Semester 2
Minor Course-123P
(2 Credits)

Semester: 2	**Course No.: 123 (P)**	**Course Code:** PHE 123(P) **Course Title: :** Physics lab
Credits: 2		**Course Category: Minor paper**

Course Outcomes: On successful completion of the course the learner will be able to

CO#	COGNITIVE ABILITIES	COURSE OUTCOMES
CO111 T-1	REMEMBERING	Get acquainted and learn the use of different laboratory instruments
CO111 T-2	UNDERSTANDING	Understanding of the principles involved in general physics , optics and electronics will become clear .
CO111 T-3	APPLYING	Using experimentally measured data different physical quantities related to general physics , optics and electronics will be obtained .
CO111 T-4	ANALYSING	
CO101.5	EVALUATING	

Unit No.	Unit Contents	Sessions Allotted
1	**GROUP: A** 1. Stefan's law. To verify the Stefan Boltzmann's fourth power law by using dc power source. 2. Diagonalization of matrix. 3. Newton's rings To find the wave length of light of given monochromatic source To find the radius of curvature of given lens. 4. Deflection Magnetometer To determine the magnetic moment (M) of given bar magnet using deflection magnetometer in Gauss A and B position.	**30**

	5. Spectrometer Calibration of spectrometer and find the wavelength of unknown line of a mercury spectrum 6. To find the moment of inertia of a rolling body about an axis passing through the centre of the body on an inclined plane.	
2	**GROUP: B** 1. Activation energy of a diode. 2. Decay Constant. 3. Projection Method To find the value of low resistance by the method of projection of potential. 4. Absorption coefficient of liquid using photocell. 5. LDR Characteristics Obtain IV characteristics of given LDR and calculate its resistance (for at least three different light levels). 6. Full-wave Rectifier Obtain load characteristic and % of regulation of Full-wave rectifier without filter and with capacitor filter. Determine ripple factor also.	**30**

Reference books:

1. B. Sc. Practical Physics by C. L. Arora , 20th Edition , 2020 S. Chand and Company
2. Practical Physics by G. L. Squires. 4th edition , Cambridge , 2001.
3. Practical Physics with viva – voce Dr.S.L. Gupta and Dr.V.Kumar , 27th edition , 20210 Pragati Prakashan .