Technical employees (On Roll) of Mechanical Department of West Central Railway working in Level 6 and above, in Pay Matrix, with 5 years of non-fortuitous service in Level 6 and above (including non-fortuitous service rendered in the corresponding pre-revised grade pay) as on 01.01.2022 are eligible for the post of AME/Gr. 'B' against 30% LDCE quota vacancies for the assessed vacancies. (Authority – RBE No. 216/2019). The post of AME (Gr. B) is a Safety category post. In terms of Railway Board's letter No. E(GP)2019/2/25 dated 16.03.2022, Senior Technicians in Level-6 with requisite length of service are eligible for appearing in the LDCE.

In terms of Railway Board's L.No.-E(GP)2005/2/87 dt. 18.08.2015 (RBE No- 92/2015), Loco Pilot (Shunting)II from running cadre having grade pay 2400 are also to be considered for this post of AME (Gr. B) while fulfilling other eligibility conditions as on 01.01.2022.

Note-

- In terms of Railway Board's Letter No. E(NG)I-93/PM1/4 dated 18-01-1993, time spent by the Rly. Servant under training immediately before appointment to regular service will be counted as service for the purpose of LDCE.
- Staff whose lien is maintained in W. C. Rly. are only eligible.
- Eligible staff in the Construction/Project Organization on deputation, training and any Ex-cadre Organization and having lien and seniority in WCR, who desire to volunteer for the above LDCE may submit their application through proper channel i.e. their respective Personnel Deptt. officer, where they hold lien.

The concerned Division/Unit should send copy of notice to the staff who are on deputation after being released from last Division/Unit.

- iv. Those Group C employees who have been given financial upgradation in GP-4200 in PB – 2 , Rs. 9300-34800 under MACPs are not eligible to volunteer for the above (LDCE) written examination.
- v. As per Railway Board's letter No. E(NG)I-2006/PM1/5 dt. 21.03.2006(RBE No 34/2006) and E(GP)2005/2/74 dt. 13.03.2008 (RBE 40/2008), 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 which is so allowed to be counted does not exceed the length of service of their immediate senior in the new unit and this benefit of counting of service will be applicable only in those cases where the staff join the new unit on request transfer in the same category of posts. For other cases the length of service shall be derived on the basis of the dates in the seniority list in the relevant grade.
- vi. Those employees who have been transferred on own request/mutual transfer and joined in WCR after the cutoff date 01.01.2022 shall not be eligible to the selection.
- vii. As per Railway Board's letter No. E(GP)/99/2/22 dated 03.10.2006 (RBE-144/2006) & E(GP)/99/2/22 dated 21.11.2006 (RBE No. 173/2006), the provisions of Chapter-II of Indian Railway Establishment Manual, Vol-I (including para 203.2) are applicable only to 70% of selection and **not to 30% LDCE** i.e. if the junior is eligible, senior employee will not be eligible unless he is also fulfilling the conditions of eligibility of 5 years non-fortuitous service in LDCE.
- viii. In case, any candidate is on leave or on deputation to other Railways/Units/office etc., the concerned unit should send necessary advice to the authority under whom he/she is working presently as the case may be, without fail and acknowledgments obtained.
- ix. The employees who are trained in dual traction are eligible for ADME/AME/AWM (Gr. B Mechanical) selection and ADEE/AEE (Gr. B Electrical) selection and they can seek further promotion only in the respective wing either in Electrical or Mechanical. Therefore, such employees should express their option in **Annexure 'D'**. Option once exercised will be final.

2. Submission of Application:-

Employees eligible as per the above eligibility conditions should submit their **applications in triplicate in the proforma attached** on or before **06.06.2022** to their immediate supervisor and obtain his acknowledgement including serial number of entry of registration of their applications. The application so received should be entered serially by the nominated supervisor in the register to be opened for the purpose and the serial number should be mentioned while giving the acknowledgement to the employee. One copy of the application may be retained in his office and the remaining two copies forwarded to the Personnel Department of the division/Workshop/HQ office. It is the responsibility of the immediate supervisor to ensure that the applications reach to the Personnel Department (DRM/P) on or before 09.06.2022 and acknowledgement is obtained. A specimen form marked 'A' of the register to be maintained in the office of the immediate supervisor/unit in-charge is enclosed.



