

TH-3 Electrical Measurement & Instrumentation

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. Define accuracy and sensitivity.
 - b. State the types of measuring instruments.
 - c. What are the three essential features of indicating instruments?
 - d. State the classification of moving coil instruments.
 - e. State the types of errors in dynamometer wattmeters.
 - f. Define creeping and what is its cause?
 - g. Write down two advantages of bridge circuits.
 - h. Define transducer.
 - i. State two uses of capacitive transducers.
 - j. What is a CRO?

2. Answer **Any Six** Questions 6 x 5
 - a. Write down the advantages of moving iron instruments.
 - b. Give a comparison between analog and digital multi meter.
 - c. What is a megger? Explain its construction with working principle.
 - d. Define Hall effect. Write some applications of Hall effect transducers.
 - e. State the operating principle of induction type wattmeter. Write down the advantages and disadvantages of it.
 - f. State the applications of CRO.
 - g. What is a thermistor? Write down the applications.

3. Explain Deflecting, controlling and damping arrangements in indicating type of instruments. 10

4. Describe Construction and principle of working of Dynamometer type wattmeter. 10

5. Explain the principle of operation and working of dynamometer type single phase power factor meter. 10

6. Explain the construction and working principle of LVDT with a neat diagram. 10

7. With a neat diagram, explain briefly the main parts of a cathode ray tube. 10