

frequencies, complex impedance, reactance, impedances of LCR series and parallel circuits, resonance, Q factor, power dissipation and power factor. AC bridges: Anderson's, deSauty's and Owens bridges, Self and mutual inductance. Measurement of mutual inductance by Carry Foster Method, Coupled circuits and Transformers.

UNIT - V

Ballistic Galvanometer (moving coil type), its distinction from beat type. B.G. differential equation and its solution under different conditions of damping. Critical damping, over damping. Logarithmic decrements, charge sensitivity, current sensitivity, determination of B using search coil and B.G. Determination of high resistance using B.G. Factors for sensitivity. B.G. constant. Measurement of mutual inductance by Carey Foster's bridge by B.G. Measurement of small resistance by Kelvin's double bridge.

Text and Reference Books:

1. E.M. Purcell, Ed. Berkely Physics Course, Vol. 1, Electricity and Magnetism McGraw Hill.
2. D. Halliday and R. Resnick, Physics, vol. 2, Wiley Eastern, New Delhi.
3. D.J. Griffiths, Introduction to Electrodynamics, Prentice Hall of India.
4. Reitz and Milford, Electricity and Magnetism, Addison Wesley.

5. A.S. Manajan and A.A. Rangawala, Electricity and Magnetism, Tata McGraw Hill.
6. A.M. Portis Electromagnetic Fields
7. S.S. Atwood, Electricity and Magnetism, Dover publication.
8. A.F. Kip, Fundamentals of Electricity and Magnetism, International Student Edition, McGraw Hill and Kogakusha, 1969
9. Electricity and Magnetic (Initials), Bhandari, kalra & Kakara