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DMW/PATIALA

Date: 29.06.2020

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

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

I	**TECHNICAL KNOWLEDGE**
i)	Knowledge of Battery regarding: a) Commissioning of new battery (Lead Acid, Ni-Cd, VRLA type batteries) b) Storage c) Initial Charging Defects d) Capacity
ii)	Principles of different excitation systems
iii)	Knowledge of G.E. Electro-hydraulic governor and its functions. Difference between G.E. and W.W. Governor.
iv)	Dynamic Braking working principles – calibration and recalibration of circuits.
v)	Load testing and object of load testing of diesel locomotives, remedial measures to be taken based on observations.
vi)	Knowledge of Indian Electricity Act and rules
vii)	Knowledge of maintenance of switch gear and relays and contactors
viii)	Knowledge of overhauling, testing of DC machines and AC motors & Alternators
ix)	Vacuum Pressure Impregnation of rewound electric motor.
x)	Reason of sparking, flashover in DC machines and their rectification.
xi)	Function of reactors, oscillator, function generator and PWM card used in WDM 2 Locos.
xii)	Railroad electronics, automatic transmission, different types of electric modifications with advantages.
xiii)	Knowledge about electrical circuits and systems involved in rebuilding of Diesel Loco type WDG3A and WDP1, ~~WDP4~~ WDP3A & WDM3A & their Components.
	DIESEL ELECTRIC TOWER CAR
xiv)	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.
xv)	Manufacturing of harness and layout in DETC. Stage testing, Load setting of DETC at Load box.
	ELECTRIC LOCOMOTIVE –WAP7
xvi)	Harness testing and layout in Electric Locomotive.
xvii)	Bunching, Securing and Plug fitment. Knowledge of tools and equipment used during manufacture of Electric Locomotives.
xviii)	Knowledge of various systems like SB1/2 Panels, HB1/2 Panels, Traction Converter, Auxiliary Converters, Transformer, VCU and Auxiliary Machines.
xix)	Sequence Testing of Locomotive, Simulation Testing, Final Testing and Commissioning and trouble shooting.
xx)	Knowledge of important RDSO modifications sheets implemented in Electric Locomotive

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	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 एंव 2 के सबंध में व्याख्या हेतु रेल्वे बोर्ड द्वारा जारी राजभाषा हिन्दी विषयक आदेशों का संकलन(तृतीय संस्करण 1993) देख सकते हैं।
iii)	प्रचलित शब्दावली

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