Roll No. ....

Total No. of Questions : 09]

[Total No. of Pages : 02

Paper ID [A0817]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem.-5th)
MECHANICAL MEASUREMENT AND METROLOGY (ME-307)

Time : 03 Hours

Maximum Marks :60

Instruction to Candidates:

1) Section - A is **Compulsory.**

2) Attempt any **Four** questions from Section - B.

3) Attempt any **Two** questions from Section - C.

Section - A

Q1)   (10 ×2 = 20)

a) What do you understand by threshold and resolution?

b) What are systematic errors?

c) What is a comparator?

d) What are transducers?

e) What are bonded gauge?

f) What is the use of Mcleod gauge?

g) What is a bimetallic thermometer?

h) What is the function of Vibration reed tachometer?

i) What is a pneumatic load cell.

j) What is the use of a dynamometer?

Visit: www.brpaper.com for
B-Tech,Diploma,BCA,BBA,MBA,MCA,Bsc-IT,
Msc-IT,M-tech, Distance-Education,B-com.

Section - B

(4 × 5 = 20)

Q2) Measurement systems are classified frequently as first order or second order system. Explain.

Q3) What are different sources of error in measurement? Explain.

Q4) Why it is desirable that piezoelectric transducers should be used for the measurement of dynamic quantities only? Discuss.

Q5) What is a sine bar and how we use it for angular measurement?

Q6) What is a proning ring? How we can use it to measure force? Explain.

Section - C

(2 × 10 = 20)

Q7) Explain the principle and working of a Bourdon tube pressure gauge with a neat sketch.

Q8) Sketch a typical radiation pyrometer. Explain its working and list its noteable characteristics.

Q9) Write notes on:

(a) Comparators.

(b) Flow viseralisation techniques.

✾ ✾ ✾