B. Sc. Part – I

PHYSICS PRACTICALS

Marks 50 **(Credites: 02)**

DSC-A LAB: MECHANICS

1. Measurements of length (or diameter) using Vernier calliper, screw gauge and travelling microscope.
2. To determine the Moment of Inertia of a Flywheel.
3. To determine the Moment of inertia of a disc using auxiliary annular ring.
4. Young's modulus of material of Bar by vibration.
5. Modulus of rigidity of material of wire by torsional oscillations
6. Y/η of Wire by Searle's method.
7. To determine g by Bar Pendulum.
8. To determine g by Kater's Pendulum.
9. Poission ratio for rubber using rubber tube.
10. To study the Motion of a Spring and calculate (a) Spring Constant (b) Value of g.

DSC- B LAB: ELECTRICITY AND MAGNETISM

1. To use a Multimeter for measuring (a) Resistances, (b) AC and DC Voltages, (c) DC Current, and (d) checking electrical fuses.
2. Measurement of constants of B. G.
3. Determine a high resistance by Leakage Method.
4. To compare capacitances using De'Sauty's bridge.
5. Measurement of field strength B and its variation in a Solenoid (Determine dB/dx).
6. Impedance of series LCR circuit.
7. To study the a series LCR circuit and determine its (a) Resonant Frequency, (b) Quality Factor.

8. 7. To study a parallel LCR circuit and determine its (a) Anti-resonant frequency and (b) Quality factor Q.

9. Frequency of A. C. mains by sonometer.
10. To verify the Thevenin / Norton theorem.

Reference Books:

1. Advanced Practical Physics for students, B.L.Flint & H.T.Worsnop, 1971, Asia Publishing House.
2. A Text Book of Practical Physics, Indu Prakash and Ramakrishna, 11th Edition, 2011, Kitab Mahal, New Delhi.
3. Advanced level Physics Practicals, Michael Nelson and Jon M. Ogborn, 4th Edition, reprinted 1985, Heinemann Educational Publishers
4. College Practical Physics – Khanna and Gulati (S. Chand and Co. Ltd, Delhi).
5. Practical Physics – Gupta and Kumar (Pragati Prakation Meerat)
6. Advanced Level Practical Physics – J.M. Nelcon, J.M. Ogloom (EIBS).
7. A Text Book of Practical Physics - Shrinivasan and Balasubramanyam.
8. Engineering Practical Physics- S.Panigrahi & B.Mallick,2015, Cengage Learning India Pvt. Ltd.