

Sub: - Syllabus for the post of JE (T&C) Trade against 25% Ranker Quota in Grade Rs. 9300-34800+4200/-

The syllabus for the post of JE (T&C) Trade against 25% Ranker Quota is as given below.

I TECHNICAL KNOWLEDGE

- i) Types of Diesel Locos in use and their general working principles.
- ii) Principles of different excitation systems and principles of governing power pack assembly.
- iii) Sound knowledge of safety devices and their function.
- iv) Trouble shooting ability to locate defects and rectification.
- v) Dynamic braking working principles-calibration and re-calibration of circuits.
- vi) Object of load box testing and self load box testing features of WDM 3A locomotives, Load box testing of DETC.
- vii) Maintenance of switch gear relays.
- viii) Knowledge of Indian Electricity Act and rules.
- ix) Knowledge of warning systems.
- x) Various technological up-gradation of electrical side of WDM 2 Loco.
- xi) Rewinding of Auxiliary Machines
- xii) Maintenance of Auxiliary Machines
- xiii) Maintenance of ECC.
- xiv) Applications and advantages of Microprocessor Systems.
- xv) Salient feature of RMBDR (Roof Mounted Dynamic Braking Resistor).
- xvi) Knowledge about electrical circuits and systems involved in rebuilding of Diesel Loco type WDG3A and WDP1, *WDM3A, WDP3A & their components.*
- Diesel Electric Tower Car**
- xvii) Knowledge of various systems in DETC like Power Rectifiers, MSG, RRU, Control Cubicles, Driver Desk, CCTV, Telephone exchange, Hydraulic Lift platform, 10 KVA Genset, Cab heaters, 24 V and 110V Batteries.
- xviii) Manufacturing of harness and layout in DETC. Stage testing, Load setting of DETC at Load box.
- Electric Locomotive –WAP7**
- xix) Harness testing and layout in Electric Locomotive.
- xx) Bunching, Securing and Plug fitment. Knowledge of tools and equipment used during manufacture of Electric Locomotives.
- xxi) Knowledge of various systems like SB1/2 Panels, HB1/2 Panels, Traction Converter, Auxiliary Converters, Transformer, VCU and Auxiliary Machines.
- xxii) Sequence Testing of Locomotive, Simulation Testing, Final Testing and Commissioning and trouble shooting.
- xxiii) Knowledge of important RDSO modifications sheets implemented in Electric Locomotive recently namely Push Pull Scheme and their advantages.

II SHOP MANAGEMENT:

- i) Knowledge of functions of time office and procedure orders for gate passes.
- ii) Knowledge of incentive scheme, work order system, of labour hours, etc., production planning and Control and workshop documents processing.

- iii) Stock and non stock items and procedure for Indenting and drawl of stores and return of serviceable and scrap items to stores Depot.
- iv) Various registers maintained in shops and their need.
- v) Stock verification authorities and periodicity.
- vi) Various safety measures to be followed on the shop floor in general and for machines and equipments in particular.
- vii) Staff protective clothing and their entitlements.
- viii) Methods to control consumption of stores and electric energy.
- ix) Knowledge of ISO 9001-2015, 14001:2015, 18001:2007 (updated to ISO 45001: 2018) Its implementation & various sources of pollution and their control measures. Knowledge of ISO 50001 and its advantages.

III MATHEMATICS

- i) The questions will be of high school standard in Arithmetic, Algebra and Trigonometry.

IV GENERAL & ESTABLISHMENT KNOWLEDGE

- i) D&AR Rules: Various definitions, the applicability,, suspension and issue of minor penalty charge sheets etc
- ii) Rule for engagement and discharge of casual labours /substitutes and knowledge of relevant sections in the Industrial Employees Compensation Act.
- iii) Factory Act.
- iv) Railway Servants (Hours of Work and Period of Rest) Rules, 2005
- v) Various Types of leave which can be granted to staff.
- vi) Railway Service conducts Rules.
- vii) General Knowledge about working of various other departments in Railways.
- viii) Staff council and rules of its formation/ Working.
- ix) Cannons of financial propriety.

V राजभाषा

- i) भारत सरकार का राजभाषानीति का समान्य परिचय।
- ii) राजभाषा अधिनियम 1963 तथा राजभाषा संशोधन 1976 .
..... उपरोक्त 1 एवं 2 के संबंध में व्याख्या हेतु रेल्वे बोर्ड द्वारा जारी राजभाषा हिन्दी विषयक आदेशों का संकलन (तृतीय संस्करण 1993) देख सकते हैं।
- iii) उपर्युक्त शब्दावली

29/6/2022
WM/LRS-1