

# 22443

**21819**

**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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
  - (7) Preferably write the answers in sequential order.

**Marks**

- 1. Attempt any FIVE of the following:** **10**
  - a) Enlist different types of high pressure gauges.
  - b) Classify dynamometer's,
  - c) List the different applications of potentiometer.
  - d) Name material used for diaphragms.
  - e) Define Reynolds number. State its formula.
  - f) List the different types of vibration measuring devices.
  - g) State the advantages of stroboscope.
  
- 2. Attempt any THREE of the following:** **12**
  - a) Explain term-fidelity and overshoot.
  - b) Compare infra-red sensor and frequency modulation transmitter.
  - c) Describe the working principle of RTD. Explain with neat sketch.
  - d) Draw the construction and explain working of nutating disc type positive displacement meter.

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Distinguish between Threshold and Resolution.
  - b) List the different types of errors in measurement system and explain any one.
  - c) Explain construction and working of R.V.D.T.
  - d) Explain radiation pyrometer with neat sketch.
- 4. Attempt any THREE of the following:** **12**
- a) Draw creep curve for force transducer. State its significance.
  - b) Explain the construction and working of thermocouple vacuum gauge.
  - c) Describe working principle of C-type Bourdon tube. List material used in it.
  - d) Explain FFT analyser with block diagram of the FFT spectrum analyser.
  - e) Explain how sound is measured by carbon-microphone.
- 5. Attempt any TWO of the following:** **12**
- a) State the working principle of piezo-electric transducer and its applications.
  - b) State the application of orifice meter Venturi tube and Pitot tube.
  - c) Draw the constructional details of hair hygrometer? State its application.
- 6. Attempt any TWO of the following:** **12**
- a) Draw and explain the working of coriolis flowmeter.
  - b) Explain the working and application of bonded strain gauge.
  - c) Explain with neat sketch working principle of Eddy current generation type tachometer.
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