Physics-1 Code: PH191 Contacts: 3P Credits: 2

Group - 1: Experiments from Higher Secondary knowledge of Physics

- 1. Determination of thermal conductivity of a good conductor by Searle's method.
- 2. Determination of thermal conductivity of a bad conductor by Lees and Chorlton's method.
- 3. Determination of dispersive power of the material of given prism.
- 4. Use of Carry Foster's bridge to determine unknown resistance.

Group -2: Experiments on General Properties of matter

5. Determination of Young's modulus by Flexure method and calculation of bending moment and shear force at a point on the beam.

6. Determination of modulus of rigidity by static/dynamic method.

7. Determination of co-efficient of viscosity by Poiseulle's capillary flow method.

Group -3: Optics

- 8. Determination of wavelength of light by Newton's ring method.
- 9. Determination of wavelength of light by Fresnel's bi-prism method.
- 10. Determination of wavelength of light by Laser diffraction method.

a) A candidate is required to perform 3 experiments taking one from each group. Initiative should be taken so that most of the Experiments are covered in a college in the distribution mentioned above. Emphasis should be given on the estimation of error in the data taken.

b) In addition, a students should perform one or more experiments where he/she will have to convert the non-electrical signals (viz Temperature, Intensity of Light, Pressure etc.) present in an Experiment into electrical signals and measure them with the help of Multi-meters/ Oscilloscopes. Students should calibrate the Sensor for Experiment before use.

c) Innovative experiment: One more experiment designed by the student or the concerned teacher or both.

Note:

i. Failure to perform each experiment mentioned in b] and c] should be compensated by two experiments from two different groups mentioned in the above list.

ii. At the end of the semester report should sent to the board of studies regarding experiments, actually performed by the college, mentioned in b] and c]

iii. Experiment in b] and c] can be coupled and can be parts of a single experiment.