3. **Scrutiny :-**

The concerned Personnel Officer should ensure that all the columns of the enclosed proforma are properly filled in before sending the statement to this office. **Signature and date both are compulsory otherwise applications are liable to be rejected.**

The unit in-charge will arrange to register the application so received and 2 copies be forwarded to Division/Workshop/HQ (as the case may be) through per bearer along with **soft copy in Excel Sheet as per the proforma given below** and with covering letter mentioning names of candidates applied for. **It is the responsibility of the Personnel Officer of divisions/units to certify the correctness of the eligibility of candidates for admission to the examination.** Each excel Sheet in proforma should be signed by the concerned Personnel officer.

Excel Sheet Proforma

S.	Name (S/Shri)	Desig.	Caste	Deptt.	Division	DOB	DOA	DOP in 9300- 34800 GP: 4200	DOP in 9300- 34800 GP: 4600
						DD/MM/YYYY	DD/MM/YYYY	DD/MM/YYYY	DD/MM/YYYY

The Personnel Officer in the Division/Workshops/HQ (as the case may be) will scrutinize the correctness of the eligibility as per the Service Record maintained by them and condition mention in the notification. **After scrutinizing the application, the Division/Workshops/HQ will send one copy of only the eligible application to HQ Personnel Department, Gazetted Section in one bunch (No piecemeal application should be sent) along with the list in the prescribed proforma in excel Sheet (Hard & Soft copy)** before the due date and ensure that these applications reach Dy.CPO(G)/JBP/HQ Office/WCR by **20.06.2022**. Any application received after the cut-off date should be summarily rejected by the Personnel Officer concerned.

Personnel Officers shall scrutinize the candidature of the employee as per the above eligibility conditions/verifying the respective Service Sheets and send the names of the eligible staff only in consolidated statements as per proforma attached.

Names of those staff who have not fulfilled the eligibility criteria as mentioned above need not be forwarded. It may also be noted that incomplete statements furnished by the divisions/units will not be entertained.

A list of not eligible candidates should be prepared by the division/workshop/HQ showing the reasons for ineligibility and the same should be duly communicated and modification, if any, on this account may be communicated before **27.06.2022**.

4. **Pre-Selection Coaching/Training -**

As per Para 2(ii) of RBE No 142/2019, Pre-selection training is not required if there is no reserved vacancy and candidates are appearing in selection/LDCEs against unreserved vacancies.

5. **Objective and Scheme of Examination:-** The examination aims at a comprehensive assessment of knowledge of the candidates related to their Technical subject, Official language policy, Establishment and Financial Rules. **The formation of the panel will be on the basis of Merit.** Selection of candidates for empanelment is based on (i) Written Examination, (ii) viva-voce (with prior Medical Fitness test) and assessment of records by the Selection Committee vide Para-204.1 of IREM Vol.I. The following procedure as outlined in RBE No. 53/2019 and in Para



10.2.2 (a) to 10.2.2 (c) (iv) of Master Circular No.68, updated in July 2019 and subsequent, clarification issued by Railway Board vide letter No. E(GP)2018/2/31 dated 28.11.2019 will be followed in this LDCE.

6. **Scheme of Examination-** In terms of Railway Boards L. No. E(GP)2018/2/31 dated 19.03.2019 (RBE No. 53/2019) there will be two-tier written examinations, i.e., Pre-Qualifying Examination and Main Examination.

A) Pre- Qualifying Examination- There shall be a Pre-Qualifying single paper examination of 100 marks which shall have 100% Objective type Multiple Choice Questions only.

(i) The distribution of marks will be as under:-

S.No.	Subject	Marks
1.	Section- (A)- Technical Subject: 40 questions (1 marks each)	40 marks
2.	Section- (B)- General Knowledge including optional Question on Official language Policy will consist of 40 questions, out of which General Knowledge consists of 30 questions (1 marks each) and 10 questions on official language policy (1 marks each) as per para 204.3 of IREM Vol. I of Rajbhasha Policy. Candidate needs to attempt 30 questions out of 40.	30 marks
3.	Section- (C)-Establishment and Financial Rules: 30 questions (1 marks each)	30 marks

(ii) Qualifying Marks- The candidate scoring 75% marks and above in Pre- Qualifying examination shall be eligible for appearing in the main examination and for this, number of candidates should be restricted to 5 times the number of respective vacancies in order of merit.

