

Grade XII**Physics****Total Periods=****1 Period= 45min**

S.No	Topics	Main Points	References	Periods
1	Understanding of the importance of system of measurements with standard units of accurate measurement in the house hold.	English and metric system, conversion from one to another. Study of construction and use of weighing devices, spring balance, arm balance. Use of accurate measurements in producing standard uniform products in food preparation. Establishment and enforcement of standards of weights and measures.		4
2	Understanding of purpose of simple machines and their constructions. Analysis of efficiency of simple machines and the effect of frictions	Use of lever, inclined plane, wheel and axle, screw and pulley.		3
3	Understanding of certain characteristics of materials in relation to the house hold.	Properties of materials such as density, specific gravity, viscosity and surface tension. Application of Archimede's principle.		4
4	Temperature, effect of heat and methods of heat transmission.	Principle of operation of thermometers, of thermocouples. Difference in thermometer scales. Operation of thermostats. Review of methods of heat transfer and their applications. Effects of insulation on heat transfer. Effects of heat causing expansion and change of state, heat units, calories and B-T-U.		5

5	Basic principle of electricity and magnetism.	Nature of electricity and of an electric current. Theories of magnetism and insulators. Meaning of amperes, watts, ohms, volts. Ohm's law. Generation of electric current. Alternating and direct current. Use of transformers. Value of fuses or circuit breakers. Use of electricity in the home. Principle of dynamo and motor. Measurement of electricity in the home; amount of electricity required to operate household appliances.		5
6	Light, color, sound	Properties of light waves. Laws of reflection and refraction. Different types of electric lights. Measurement of illumination. Different lenses and their uses. The spectrum, transmission of sound, providing good quality light in the home – Natural and artificial. Amount of light required for certain kind of tasks.		5

BOOKS RECOMMENDED

1. Household Physics By Madalyn Avery ,The MacMillan Co. New York.
2. A Brief Course in Physics By Lester T. Earls For Home Economics Students.Prentice Hall Inc, New York

Practical

1.	To find out the density of solid cylinder by graduated cylinder	02
2.	To find out the density of solid sphere by graduated cylinder	02
3.	To find out the specific gravity of a solid cylinder heavier than water but insoluble in it by Archimede's Principle	02
4.	To find out the specific gravity of a solid sphere heavier than water but insoluble in it by Archimede's Principle	02
5.	To find out the specific gravity of glycerin by R.D bottle	02
6.	To find out the specific gravity of glycerin by R.D bottle	02
7.	To measure the length and diameter of a solid cylinder with the help of a Vernier Calliper and calculate its volume	02
8.	To measure the diameter of a solid sphere with the help of a Vernier Calliper and calculate its volume	02
9.	To determine the diameter of a given wire by using a screw gauge and calculate it's area of cross section	02
10.	To determine the volume of a small sphere with the help of a micrometer screw gauge	02
11.	To study the relationship between current and voltage	02
12.	To plot magnetic lines of force of a bar magnet with its north pole pointing towards the geographical south.	02`
13.	To study the laws of reflection of light.	02
14.	To study the laws of refraction of light	02