Code No.: 9A04604/R09 **Set-1**

B.Tech. III Year II Sem. Regular and Supplementary Examinations

April/May - 2013

ELECTRONIC MEASUREMENTS AND INSTRUMENTATION

(Electronics and Communication Engineering)

Time: 3 Hours Max. Marks: 70

*Answer any **FIVE** Questions*

***All** Questions carry **equal** marks*

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1. (a) What is precision? What are the two characteristics of precision?

   (b) Differentiate accuracy and precision.

2. (a) With the help of block diagram explain the functioning of a conventional standard signal generator.

   (b) What are the characteristics of signal sources?

3. (a) With the help of a neat sketch, explain the working of a frequency selective wave analyzer.

   (b) What is the function of high-Q filter?

4. (a) Define astigmatism, focus and intensity.

   (b) State the various applications of an oscilloscope.

5. Describe in details the construction and working of an analog type storage oscilloscope. Explain the principle of secondary emission.

6. (a) Discuss the bridge which is used for the precision measurement of capacitors and their insulating properties. How does the balancing condition help finding the reactance of the unknown component and its dissipation factor?

   (b) A bridge has 2000 ohm in one arm and its opposite arm has a capacitor of value 0.5 μF. The arm to the right of resistor arm is having 1000 ohm in shunt with a 0.5 μF. The arm opposite to this arm is connected with the unknown component. Find the value of the component and its dissipation factor.

7. Describe the operation of,

   (a) Total radiation pyrometers

   (b) LVDT

   (c) Resistive transducers.

8. Explain the different methods used for producing recorder.