

Elements of Electrical Technology

AC motor single phase

Constructions, working, principle, Types of AC motors -induction motor (split phase and repulsion start), capacitor motor, shaded pole motor, Universal motor special characteristics and applications of different type of fractional horsepower motors, rotation, reversal and speed control of AC motors, installation of AC motors and Common faults and causes, Testing and repairs.

Transformer

Working Principle, Construction Types of Transformer Step up Transformer and Step down Transformer, Rating and applications of different types of transformer, Voltage and Current transformer, Auto-transformer, winding of transformer, Introduction to a welding Transformer, Study of star connection and delta connection with simple derivation related to above contents.

Power

Generation, Transmission, and Distribution of electrical power, Sources of electricity, Study of Hydro, Thermal, Diesel, Nuclear Power Plants, introduction, Types of substation, Types of poles, Span, Classification of Cables as per Voltage.

MWP TERM -2 SYLLABUS 109

Winding shop

Tools, Machines, Equipment and Instruments required for Winding shop, their working and use, Planning, Layout and setting of a winding shop, Safety precautions and measures in winding Shop, up keeping of Winding Shop.

Estimating Costing and Billing

Elements of estimation, Quantity and Specifications of required Materials, Knowledge of waste and Extra Material Requirement, Formula for estimation, Elements of Costing - Market value of Materials, Labour cost, Production cost, Overhead cost, Profit and Total cost, Method of Costing, Costing Formula, Billing Methods and terms of Payments.

Load Estimation and Test Report

Specification of various electrical accessories and appliances, Load calculations of an electrical installation and preparation of Test Report as per norms, Tariff, Estimation of a Bimonthly electricity Bill.

PAPER - 3

Vacuum cleaner

Construction and working principle of vacuum cleaner, common faults and Causes, Testing and Repair.

A.C. Voltage Stabilizer (Manual)

Construction, Working Principle of stabilizer, common faults and causes, Testing and Repair.

Electric hand drill

Construction and working of electric hand drill, common faults and causes, Testing and Repair.

Battery charger

Construction, Working, Common faults and Causes, Testing and Repair, Specification of a battery charger.

Fire Alarm

Construction and working Principle of fire alarm, Common Faults and Causes, Testing and Repair