Time: 3hrs Total marks: 80

N.B:

(1) Attempt **four** questions, question **no:1** is Compulsory.
(2) Assume suitable datawherever required.
(3) Answers to the questions should be grouped together.
(4) Figure to the **right** of question indicates **full** marks.

1) Attempt any **four:** **20**
   (a) Draw block diagram for generalized measurement system and explain its components.
   (b) Explain the working of straingauge and its application in load measurement.
   (c) Significance of four and half digit display.
   (d) List names of bridges for RLC measurement with proper classification
   (e) Brief out classifications of errors in measurement

2. (a). Explain with neat diagram the working principal of LVDT. Give its applications 10

   (b). Describe how Q meter is used for the measurement of low impedance. What are various sources of errors in Q Meter 10

3. (a). Explain Kelvin's Double bridge and its application in very low resistance measurement 10

   (b). Draw neat block diagram of CRO and explain its functioning. Comment on role Sweep in CRO 10

4. (a). Discuss DSO with the help of block diagram along with various modes of operation. Also explain its applications 10

   (b). What is the basic principal of wave analyzer and explain Heterodyne type wave analyser and its applications 10

5. (a) Draw and explain weighted resistor network type DAC for 3 bits input taking suitable example 10

   (b) Draw and discuss Maxwell bridge and its applications for measurement of inductance 10

6. (a) Explain single and multichannel data acquisition system with neat labelled separate block diagram 10

   (b) Compare the temperature transducers, RTD, Thermistors and thermocouples on the basis of principle, characteristics ,range and applications 10

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