

Central Railway

Divisional office
Personnel Branch.
Pune.

No.Pune.P.Dsl. Chief Instructor

Date:- 13.06.2024.

PCEE/CSTM
DRM(P)Pune,SUR.
Sr DME(D) Pune, SUR,

CORRIGENDUM

Sub :- Formation of Panel for the post of Instructors for Basic Training Centre of Diesel Loco Shed, Pune.

Ref:- This office Notification dated 10.06.2024.

Reference above, the syllabus circulated vide above mentioned notification for the post of Chief Instructor (Electrical) and (Mechanical) may be read as below;

Syllabus for Chief Instructor (Mechanical) and (Electrical) **Common Topics**

1. General Knowledge.
2. Indian Railway History, Workshops & other Establishments, Organizational hierarchy.
3. Evolution of Diesel & electric Loco, Types & Differences, Diesel & Electric Loco major and minor schedules, Failure categories, Outage and other performance parameters of Diesel shed, Safety Items, APU, REMMLLOT, Cranes & other M&P, RSP, DAR, Stores, Lubricants, Load Factor, SFC, SOPGEN, PPT office, measuring instruments, Safety Measures in shed.
4. Suggestions for reduction in failures, OCRs, improvements in schedules.
5. Apprentice Act 1961 and revisions, related instructions.
6. Safety.
 - i. Knowledge of G&SR, WTT, Accident manual.
 - ii. Working of train in normal and abnormal condition.
 - iii. Classification of Accidents.
 - iv. Types of fire extinguishers and their use.
 - v. Type of neutral section.
7. Crew management.
 - i. Loco and crew link

- ii. Loco statistics,
 - iii. Method of calculation of shed / Territorial outage.
 - iv. Punctuality.
8. Train dynamics.
- i. Calculation of Tractive effort to haul load as per RDSO's guidelines effects of gradient on Coupler forces etc.
 - ii. Speed time, torque speed and speed current curves for electric locomotives.
 - iii. Train stalling and parting.
 - iv. Specific energy consumption.
9. Computer
- i. Basic knowledge of computer hardware like mother board and CPU and hard drive memory, RAM, CD writer, Scanner, Printers etc.
 - ii. Windows and MS office.
10. राजभाषा

Diesel Locomotive

Electrical equipment

Diesel loco major electrical assemblies, specifications, functions, schedule & overhauling, Batteries, Governor, Diesel Loco DC-DC & AC-AC System, Block Diagrams, Dynamic Brakes in AC-DC & AC-AC system.

Diesel & electric loco Tests, Load Test, Major failures and their troubleshooting, working principles & Laws governing electrical machines. Electrical Safety.

Mechanical equipment

ALCO & HHP type Diesel Locos Major Mechanical assemblies, specifications, functions, their schedules and overhauling.

Diesel loco mechanical systems flow diagrams.

Braking system & components

Bogie-Types-Load distribution, fractures, Schedules, Major Failure areas-wheel mamagment.

Lube /Fuel oil consumption.

Performance tests.

Various tools and test benches used in loco shed

Major failures & Troubleshooting.
Details about MPT, DPT & UST

Electrical locomotive

- a. Electrical Engg: Basic Principle of;
 - a. Knowledge of basic electricity such as resistance inductance, capacitance insulation etc.
 - b. Knowledge of electrical laws such as Ohm's Law, Kirchoff Law, Faradays Law etc.
 - c. DC motors, AC Motors, single phase and Three phase motors.
 - d. Rectifier and Transformer.
 - e. Speed control of DC series motors and Three phase induction motors.
 - f. Precautions while working in electrical section.
- b. Electrical equipment.
 - a. Knowledge of AC tap changer locos and Three phase locos and leading performance parameters-Main features starting torque and tractive efforts, speed TE characteristics and adhesion.
 - b. Different types of pantographs used in locomotives.
 - c. Various types of Auxiliaries used and their capacity.
 - d. Knowledge of static invertors and microprocessor-based fault diagnosis control system.
 - e. Power circuit, Auxiliary circuit and control circuit, battery charger and pneumatic circuit.
 - f. Types of contactors used in locomotive
 - g. Working of Hotel load system in locomotives
 - h. Trouble shooting of tap changer locos and three phase locos.
 - i. Knowledge of various circuit modification issued by RDSO pertaining operation.
- c. Mechanical equipment

- a. Types of Bogies used on AC Locos and their suspension arrangement, Power transmission.
- b. Safety fittings, lubrications and dampers.
- c. Air Brake, regenerative and rheo static braking, standing, wheel slip and its prevention.

You are requested to kindly circulate the above to all concerned.

(Jitender Singh Meena)
APO/Pune.
For DRM(P)Pune.

C/- CCOR-DD, KWV, SUR, Wadi.