

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Software Engineering) (Sem.-1)

INTRODUCTION TO ENGINEERING MEASUREMENTS

Subject Code : EP-1990

M.Code : 77254

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FOUR questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**1. Write briefly :**

- a. Define the term Measurement.
- b. State Kirchhoff's laws.
- c. What is the use of function generator?
- d. What do you understand with signal conditioning?
- e. Define quantization errors.
- f. Explain non- linear sensors.
- g. Differentiate Strain & Force.
- h. List the different units of Temperature. Also convert 180°C to °F.
- i. State the Objectives of Surveying.
- j. Define direct distance measurement.

SECTION-B

2. Explain the working of the function generators with suitable diagram.
3. Discuss the principle of data acquisition. Also define the term linearity and gain in context to DAQ.
4. In brief discuss principle of electro-mechanical energy conversion.
5. Explain the resistive temperature measurement instruments with neat sketches.

SECTION-C

6. Discuss the measurement of horizontal angles with a neat and clean diagram.
7. Draw and explain block diagram of CRO. How will you measure frequency and phase using Lissajous pattern?
8.
 - a. Define torque, list the instruments used to measure torque. Explain strain gauge torque measurement technique with neat sketch.
 - b. Discuss the data acquisition software applications.
9. Write a short note on :
 - a. Rotating DC machine
 - b. Radiation based level sensors

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.