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

(iv) Ten percent of the 100 marks prescribed for written examination held as part of Selection should be set apart for question on official language policy and official language rules. While the employees should be encouraged to attempt the question on official language policy and official language rules, the question should not be compulsory.

(v) To ensure the authenticity of the answers in Multiple Choice Question, no corrections of any type (viz. cutting, overwriting, scoring off a ticked answer & ticking another answer, erasing, modifying the answer in any way) will be permitted. Zero marks will be awarded in such cases of corrections.

(vi) In the English as well as Hindi version of Question papers, every question should have four options numbered as A,B,C,D (only Capital Letters).

(vii) Candidates should mark their answers on OMR answer sheets and the OMR Sheets will be evaluated manually.

(viii) In case, any candidate answers more than 100 questions, first 100 attempted questions only are to be taken for evaluation.

(B) Main Examination- The Pre-Qualifying examination will be followed by one descriptive type paper on professional subject comprising of 100 marks. Qualifying marks in the written examination will be 60% and above.

Note- As per IREM, Vol.-I, Para 204.3, 10% marks of the total marks in the Pre-qualifying examination and main examination will be set apart for question in Official Language. The question on Official Language will not be however, compulsory in nature.

(i) Written Examination will be conducted according to Syllabus. There shall be no supplementary examination in LDCE selection. (Para 16.2 of Master circular No. 68)

(ii) The duration of the written examination will be of 02 hrs. (120 minutes) for the Pre-Qualifying and Main Examinations.

(C) **Medical Examination:-** The candidates who qualify in the written test will be subjected to medical examination as per Para 530(a) & 532 (i) of IRMM Vol.I 2000 (IIIrd Edition) and only those candidates who are found medically fit will be allowed to appear for Viva-Voce as per extant rules.

7. **Viva-Voce & Record of Service-**

Sl. No.		Maximum Marks	Qualifying Marks
1.	Viva-Voce	25	30 (including at least 15 marks in the record of service)
2.	Record of Service	25	

8. **Syllabus for professional paper of LDCE :**

The syllabus prescribed by the Board for written examination held as part of 30% LDCE in organized services constitute topics on Paper-I & Paper-II. In view of the aforementioned changes in pattern of the LDCEs, the topics on professional subjects divided in two segments as Paper-I and Paper-II shall be amalgamated and topics may be picked up for the Pre-qualifying and Main examination.

Copy of the combined syllabus prepared on the basis of RBE No.40/2007 is enclosed for general guidance purpose.

9. **Schedule of Examination :-**

Last date of submission of application in units	06.06.2022
Last date of receipt of application in DRM office/Workshop/HQ	09.06.2022
Last date of receipt of application in HQ/Gaz Section	20.06.2022
Issuance of Provisional eligibility list by HQ/Gaz Section	30.06.2022
Issuance of Final eligibility list by HQ/Gaz Section	05.07.2022
Date of written test (Pre-Qualifying)	16.07.2022 (Time: 11:00Hrs)
Venue	All the three division(Centre of exam will be notified by concerned Division).

Note: Examination for candidate from WRS/Kota and CRWS/BPL will be conducted by respective divisions.

10. **Important Instructions:-**

It should be ensured that all the employees concerned are directed with the **identification certificate** for the Written Test on the date and time specified above, without fail. No leave of any kind should be granted to these employees which may result in their absence in the examination. They should also not be sent on line.



If any of the employees are on deputation and working under central/state/semi-government, undertaking and whose lien is maintained in this Railway, their Controlling Officers should be advised to inform the candidates(s) regarding the examinations provided they fulfill the requisite conditions.

The concerned Personnel Deptt. 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 main examination through special messenger to Dy. CPO (Gaz.)/WCR/JBP

If any DAR/Vigilance/SPE case is pending/penalties are in operation/pending against anybody, the details thereof may be advised immediately to this office by the concerned officials.

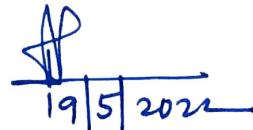
The concerned Personnel Officers & the Sr. DME's/Dy.CME are advised to give wide publicity to this notification at all major Units under their jurisdiction. The Divisions /Unit are advised to submit an undertaking that the notification has been served at all major units where eligible staff are available and their acknowledgement should be obtained. This should be certified by Sr.DME(Co)/Dy.CME concerned. Secretary to PCME shall be the overall co-ordinating officer at zonal level for smooth conduct of examination and all its stages.

