

312333

12526

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
- (8) Abbreviations used are their usual meanings.

Marks

1. Attempt any FIVE of the following : 10
- a) State any four static characteristics of an instrument.
- b) Enlist any four temperature scale.
- c) Define heat and temperature.
- d) Define pressure and state it's any two units.
- e) Enlist any four displacement transducers.
- f) State any four methods of liquid level measurement.
- g) Define modulus of elasticity.

P.T.O.

- 2. Attempt any THREE of the following : 12**
- a) Describe any two dynamic characteristics of an instrument.
 - b) Explain temperature scale with neat figure.
 - c) Describe construction and working of well manometer.
 - d) Draw the neat and labelled stress-strain curve for ductile and brittle materials.
- 3. Attempt any THREE of the following : 12**
- a) State the following static characteristics of an instrument –
 - i) accuracy
 - ii) precision
 - iii) repeatability
 - iv) reproductibility
 - b) Describe working of liquid in glass thermometer with neat figure.
 - c) Explain with neat figure the sight glass method for liquid level measurement.
 - d) Describe with neat figure the resistance strain gauge.
- 4. Attempt any THREE of the following : 12**
- a) Describe any two errors in measurement.
 - b) Explain working of sling hygrometer with neat figure.
 - c) Draw neat labelled figure of Mcleod gauge.
 - d) Explain with neat figure the magnetic float gauge for liquid level measurement.
 - e) Explain with neat figure the mechanical tachometer.

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Marks

5. Attempt any TWO of the following : 12

- a) State any four advantages, limitations and applications of RTD.
- b) Describe RVDT with neat figure.
- c) Explain working of rotameter with neat labelled figure.

6. Attempt any TWO of the following : 12

- a) Describe working of radiation pyrometer with neat figure.
 - b) Explain working of Bellows strain gauge with neat figure.
 - c) Describe with neat figure the electromagnetic flow meter.
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