Code: 9A04604

R09

B.Tech IV Year I Semester (R09) Supplementary Examinations June 2017

ELECTRONIC MEASUREMENTS & INSTRUMENTATION

(Electronics & Computer Engineering)

Time: 3 hours Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 (a) What are the essential requirements of multipliers?
(b) Explain how different full scale voltage ranges may be obtained by the use of individual multiplier resistors or potential divider arrangement.

2 (a) State the function of frequency sweeper and marker generator in a sweep generator.
(b) State the function of symmetry control in a pulse generator.

3 (a) Describe with diagram, the operation of a digital Fourier analyzer.
(b) Explain in brief the operation of a practical FFT spectrum analyzer.

4 (a) With the help of a neat sketch, explain the operation of a triggered sweep generator.
(b) Explain the operation of a dual trace in X-Y mode.

5 (a) How does the sampling oscilloscope increase the apparent frequency response of an oscilloscope?
(b) What is the relationship between the period of a waveform and its frequency? How is an oscilloscope used to determine frequency?

6 (a) Draw Maxwell bridge circuit and derive the bridge balance equations.
(b) Describe the Kelvin double bridge for the measurement of small resistance.

7 (a) What parameters should be considered in selecting a transducer?
(b) Define active transducer and passive transducer. Give the examples for each.

8 (a) Why a D/A converter are usually considered as decoder?
(b) Why an A/D converter is usually considered as encoder?

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