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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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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.