M1PHY05-CP01 : General Physics Laboratory

External: 80 Marks Internal: 20 marks

External Assessment: Experiments: ***60 marks, Viva-Voce: 20 marks***

NOTE:

1. Students are required to complete at least five experiments allotted to them.
2. Students are expected carry out the practical after understanding theoretical principle behind each experiment, design of experiments, working principle of the equipments/instruments, sources of errors in experiments etc.
3. Experimental errors must be estimated in all experiments.

LIST OF EXPERIMENTS

1. Measurement of arc spectra by constant deviation spectrometer.
2. Determination of elastic constants of glass by method of Cornu's fringes.
3. Determination of coefficient of thermal conductivity of metal by Angstrom's method.
4. To study variation in internal resistance of a material with temperature.
5. To study the Hall effect in a given semiconductor probe and to find the Hall Voltage and Hall Coefficient, Charge Carriers, Hall angle and Mobility.
6. To study the characteristic of given Solar Cell Panel.
7. Determination of λ, $d\lambda$, and thickness using Michelson's interferometer.
8. Determination of wavelength of light emitted by He-Ne laser and to verify the law governing Interference from a Young's double slit experiment.

(a) Measurement of wavelength of He-Ne laser light using ruler. (b) Measurements of thickness of thin wire with laser.

9. Investigation of Faraday's effect and to determine Verdt's constant.
10. To plot the polar curve of a filament lamp and to determine its mean spherical intensity.
11. To study the dissociation limit of iodine.
12. Jamin's Interferometer's method for refractive index of air using He-Ne Laser.
13. Beam characteristics of a He-Ne laser beam.
14. Any other experiments designed and setup by the teacher.