Semester -VI

Minor Course- 364P

(Minor Course – 2 Credits)

Semester: 6	**Course No.: 364(P)**	**Course Code:** PHE 364(P) **Course Title:** Physics lab
Credits: 2	1 Session = 2 hour	**Course Category: Minor Paper**

Course Objective:

The course objectives for mechanics, solid state physics and electronics practical in physics generally focus on developing practical skills in measurement, experimentation, and understanding of fundamental concepts in mechanics and electronic circuits.

Key objectives include:

- Understanding and applying principles of mechanics through hands-on experiments such as
- Measuring physical quantities and verifying theoretical laws.
- Understand how to design the basic electronic circuits using diodes and transistor.
- Developing the ability to interpret experimental data, analyze errors, and relate practical observations to theoretical physics concepts.
- Learning to operate and maintain physics laboratory equipment used in mechanics and electronics.

Course Outcomes:

On successful completion of the course, learners will be able to

S.NO	COURSE OUTCOME	BLOOMS VERB
CO1	Set up the instruments as per the instructions, Connect the circuit as given in the circuit diagram.	**Remember Understand**
CO2	Develop measurements techniques, record observations, use the given formula, do calculations and draw your conclusion from the result.	**Understand Apply**
CO3	Find uncertainty involved in the observations	**Evaluate**
CO4	Analyse the observations for scientific inference	**Analyse**

Unit No.	Unit Contents	Sessions Allotted
1	1.Find modulus of rigidity (η) of given wire by torsional pendulum 2. Resonance pendulum 3. Determination of specific heat capacity of a liquid using the method of cooling 4. Liquid lens 5. e/K by power transistor 6. To find the value of unknown inductance in ac circuit 7. To study the variation of Ic & Vce with temperature in fixed bias circuit & potential divider circuit for CE configuration. 8. L by Anderson's bridge 9. Load line and determination of Q point for BJT 10. Study of X-ray diffraction using power pattern	**60 Hours**

Suggested Text Books:

1. 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, 22nd edition, 1997 Pragati Prakashan