SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

Total no. of pages: 01
M.M: 60

Roll No:_____
Total no. of Questions: 06
Time: 03 hours

B.Tech ECE 4th Sem
Electronic Measurements and Instrumentation
Subject Code: BTEC-404 (Paper ID:)

Note: All questions are compulsory.

Section A (10 x 2marks=20)

1. Write answers to the point

a) Define the terms Fundamental Units and Derived Units and cite suitable example to support your answer.
b) List the various advantages of Electronic voltmeters
c) List the advantages and disadvantages of PMMC Instruments.
d) What do you mean by piezoresistive effect?
e) What are oscillators? List the various classifications of the oscillators.
f) Define piezo-electric effect and name a few piezo-electric materials.
g) What is the principle of a Wheatstone bridge?
h) Distinguish between LCD and LED display devices.
i) List the various advantages and disadvantages of thermocouples.
j) List the various components of a Digital data acquisition system.

Section B –(5 x 8marks = 40)

2.	Discuss the various errors in an instrumentation system. OR Define and explain the various static characteristics of an instrumentation system	CO1
3.	Describe the frequency and phase angle measurement using CRO. OR Describe integrated and Ramp DVM.	CO2
4.	Derive the equations of balance for an Anderson's bridge. Discuss the advantages and disadvantages of the bridge. OR Discuss the working of moving iron type instruments.	CO3
5.	What is telemetry? Explain the various land line telemetering system. OR Explain the construction and principle of working of a linear voltage differential transformer (LVDT). Explain how the magnitude and direction of the displacement of core of an LVDT detected. List the various advantages, disadvantages and uses of LVDTs.	CO6
6.	Explain digital tape recorder in detail. OR Describe the principle and working of Nixie tube.	CO5