

Syllabi & evaluation norms for Part-III courses

Co-ordinating Department: Department of Physics

SEC III – VALUE ADDED COURSE

ANY SEMESTER BETWEEN II to V

16UPHVA02	Repair & Maintenance of House hold Appliances	40 Hrs	01 Credits
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Objectives:

1. To understand the necessity of good earthing in an electrical installation.
2. To familiarise the students the safety precautions while working.
3. To acquire knowledge about principle of operation, working and application of various domestic appliances.
4. To acquire skills in house wiring
5. To acquire skills in assembly, repair, installation, of domestic appliances.

Unit 1 : SAFTY PRACTICE AND MEASUREMNTS (10 hrs)

- Safety practice - Lifting and handling loads, Heavy Equipments
- Fire extinguishers, Types of fire extinguishers
- General safety of tools and equipments, Electrical safety
- Purpose of Earthing, Types of Earthing
- Need of fuse, Types of fuses
- Basic electric shock guards, Roberts, MCBS

Unit 2 : ELECTRIC MATERIALS, CABLES AND MEASUREMENTS (10 hrs)

- Introduction to Electric Conductors
- Types of conductors, Insulators
- Measurements of electrical conductivity
- Measurement of line voltage, current, Electric power
- Direct current and testing the polarity,
- Alternating current and identifying phase, Neutral and earth terminals
- Types of electric cables, Crimping cable ends

Unit 3 : DOMESTIC ELECTRICAL CONNECTIONS AND ELECTRIC MOTOERS WINDING (10 hrs)

- Simple house wiring circuit
- Connecting number of lamps, Fans in series & parallel
- Different types of motors
- Preparation of winding table
- Connection diagram, Winding diagram for given Motor
- Testing the motor after rewinding

**Unit 4 : INSTALLATION, SERVICING AND REPAIRING OF
ELECTRICAL HOME APPLIANCE**

(10 hrs)

- Understand home appliances like heater, Iron, Ceiling fan, Washing machine etc.
- Dismantle and reassemble Ceiling fan, Table fan, Water heater, Washing machines
- General repair of heating Iron, Ceiling fan, Table fan, Washing machine etc.
- Maintenance of electrical appliances
- Regular services and faults finding in different electrical appliances
- Practice one installation of common electrical accessories such as switch, holder, Plug on board

Reference Books:

1. KB Bhatia, Study of Electrical Appliances and Devices, Khanna Publishers.
2. K Nath, Electrical Appliances Repairer & Maintenance, Hind Pocket Books.
3. Garshon J Wheeler, How to repair Electrical appliances, D.B. Taraporewala and Sons Co.Pvt. Ltd.
4. M L Anwani and I M Anwani, Electric Motor Winding and repair, Dhanapat Rai and Sons.
5. S R Roy, Electrical Gadgets and their repair, Pitamber Book Depot.