EX-604

B.E. VI Semester

Examination, December 2014

Electronic Instrumentation

Time: Three Hours ***Maximum Marks: 70***

Note: i) All questions cany equal marks, ii) Assume suitable data if required.

Unit -1

1.a) Draw the block diagram of a general purpose oscilloscope and explain the function of each block. 7 b) Explain the dual trace and dual beam method for multiple trace oscilloscopes in detail. Which method is better and why? 7 OR

2.a) Explain electronic voltmeter and write a short note on electronic voltmeter using rectifier. 7

b) Discuss the various applications of CRO with relevant circuit diagram. 7

Unit-II

3.a) Explain with suitable diagram the working of Schering bridge.

b) Explain the Wien's bridge with the help of circuit diagram and derive the mathematical expression for determination of frequency.

OR

4. a) Write short note on basic Q-meter and it's application. 7

b) Write short note transducer and explain strain gauge and gauge factor. 7

Unit-III

5.a) Describe the working of a sweep frequency generator. What are the sweeper error? 7

b) Explain the working of heterodyne wave analyzer with the aid of block diagram. 7

OR

6.a) What is the difference between a wave analyzer and a hannonic distortion analyzer? Explain with the help of block diagram, the working of a harmonic distortion analyzer. 7

b) Explain the working of spectrum analyzer with the aid of' block diagram. Also give its application. 7

Unit-IV

7.a) Explain the advantages of digital instruments over analog instruments. 7

b) Write short notes on: 7

i) Light Emitting Diodes (LED) ii) Liquid Crystal Diodes (LCD)

OR

8. a) Write different methods used for magnetic tape recording. Explain direct recording. 7

b) Explain successive approximation type and ramp type digital voltmeter. 7

Unit-V

9.a) Describe RS-232C interface. Why it is preferred to used serial data transmission over long distance? 7

b) Write short note on IEEE-488 standard interface. 7

OR

10.a) Explain the working of network analyzer with the help of diagram.

b) Describe optical time domain reflect meter with the help of block diagram. 7