

22443

23124

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.

**Marks**

1. Attempt any FIVE of the following :

10

- (a) State different applications of orifice plate.
- (b) Define Gauge factor.
- (c) Enlist different sources of error.
- (d) State law of intermediate temperature.
- (e) State Seeback effect.
- (f) Enlist different types of load cell.
- (g) Explain function of Dynamometer.

2. Attempt any THREE of the following :

12

- (a) Differentiate between Active and Passive Transducer.
- (b) What are different materials used for Strain Gauges ?
- (c) Explain Rotameter with neat sketch.
- (d) Explain Inductive pick up type transducer.



- 3. Attempt any THREE of the following : 12**
- (a) Explain the working of LVDT.
  - (b) Explain the working and principle of Radiation Pyrometer.
  - (c) Differentiate between Diaphragm and Bellows.
  - (d) Explain Hysteresis and Dead zone.
- 4. Attempt any THREE of the following : 12**
- (a) Explain Photoelectric pressure transducer with neat sketch.
  - (b) Explain working of Sling Psychrometer.
  - (c) What is Transducer ? State its advantages and disadvantages.
  - (d) Explain Block Diagram of FFT Analyser.
  - (e) Differentiate between Systematic error and Random error.
- 5. Attempt any TWO of the following : 12**
- (a) Explain working and principle of Anemometer.
  - (b) Explain Potentiometer for Displacement measurement with neat sketch.
  - (c) Explain Ultrasonic flow meter with neat sketch.
- 6. Attempt any TWO of the following : 12**
- (a) How speed measurement is done by stroboscope ?
  - (b) Explain Platinum resistance Thermometer with its applications.
  - (c) Explain Slipping Clutch Tachometer. Also state its advantages and disadvantages.
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