Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ETE) / (ECE) / (Electronics & Computer Engg.) (2011 Onwards)/
B Tech.(Electronics Engg.) (2012 Onwards)

(Sem.–4)

ELECTRONIC MEASUREMENT & INSTRUMENTATION

Subject Code : BTEC-404

Paper ID : [A1192]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

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

SECTION-A

Q1 Answer briefy :

a. List the advantages of electronic instruments over mechanical instruments.

b. Differentiate between primary and secondary type of measurements.

c. What do you mean by accuracy and precision?

d. What is loading effect?

e. Define the terms in context of normal frequency distribution of data 1. Average Deviation 2. Standard Deviation.

f. What is the purpose of using Ohm meter?

g. Elaborate instrumental error, environmental error and observational error.

h. Briefly explain speed of response and measuring lag.

i. What is Strain gauge?

j. What is working principle of PMMC?

SECTION-B

Q2 Explain the theory and working of a seven segment display. Elaborate its advantages.

Q3 Explain the construction and working principle of LVDT.

Q4 Describe different modes of operation of Piezo electric transducers.

Q5 Define Limiting (Guarantee) errors. Derive the expression for relative limiting error.

Q6 Explain the functioning of a basic type of Strip Chart recorder. Describe the different type of making mechanism used in it.

SECTION-C

Q7 Explain the block diagram of True RMS voltmeter.

Q8 Explain how the following measurements can be made with the use of CRO :

a. Frequency

b. Phase Angle.

Q9 Write a short note on :

a. Maxwell Bridge.

b. Methods of data transmission.