To ensure that the eligible staff avails of the opportunity for appearing for the LDCE, wide publicity should be given by pasting a copy of the notification on the notice Board of the Division Office as well as the subordinate offices. Supervisor-in-charge should bring to the notice of the staff working under them about this LDCE. Copies of this notification should also be given to local branches of both the recognized Unions and Associations for their information.

This notification can also been seen in the WCR website with the address 10.150.2.19.

All the division/Units/applicants are advised to regularly visit WCR website (address 10.150.2.19) for any update in the matter.

**Encl/- 1. Form A, Form B, Form C & Form D
2. Syllabus**



**(Anil Kumar Sinha)
APO(Gaz.)/WCR/JBP**

For Principal Chief Personnel Officer

Copy to:

Secretary (E) Ministry of Railways, Railway Board, New Delhi.

Secy. to GM/WCR & AGM/WCR for information.

Genl. Secy./ WCREU, WCRMS ,

Zonal Genl. Secy. All India SC/ST & All India OBC Employees Association JBP for information.

WEST CENTRAL RAILWAY**FORM 'A'**

FORM OF REGISTER TO BE MAINTAINED IN THE OFFICE OF THE IMMEDIATE SUPERVISOR (Form A) and DRM (P)/APO-Admn./HQ (Form B) REGARDING 30% LDCE OF MECHANICAL DEPARTMENT.

(Ref: CPO/WCR/JBP's L.N. WCR/PHQ/GAZ/Selection/AME/Gr 'B'/LDCE/2022
Dt. 19.05.2022)

Sr.No.	Name of the employee	Designation	Place of work	Letter No. & Date under which the application has been sent to the DRM(P)/APO(Admn./HQ	Sr.No. & date by which application is sent to (DRM/P)/APO(Admn.)/HQ..
1	2	3	4	5	6

WEST CENTRAL RAILWAY**FORM 'B'**

(Ref: CPO/WCR/JBP's L.N. WCR/PHQ/GAZ/Selection/AME/Gr 'B'/LDCE/2022
Dt. 19.05.2022)

Sr.No.	Name of the employee	Designation	Place of work	Letter No. & Date under which the application has been received in the office from the Immediate supervisor	Date of receipt of the application In the office of the controlling officer (DRM/P)with ref. No.Col.5	Sr. No. of the registration and date by which application is forwarded to PCPO/WCR.
1	2	3	4	5	6	7

**WEST CENTRAL RAILWAY
PROFORMA**

FORM 'C'

(It is mandatory to fill each and every column with correct information.)

Application for **AME** Post Group 'B' 30% Limited Departmental Competitive Examination in the **Mechanical** Department. (Ref:PCPO/WCR/JBP's L.N. WCR/PHQ/GAZ/Selection/AME/Gr 'B'/LDCE /2022 Dt. 19.05.2022)

1	Name in full (Block letter)	
2	Designation & station	
3	Working under	
4	Divn/Unit where lien held	
5	Pf No./NPS No.	
6	Date of Birth	
7	Date of Appointment to Railway Service a) Designation b) Grade Rs. (RSRP)	
8	Date of appointment/promotion to grade Rs. 5000-8000/ GP 4200/Lavel 6.	
9	Date from which working in <u>regular basis</u> Rs. 5000-8000/ GP 4200/Lavel 6.	
10	Total Non fortuitous service in Gr.Rs.5000-8000/ GP.4200/Lavel 6. As on 01.01.2022 *	
11	Date of appointment/promotion to grade Rs. 6500-10500/GP 4600/Lavel 7.on regular basis	
12	Community (SC/ST/UR)	
13	Period of training undergone before Appointment/Promoton to working	
14	Mob.No.	

*Note- In case of transfer from other Railway toWCR, please specify the date of joining in WCR.

Date: _____	Signature of the applicant: _____ Name of the applicant: _____	Date : _____ Office of ----- Place : _____ Signature of the Immediate Supervisor with date Place : _____ Date : _____
Memo No. (ForwardControlling Officer)	Paste Passport size Photograph here (Photo Attested with Controlling officer.)	Office of ----- Place : _____

Forwarded to Principal Chief Personnel Officer, West Central Railway, Jabalpur. The particulars given above by the employee have been scrutinized and found correct & the above named employee is eligible to appear for the **AME 30% LDCE..**

Date:

**Signature of the
Sr.DPO/DPO/SPO/APO**



DECLARATION OF OPTION FOR AME SELECTION 30% LDCE

(Trained in Dual Traction)

I am aware of the fact that I can take part either in AME (Group B Mechanical Selection) OR AEE (Group B Electrical Selection) only, since I was trained in dual Traction.

