

22443

12425

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Answer any FIVE of the following :**

**10**

- (a) Enlist different types of load cells.
- (b) State the parameters used for selection of displacement transducer.
- (c) State the law of 'Intermediate Temperature'.
- (d) State the applications of 'Orifice Plate'.
- (e) Define 'Gauge Factor'.
- (f) Classify Tachometers.
- (g) List the different applications of potentiometer.

**2. Answer any THREE of the following :**

**12**

- (a) Explain the term
  - (i) Threshold
  - (ii) Resolution



- (b) Explain the working of RVDT.
- (c) Explain working and principle of optical pyrometer.
- (d) Explain Rotameter with neat sketch.

**3. Answer any THREE of the following :**

**12**

- (a) Distinguish between Accuracy and Precision.
- (b) List the factors for selection of transducer. Explain with example.
- (c) Explain working of photo-electric pressure transducer with sketch.
- (d) Explain working principle of 'Slip Ring' with neat sketch.

**4. Answer any THREE of the following :**

**12**

- (a) Describe with neat sketch working of FM Transmitter.
- (b) Explain with neat sketch Radiation Pyrometer.
- (c) Describe the working of Platinum Resistance Thermometer with neat sketch.
- (d) Explain FFT Analyser with block diagram.
- (e) Explain how sound is measured by using Carbon Microphone.

**5. Answer any TWO of the following :**

**12**

- (a) Classify errors and explain any two types of errors.
- (b) Explain ultrasonic flowmeter with neat sketch.
- (c) State the necessity of contactless electrical tachometer. Explain any one with sketch.

**6. Answer any TWO of the following :**

**12**

- (a) Draw and explain the working of hot wire anemometer.
  - (b) Explain the working and application of bonded strain gauge.
  - (c) Explain with neat sketch the construction of 'Slipping Clutch Tachometer'.
-