Q.P. Code : 545502

(3 Hours) **[Total Marks : 80**

N.B. : (1) Attempt **four** questions, question no **1** is **compulsory**.
(2) Assume suitable data where ever 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) Why wave analyzer is known as frequency selective voltmeter?
   (b) Define accuracy, precision and sensitivity with suitable example.
   (c) General specifications of Digital Multi-meter.
   (d) List name of bridges for RLC measurement with proper classification.
   (e) Significance of three and half digit display.

2. (a) What is eddy current sensor? Explain measurement of current using it. **10**
   (b) Draw neat block diagram of CRO and explain its functioning, comment on role of sweep in CRO. **10**

3. (b) Draw and explain Weighted resistor network type DAC for 3 bits input taking suitable example. **10**
   (b) Explain Kelvin's double bridge and its application in very low resistance measurement. **10**

4. (a) Explain dual slop integration type ADC with the help of block diagram and comment on its speed. **10**
   (b) Explain LVDT and define its application in displacement measurement. **10**

5. (a) Explain Hetrodyne type waves analyser and its applications. **10**
   (b) Discuss DSO with the help of block diagram along with various modes of operation also explain its applications. **10**

6. (a) Draw and discuss Maxwell Bridge and its application for measurement of inductance. **10**
   (b) Define Q factor and explain working of a Q meter for Q factor measurement. **10**

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