

**Government College of Engineering, Amravati**

(An Autonomous Institute of Government of Maharashtra)

CT-2 Sub- MEU504 (Metrology & measurement system) Max Marks- 15 Time- 1Hr

*Solve any three (Each question carry 5 mark)*

- ~~Q1~~ State different gauges used for measurement of high & low pressure. Explain one high pressure & low pressure gauge. (5)
- ~~Q2~~ A) A tensile strain of 0.001 has been applied to a strain gauge having a gauge factor of 2. The gauge resistance & other three resistances comprising the limbs of a Wheatstone bridge circuit have an initial resistance of  $120\ \Omega$ . Find i) change in the value of variable resistance  $R_2$  to rebalance the null type bridge, ii) output voltage of a voltage sensitive bridge if the voltmeter resistance is very high & bridge supply voltage is 6V. (2)
- B) Explain how dummy gauges are for temperature compensation with neat sketch. (3)
- ~~Q3~~ A) Draw a neat sketch of pressure type thermometer which converts temperature into pressure. Draw the generalized block diagram for it. (2)
- B) Explain any three methods of correction for interfering and modifying inputs with neat sketch. (3)
- Q4) A) Define the following i) accuracy & precision ii) dead time & dead zone iii) hysteresis & threshold. (3)
- B) State difference between ballast circuit & Wheatstone bridge circuit with diagram. (2)