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10IT35

Third Semester B.E. Degree Examination, Dec.2018/Jan.2019
Electronic Instrumentation

Time: 3 hrs. Max. Marks:100

Note: ***Answer FIVE full questions, selecting atleast TWO questions from each part.***

PART – A

1 a. Explain the following with example :
i) accuracy ii) precision iii) resolution iv) significant figures v) random errors vi) sensitivity. **(12 Marks)**

b. Explain the working of a true RMS voltmeter with the help of a suitable block diagram. **(08 Marks)**

2 a. Explain the ramp type digital voltmeter with the help of a block diagram. **(10 Marks)**

b. Explain successive approximation type with a neat diagram. **(10 Marks)**

3 a. Explain the working principle of dual trace oscilloscope, with a neat block diagram and necessary waveforms. **(10 Marks)**

b. With a neat diagram, explain the typical CRT connections. **(10 Marks)**

4 a. Explain in detail the working of sampling oscilloscope, with necessary wave of forms. **(10 Marks)**

b. Explain the operation of digital storage oscilloscope with the help of a blocks diagram, mention the advantages. **(10 Marks)**

PART – B

5 a. With a neat block diagram, explain the working principle of function generator. **(10 Marks)**

b. Explain the operation of a sweep frequency generator with the help of a suitable block diagram. Mention its applications. **(10 Marks)**

6 a. With a neat block diagram, explain the Wein's bridge to measure the frequency. Mention the merits and demerits. **(10 Marks)**

b. With a neat block diagram, explain the Wagner's earth connections. **(10 Marks)**

7 a. With necessary sketches, explain the construction and working principle of LVDT. **(10 Marks)**

b. Explain the construction and working of thermistor. What are the salient features of it? **(10 Marks)**

8 a. Write a note on photo transistor. **(05 Marks)**

b. Write a note on signal conditioning system. **(05 Marks)**

c. Explain the working of piezo electric transducer with circuit diagram. **(10 Marks)**

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