

COURSE CONTENT:		
UNIT I	ELECTRICAL SYMBOLS	9
Main fuse board with switches (lighting) -Distribution fuse-board with switches (lighting) - Main fuse-board with switches (power) -Distribution fuse-board with switches (power) - Main witches for Lighting and power. Junction of conductors-Line Existing - Line Proposed - OH line UG cable – Fault Line crossing - Socket outlet 5 amps - Socket outlet with switch 5 amps Socket outlet 15 amps - Socket outlet with switch 15 amps.		
UNIT II	INDIAN ELECTRICITY RULES	9
Rule 28 Voltage, Rule 30 Service Lines and apparatus on consumer premises, Rule 31 Cut-out on consumer's premises, Rule 46 Periodical inspections and testing of consumer's installation, Rule 47 Testing of consumer's installation.		
UNIT III	SPECIFICATION OF ELECTRICAL ITEMS	9
Switches - Main Switches - Sockets - Switch boards - Wall socket - Fuse units - Lamp Holders - Ceiling rose - Distribution boxes - Miniature Circuit Breaker - Earth Leakage Circuit Breaker - Ceiling fan - Electronic fan regulator - Storage type Water Heater – Immersion Heater – Wires and Cables (PVC, VIR, Weather Proof) - UG Cable (LT and HT) - Copper conductor sizes and rating – Earth wires. Lamps: Incandescent lamp, fluorescent lamp, Sodium vapour lamp, High Pressure Mercury Vapour lamp, Halogen lamp - Neon tube/lamp		
UNIT IV	SYSTEMS OF INTERNAL WIRING, WIRE SIZE, FUSE, SHOCK, EARTHING, AND TESTING OF INSTALLATION	9
Wiring systems – Types of wiring – points to be considered for selection of wiring - comparison – Looping back system and Joint box system and tree system – Position of switches, cutouts, main switch board, sub-distribution boards. Considerations for selecting wire size – size of conductors /cable used for Domestic installation, Service connection, Distributors - Power rating of some important households electrical appliances Materials used as fuse element – Selection of fuse wire - types of fuses – difference between circuit breaker and fuse – why fuse is not used in the neutral – table for sizes of fuse wire. Electric shock – Effects of electric shock – factors influencing the electric shock - Precautions against electric shock – cure of shock - Treatment for electric shock - artificial respiration - fire hazards due to electricity.		
UNIT V	DOMESTIC, COMMERCIAL AND INDUSTRIAL INSTALLATION ESTIMATES	9
Conditions and Requirements for Domestic, Commercial and Industrial Installation – steps to be followed in preparing electrical estimate (domestic, industrial and agricultural installation)Estimate the quantity of material required for Residential single bed room Flat (1BHK).Industrial power wiring having 4 or 5 machines, School building having 3 class rooms, Primary Health Centre having minimum 6 rooms, Lighting scheme of a party hall having minimum 20 twin TL fittings.		
TOTAL: 45 PERIODS		
TEXT BOOKS:		
1. Electrical Estimating and Costing by Gupta. 2. 2. Electrical Wiring, Estimating & costing by Dr.S.L.Uppal.		
REFERENCE BOOKS:		
1. Electrical Drawing & Estimating C.R.Dargon. 2. Electrical Engineering by K.B.Raina and S.K.Bhattacharya		