In view of the above, i hereby

Opting to take part in this AME selection

☐

Not opting to take part in this AME selection

☐

(Tick at the appropriate box)

I am also aware that once I opt for AME (Group B Mechanical) selection, I cannot take part in all the future AEE (Group B Electrical) selection.

Signature:

Name:

PF No:

Designation:

Station:

Date:

Mob No.

Signature of the controlling official with stamp and date

Signature:

Name:

Designation:

Stamp/Seal:

Date:

Mob No.

SYLLABUS FOR 30% LDCE FOR PROMOTION TO GROUP "B"

FOR AME/AWM IN MECHANICAL DEPARTMENT

Syllabus for Pre-qualifying Exam

MAXIMUM MARKS - 100

PASS MARKS - 75

PART - A TECHNICAL SUBJECT - 40 MARKS

- Out of commission (under repair) percentage for different types of rolling stock & motive power and how to minimize the same
- Different types of Locomotives, Coaches & wagon Stock in use on the Railways
- Prevention of hot boxes on motive power/rolling stock & maintenance of roller bearings
- Disaster Management- Accident Classification, duties of first official to reach at accident site, causes of accidents and their prevention, existing disaster management system & its shortcomings, recommendations of high-level committee, accident Enquiry
- Corporate Safety Plan, RSRC Recommendations
- Benchmarking
- Quality improvement in Work area
- Failure analysis
- Performance Indices
- Items to be inspected at workplace
- Health & Safety standards in shops sheds & yards

STORES

- Classification of Stores
- Procedure for draws of Stores
- Indenting Procedures
- Procurement methods: Local purchase, purchase through tender, purchase through e-tender, Limited tender, Tender Committee, Direct Purchasing
- Schedule of Powers
- Incoming inspection requirements
- Scrap

INFORMATION TECHNOLOGY

- Familiarity with Personal Computer Specs - Processor, RAM, Hard Disk, Floppy, CD, Multimedia etc.
- Operating System - Windows
 - Starting & closing programs
 - Creating, Saving, Copying, Moving files in PC and moving files from one PC to another PC
 - Utilities, Accessories, Disk Cleanup, Defrag, Antivirus, CD Burning
- Basic MS Word, Excel and PowerPoint
- Basic Local Area Networks, Servers, Hubs, Switches, Structured Cabling, Nodes, Network applications
- Using Internet, Email, Browsing, Searching

OTHER ISSUES

Environment, Quality Management Systems: ISO 9000 & ISO 14000

PART B - GENERAL KNOWLEDGE & OFFICIAL LANGUAGE POLICY - 30 MARKS

This section would contain questions of general interest and importance which is acquired by general observation and reading without specific text book study. Subjects of national importance as well as

STRENGTH OF MATERIAL

Various Engineering materials and their properties, Bearing, Stress & Strain, Fatigue, hardness, Corrosion & Surface finish.

PHYSICS & BASIC ELECTRICITY

- Temperature & its measurement
- Mechanics: Newton's Laws of Motion, Velocity & Acceleration, work, energy, power, Archimedes Principle etc.
- Heat & Work, Expansion of Solids Liquids & Gases
- IC Engines, Gas Turbines, Heat Recovery & Thermal Efficiency, Supercharging & Intercooling
- Ohm's Law, Coulombs Law, Faraday's Laws, Voltage, Current & Resistance, wet & dry batteries, power factor.
- Simple Motors & Dynamos – Principle & working, transformer, relay, fuse, circuit breakers
- Power Supply, AC & DC, Rectification

RAJBHASHA

PART – C - ESTABLISHMENT & FINANCIAL RULES – 30 MARKS

ESTABLISHMENT RULES

- General Conditions of service of Railway servants including rules regarding leave, joining time, passes
- Railway Service D&A Rules – 1968
- Railway Service Conduct Rules – 1966
- Retirement Benefits
- Payment of Wages, Allowances and Overtime
- Labour laws including Payment of Wages Act, Workmen's Compensation Act, Hours of Employment Regulations, Factories Act, Industrial Disputes Act, Contract Labour Act
- Manpower Planning & Training
- Welfare measures in Railways
- PNM, JCM & PREM

