

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

B.Tech. (Sem. Vth)

MECHANICAL MEASUREMENT AND METROLOGY

SUBJECT CODE : ME - 307

Paper ID : [A0817]

[Note : Please fill subject code and paper ID on OMR]

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 x 2 = 20)

- a) What do you understand by working standards?
- b) Define dead zone.
- c) What is a transducer?
- d) What is meant by random error?
- e) Where do we use vernier caliper?
- f) How force is measured?
- g) What do you understand by bonded gauge?
- h) What is a liquid in glass thermometer?
- i) What is a transmission dynamometer?
- j) What is the use of angle gauge?

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P.T.O.

Section - B

(4 x 5 = 20)

- Q2)** What can be the sources of error in measurements? Discuss.
- Q3)** Discuss the working of a pneumatic load cell.
- Q4)** What is meant by temperature compensation? Explain.
- Q5)** What is a McLeod gauge and how it works? Explain.
- Q6)** Explain how the operational errors of the Bourdon tube gauge can be reduced.

Section - C

(2 x 10 = 20)

- Q7)** Explain the difference between a comparator and a measuring instrument. State the field of application of comparators.
- Q8)** Explain the construction and working of optical pyrometer.
- Q9)** Write short notes on :
(a) Stroboscope.
(b) Dead weight gauge tester.

