QP Code : 5223

Time: 3 Hours

MM: 80 Marks

Note: 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.

Q1) Attempt any four: (20)
a) Significance of four and half digit display
b) Discuss Megger for measurement of very high resistance.
c) Explain working of strain gauge and its application in load measurement
d) Explain working of thermocouple and mention its range
e) Explain error in measurement and methods of error minimization
f) A galvanometer, with a 1 mA full scale deflection and an internal resistance of 500 Ω, is to be used as voltmeter, find series resistance for 1v and 10 v ranges.

Q2 a) Draw and explain working of capacitive transducer for level measurement. (10)
b) Draw neat block diagram of CRO and explain its functioning, comment on role of delay line in CRO. (10)

Q3 a) Discuss DSO with the help of block diagram along with various modes of operation also explain its applications. (10)
b) Explain LVDT and define its application in displacement measurement. (10)

Q4 a) Explain Hetrodyne type waves analyser and its applications. (10)
b) Draw and explain Weighted resistor network type DAC for 3 bits input taking suitable example. (10)

Q5 a) Draw and explain Schering bridge and drive expression for measurement of capacitance. (10)
b) Define power and energy and explain working of a single phase energy meter. (10)

Q6 a) Draw and explain Wheatstone bridge and drive expression for measurement of resistance. (10)
b) Explain Flash type 3 bit ADC with the help of block diagram and comment on its speed. (10)

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