FINANCIAL RULES

- Parliamentary Control over Railway Finance – Public accountability, Canons of Financial Propriety
- Railway Budget – Budgetary terms, types of Budgets, Budget Cycle, Demand for grants, Expenditure Classification
- Works Programme – Financial Justification of Works – Preparation of Estimates, Capital budget, Control Over Capital Expenditure
- Financial and Cost Control in Railway Workshops, Sheds & Depot
- Delegation of Powers
- M&P Programme, RSP

SYLLABUS FOR MAIN EXAMINATION

MAXIMUM MARKS 100

PASS MARKS 60

Sufficient number of questions shall be included in each of the disciplines to enable a candidate to answer the questions up to full 100 marks.

Professional portion of 100 marks in Four sections representing various streams of Mechanical Branch – Division & Workshop Management, Diesel Locomotives, Carriage & Wagon and Workshops. Candidates can attempt questions from their own discipline or from more than one discipline if he so desires to complete up to 100 marks.

DIVISIONAL WORKING & OPERATIONS MANAGEMENT

- Working Time Table
- Working in Control Office
- Power Plan & Engine Utilization
- HOER & Crew Planning
- Running rooms & crew booking point management
- Fuelling Installations Management
- Running staff training
- Load Trials
- Drivers Grading System
- Accident Classification, definitions, ART Ordering, Role of Supervisors & Officers at accident site management.
- 140-ton Crane Construction & safety in operations

DIESEL LOCOMOTIVES

- Preventive maintenance schedules
- Latest design improvements in diesel locomotives to reduce failures on line
- Design improvements in bogies to make them fit for high-speed operation
- Brake system of diesel locos including working of expressors and vigilance control devices and their maintenance
- Cooling water system of diesel engines
- Fuel oil system of diesel engines
- Control of lubricating oil consumption
- Safety devices used on diesel engines and locomotives
- Testing Equipment required in sheds for governors and fuel injection pumps. Nondestructive testing such Zyglo & magna-flux
- Trouble shooting on locomotives running on the railways
- Fuel Economy on diesel locomotives
- Maintenance requirements of different assemblies like – Traction motor/ Traction Generator, express or Turbo supercharger, power assembly, cylinder head
- Thermal loading of engine components
- Under gear maintenance
- Suspension bearing, wheels
- Excitation system, transition, dynamic braking, carbon brushes, relays & contactors
- Load Box Testing
- Improvements made in ALCO locomotives
- DEMUs- types, systems & trouble shooting
- Biodiesel, CNG
- Introduction to GM Locomotives and its systems

- schedules in shops
- Wagon Stock-preventive maintenance including ROH in depots and POH Schedule in shops
- IRCA Rules for reject able defects
- ICF Bogies and their maintenance in sick line / shops
- CASNUB Bogie & its modifications for high speed
- Corrosion repairs to coaching and goods stock
- Couplers & Draw gear, Train Parting & measures to avoid the same
- Water availability in coaches
- Fire prevention on Trains
- Air Brake System-Twin Pipe & single pipe. Under frame & bogie mounted brake system, Test rig, checking timings, trouble shooting, DV defects, slack adjustments methods. Brake Binding
- Passenger amenity items
- Coach Housekeeping
- Maintenance Pattern of freight trains including CC Rakes & Coaching stock maintenance including Revised policy Circular – 4
- Neutral train Examination
- Ride Index
- Anti Telescopic features
- Maintenance of various components like DV, SAB, PEASD
- Latest design improvements of Carriage & Wagons to improve their performance and speed potential •
- LHB Coaches & BLC Wagons
- Construction, Design & Maintenance of Tank Wagons

WORKSHOPS

- System of labour accountal GA Cards for time keeping documents, tally sheets, Job/Route Cards, inspection & rate fixing.
- Rules & Calculations under incentive scheme
- Paints & painting systems
- Different types of machine tools such as lathes, milling machines, shapers, planers, cutting tools and cutting speeds.
- CNC machines
- CLW pattern of incentive scheme, Group Incentive scheme
- Different types of welding processes, welding defects
- Wheels, tyres & axles and their ultrasonic testing
- Heat treatment of ferrous items such as surface hardening, annealing, normalizing etc.
- Roller Bearing & Cartridge Bearings.
- Injury free features in coaches
- Material handling