

S.l. Subject

Chapter - 1: MATHEMATICAL PRELIMINARIES

Chapter - 2: GENERAL INSTRUCTIONS

Chapter – 3: UNITS AND MEASUREMENTS

Chapter – 4: MEASURING INSTRUMENTS

EXPERIMENTS

1. Measurement of length by slide callipers.

- 2. Determination of volume of the given solid cylinder by slide callipers.
- 3. Determination of volume of a hollow cylinder by slide callipers.
- 4. Determination of curved surface area of a cylinder by slide callipers.
- 5. Comparision of the volume of two given cylinders by slide callipers.

PRINCIPLE OF MICROMETER SCREW

- 6. Measurement of thickness of an irregular lamina by Screw Gauge.
- 7. Determination of diameter of a thin wire by using a screw Gauge.
- 8. How many pieces of the given tin foil will make up a thickness of 2.5 cm?
- 9. Determination of volume of the given lamina with the help of screw gauge and a graph paper.
- 10. Measurement of thickness of a plate by spherometer.
- 11. Measurement of radius of curvature of a curved surface by spherometer.
- 12. Determination of the value of π .

Chapter - 5: PHYSICAL BALANCE

- 13. Determination of weight of a body by a physical balance using equal oscillation method.
- 14. Determination of the specific gravity of a solid using a hydrostatic balance.
- 15. Determination of the specific gravity of the given liquid using a hydrostatic balance.
- 16. Weighing a body by a physical balance using resting point method.
- 17. Correct weighing by a faulty balance.

S.I. Subject

- 37. Determination of the dispersive power of a glass prism using prism spectrometer.
- 38. Determination of focal length of combination of two thin lenses by nodal slide assembly and its verification.

Chapter - 13: MAGNETISM

- 39. Comparison of moments of two bar magnets by diffection magnetometer.
 - (a) 'End-on' or Tan A position
 - (b) 'Broadside-on' or Tan B position
- 40. Comparison of moments of two Bar Magnets by oscillation magnetometer.
- 41. Determination of the horizontal component of the earth's magnetic field.
- 42. Variation of the magnetic field with distance along the axis of a circular coil carrying a current.

Chapter - 14: ELECTRICITY

- 43. Determination of resistance and specific resistance of a given wire by Carey Foster's bridge.
- 44. Determination of temperature co-efficient of platinum wire of platinum resistance thermometer by using a Carey-Foster bridge.
- 45. Determination of the frequency of an A.C. supply using a sonometer.
- 46. Determination of the frequency of an A.C. supply using a steel wire of a sonometer.
- 47. Determination of the frequency of an A.C. supply using a horseshoe magnet.
- 48. Variation of thermo-emf with temperature and determination of
 - (i) the neutral temperature for a given thermocouple, and
 - (ii) unknown temperature (M.P. of wax).
- 49. Drawing a thermo-electric line for a thermocouple of copper and lead to determine thermoelectric emf, neutral temperature, Peltier co-efficient and Thomson co-efficient.
- 50. Study of a series resonant LCR circuit for drawing the resonance curve and for determining the Q-factor of the circuit.
- 51. Study of a parallel resonant circuit at audio frequency range.
- 52. Study of RC a.c. circuit.