

SYLLABUS FOR PROMOTION EXAM – JE (C&W) PB-2 9300-34800 + 4200
CARRIAGE WORKSHOP JODHPUR

1. Supervisor – Duties, Qualification, Responsibilities, Required merits
2. Incentive Bonus Scheme
3. Wages
4. Job Evaluation
5. Time Study

MATHEMATICS

Arithmetic : Percentage, average, simple equation, ratio, Time and work, gain & loss, Interest
 Algebra : Fundamentals of algebra, (Addition, Subtraction, Multiplication, Division) simple equations, Measurement
 Mensuration : Area of square, rectangle, equilateral, triangle, isosceles triangle, right, Gain & Loss, Interest, Cutting, Turning, Drilling & boring calculation, Newton’s Law of Motion
 Decimal & Fraction : Power & root – Logarithms, Ration and Proportions, Geometry, Graphs, Trigonometry, Work, Power, Energy & efficiency, Strength of material, Centre of gravity, Density, special gravity, Friction

GENERAL KNOWLEDGE

Abbreviations, current affairs, day-to-day events, current sports, books, new adventure / inventions, etc. Flags, capital. Head of States and currencies of nations. Indian history. UNO and its organizations, Security Councils, General knowledge about railways.

ESTABLISHMENT RULES

Leave Rules, Pass Rules, Rly Service Conduct Rules 1966, D&A Rules 1968

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Trade – C&W

Energy – Kinetic energy, law of conservation of energy. Heat – Unity of heat, calorie, heat loss and gain. Fraction – Work – Unit of work in MKS system and SI. Difference between heat and energy. Difference between mass and weight. Heat treatment, Meaning of stress, strain – simple problems, Iron and non-iron metal, Definition and difference and characteristics Electricity – definition, use, atom, molecules and structure, current and its types, conductor, resistance, Ohm’s law. Magnet and its characteristics	File & filing, marking, limit, fit and tolerance, inter-changeability, Metallurgy, Engineering materials, Basic electricity technology. Pipes & pipe fitting, Lubricants & lubrication, cutting fluids & coolants, Study of laths MC, Forging – Heat treatment, Coaching/preventive maintenance Latest design improvement in carriage & wagon to improve their performance. Design improvement in coach & wagon to raise their speed potential. IRCA rules for rejectable defects. IRS, ICF & BEML, bogies and their maintenance in shop. Corrosion repair to coaching. Different types of couplers and prevention of damage/ leakage during service. Incentive and safe to run examination. Different types of vacuum air brake cylinders and their overhauling. Passenger amenity items Cleaning technology, Maintenance pattern. Bogie mounted brake system Neutral TXR examination Undergear examination Ride Index Anti-telescopic features Maintenance of various components like DV, SAB, PEASD & Truss bar, hanger, etc.
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