

R09/SS

Code: 9A04604

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2015

ELECTRONIC MEASUREMENTS & INSTRUMENTATION

(Common to ECE & ECC)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) What are the various dynamic characteristics of an instrument? Explain them in detail.
(b) Three resistances are specified as $R_1 = 80\Omega \pm 5\%$, $R_2 = 40\Omega \pm 5\%$, $R_3 = 20\Omega \pm 5\%$. Determine the magnitude of the resultant resistance and the limiting error in percentage and in ohms if the resistances are connected in series.
- 2 (a) Write about fixed frequency AF oscillator and variable frequency AF oscillator.
(b) Describe with the help of a sketch, the basic sine wave generator.
- 3 (a) Define a wave analyzer. List the different types of wave analyzers.
(b) Explain with a neat sketch the working principal of a spectrum analyzer.
- 4 (a) What are the advantages of dual trace oscilloscopes over dual beam CRO?
(b) Explain the operation of delayed sweep CRO.
- 5 Explain in detail about single and multiple period measurements with suitable diagram.
- 6 (a) Explain in detail about advantages of noise reduction techniques.
(b) What are the main differences between AC&DC BRIDGES?
- 7 (a) Compare RTD with thermistor.
(b) Explain how the displacement is measured using LVDT.
- 8 (a) Explain about I/O address map and PC bus of PC system.
(b) Explain hard disk features and partitions.
