

Rayat Shikshan Sanstha's
Yashwantrao Chavan Institute of Science (Autonomous), Satara.
Department of PHYSICS
Syllabus for Advanced Diploma course (B.Sc.-III) w.e.f. June 2020

Sr. No.	Paper code and Name.	Contact hours	Credit	Marks
1	DPT 301:	48	4	100
2	DPL 302: Practical	96	4	100
3	DPP 303: Project	24	2	50
Total		168	10	250

THEORY SYLLABUS

Learning Objective:

1. To enhance the students practical knowledge
2. To make the students aware about handling the instruments
3. To make them aware of selection wiring materials and all components.

Unit I: Safety Precautions

(06)

Safety precautions and elementary first aids ,Treatment in case of a person suffering from a electrical Shock.

Unit II: Basic of electrical wiring

(09)

Ohm's law and joule's law of heating. Work, power and energy and their units, Uses of Resistors, Inductors, Capacitors, transformers and thermostat, Basic of electrical wiring :Phase, neutral and earthling , necessity of earthing, different types of wires, Different types of joints, basics of single phase and three phase circuits.

Unit III: Common electrical accessories and materials:

(12)

Switches, Ceiling roses, lamp holders, adaptors, plug and plug pins, Types of fuses with uses, test lamp and its use. Simple wiring layouts for connections of domestic electric appliances, such as geyser, lamp, computer, electric iron etc. Idea of different A.C. motors, single phase and three phase motors.

Unit IV: Maintenance And Repairing of Appliances

(18)

Maintenance and minor repairs of domestic electrical appliances:

Testing, Fault finding, repair and overhauling of : Electric fans, electric mixer and grinder, Refrigerator, Hair drier, Room heater, Air conditioner, electric iron, Vacuum cleaner, Emergency light, Voltage Stabilizer , Electric and Hand Drilling machine, Inverter. Oven

Learning outcomes:

1. It will enhance the student's practical knowledge.
2. The students will be aware about handling the all instruments.
3. The students will aware of selection of electric wiring and easily play with all appliances.

Reference Books:

1. A Text book of electric wiring- S.Chand Publication
2. Performance an design of AC machines- M.G. Say.

PRACTICALS

1. Demonstration of tools, accessories, electric materials and measuring instruments.
2. Study of series and parallel circuits.
3. Study of simple single phase A. C. wiring using switches, ceiling Roses and lamp holders.
Testing, fault finding, minor repairs and overhauling of:
 4. Electric Fan
 5. Electric mixer and grinder
 6. Hair drier
 7. Room Heater
 8. Air Conditioner
 9. Electric iron
 10. Vacuum cleaner
 11. Electric hand Drill machine
 12. Emergency light
 13. Voltage stabilizer
 14. Invertors.
 15. Refrigerator

Project Work on repairing of instruments wand hands on training.

(24)
