



Government Degree College, Seethanagaram

Accredited by NAAC with "B" Grade, ISO 9001:2015 Certified College

Affiliated to Aadi Kavi Nannayya University
Opp K.G.N.M. Trust, Purushottapatnam Road, Seethanagaram

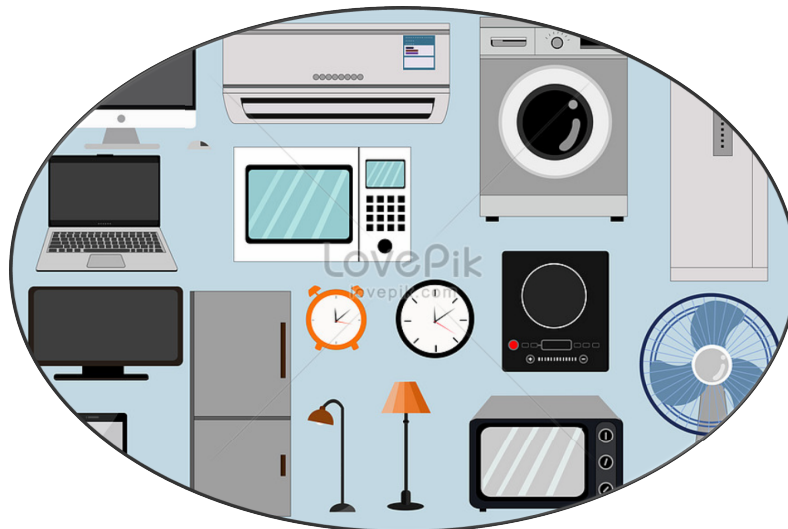


DEPARTMENT OF PHYSICS

CERTIFICATE COURSE

ON

"ELECTRICAL APPLIANCES"



01-12-2022 to 11-01-2023

Submitted by

G. PADMA

Department of Physics

Government Degree College, Seethanagaram

CERTIFICATE COURSE IN PHYSICS 2022

ELECTRICAL APPLIANCES

SYLLABUS

UNIT-I:(6hrs)

Voltage, Current, Resistance, Capacitance, Inductance, Electrical conductors and Insulators, Ohm's law, Series and parallel combinations of resistors, Galvanometer, Ammeter, Voltmeter, Multimeter, Transformers, Electrical energy, Power, Kilowatt hour (kWh), consumption of electrical power

UNIT-II:(10 hrs)

Direct current and alternating current, RMS and peak values, Power factor, Single phase and three phase connections, Basics of House wiring, Star and delta connection, Electric shock, First aid for electric shock, Overloading, Earthing and its necessity, Short circuiting, Fuses, MCB, ELCB, Insulation, Inverter, UPS

UNIT-III:(10hrs)

Principles of working, parts and servicing of Electric fan, Electric Iron box, Water heater; Induction heater, Microwave oven; Refrigerator, Concept of illumination, Electric bulbs, CFL, LED lights, Energy efficiency in electrical appliances, IS codes & IE codes.

Electrical Appliances Time:

2Hrs Max

Marks:50

Section–A

Answer any FOUR questions. Each question carry 5 marks.

4x5= 20Marks

- 1. Explain the terms (i) Voltage and (ii) Current.**
- 2. Write short notes on short circuiting?**
- 3. Write about Galvanometer**
- 4. What is the difference between Inverter and UPS?**
- 5. What is the variation of Electrical energy and Power?**
- 6. Define IS codes and IE codes**
- 7. What is the principle of Microwave oven**
- 8. Explain the parts and servicing of Electric fan**

Section–B

Answer any THREE questions. each question carry 10 marks.

3x10M=30Marks

- 9. Explain about the series and parallel combination of resistors**

(OR)

- 10. Distinguish between Electrical conductors and Insulators**
- 11. Discuss about single phase and three phase connections**

(OR)

- 12. What is electric shock and discuss necessary steps for first aid for electric shock**
- 13. Write the concept of illumination and discuss about LED light**

(OR)

- 14. Distinguish between Water heater and Induction heater.**

