Total No. of Questions : 8] *[Total No. of Printed Pages : 3*

Roll No .....

EE-503(B)-CBGS

B.Tech., V Semester

Examination, June 2020

Choice Based Grading System (CBGS)

Applied Instrumentation

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

iii) In case of any doubt or dispute the English version question should be treated as final.

1. a) Explain dual trace oscilloscope with the help of block diagram. Write function of each block. 7

   b) What is Lissajous patterns? Explain how it can be used for measurement of frequency. 7

2. a) Explain the principle of sampling oscilloscope. Write its applications. 7

PTO

b) Explain measurement of capacitance with the help of schering bridge. 7

3. a) What is Q of a coil, give the principle of a basic Q meter. 7

b) Explain with diagram the working principle of Hay's bridge. 7

4. a) Explain the construction and working of LVDT. 7

LVDT

b) What is strain gauge? Give the derivation for its gauge factor. 7

5. a) What are the thermistors? Explain in detail its working characteristics and applications. 7

b) Explain Ramp type DVM with block diagram in detail. 7

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6. a) Draw and explain the basic structure of IEEE 488 for General Purpose Interface Bus (GPIB) instrument. 6

IEEE 488

b) Explain the principle of direct gating used for digital frequency meter. Draw the block diagram of such a meter and explain the working. 8

7. a) Describe a harmonic distortion analyzer with the help of block diagram. 7

b) Describe with neat diagram, construction and working of a sweep frequency generator. 7

8. Write a short notes on any two of the following. 7 each
   a) Piezoelectric transducer
   b) Wein's bridge
   c) LED and LCD

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