

Roll No

EX-604

B.E. VI Semester

Examination, December 2016

Electronic Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain dual trace and dual beam method for multiple trace oscilloscope. 7
b) How does the digital oscilloscope differ from the conventional storage oscilloscope using a storage Cathode ray tube? What are the advantages of each? 7
2. a) Explain with the help of neat diagram how you would measure the frequency of a signal using CRO. 7
b) Explain the working of chopper amplifier type of voltmeter. Give its advantages, disadvantages and applications. 7
3. a) What are the various sources of errors in a.c. bridge circuit? Outline the precaution and techniques used for reducing such errors. 7
b) Explain Schering bridge method for measurement of capacitance. Draw the Phasor diagram. 7
4. a) Define gauge factor of a strain gauge. Discuss a bridge circuit for application of strain gauge. 7
b) Discuss the principle of magnetic tape recorder. 7

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5. a) What is Spectrum analysis? Describe with the help of neat diagram of operation of a spectrum analyzer. 7
b) What is a function generator? Draw a block diagram showing basic elements of a function generator and explain their working. 7
6. a) Draw the block diagram of Ramp type digital voltmeter and explain its working. 7
b) What is a strip chart recorder? Describe the various types of marking mechanism system employed in it. 7
7. a) Explain the IEEE 488 instrumentation bus with the help of its schematic representation. 7
b) How can optical power be measured? Also discuss with the help of block diagram. 7
8. Write a short notes on any two. 7 each
 - a) Wagner's Earthing device
 - b) Measurement of uncertainty
 - c) De-sauty's Bridge

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