

**ELECTRICAL & ELECTRONIC MEASUREMENTS**

**QUESTION BANK**

**MODULE 1: Principles of Analog Instruments**

Q1 Explain MI iron instrument is unpolarized instrument

Q2 Explain the construction and working of PMMC instrument and also derive the equation for deflecting torque  $T_d$  and deflection  $\theta$ . What is the shape of scale?

Q3 Explain the construction and working of Electrodynamics type wattmeter also show that the deflection of the pointer is an indication of the active power.

Q4 Write short note on i) Production of controlling torque through the spring control method

ii) Extension of range of ammeter

Q5 Classify frequency meter & explain in detail in any one

Q6 Differentiate between indicating & integrating instruments

Q7 Explain in detail different types of errors that occur during measurement explain each in brief.

Q8 Prove that in a ballistic galvanometer, the charge is proportional to first swing the moving coil

Q9 Explain systematic, random error and limiting error derive an expression for relative limiting error.

Q10 Why synchroscope is required? Explain with neat diagram Weston type Synchroscope

Q11 Explain with the neat diagram Electrodynamicometer type power factor meter? Show that the power factor is proportional to its deflection

Q12 Describe the construction & working of ballistic galvanometer. Explain the difference in construction details of D'Arsonval galvanometer.

Q13 Describe the working and construction detail of an attraction type moving iron instrument discuss its advantages & disadvantages.

Q14 What is an instrument transformer? State its type

Q15 Write a short note on Vibration Galvanometer.