

22372

24225

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) Answer each next main Question on a new page.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) 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) Define Hysteresis.
- (b) List the application of Capacitive transducer.
- (c) Classify transducers based on phenomenon.
- (d) State any four speed measuring devices.
- (e) State working principle of torque measuring device.
- (f) Define signal conditioning.
- (g) Define Span & Dead zone.

2. Attempt any THREE of the following :

12

- (a) Explain working of RVDT with neat sketch.
- (b) Explain working principle and construction of thermocouple.
- (c) Explain with neat sketch working of ultrasonic flow meter.
- (d) Explain with neat sketch working of tachometer.



- 3. Attempt any THREE of the following : 12**
- (a) State atleast four industrial applications of Hall effect transducer.
 - (b) Draw the block diagram of data acquisition system and explain function of each block.
 - (c) Explain working principle and construction of rotameter.
 - (d) Draw the neat sketch of hair hygrometer. Explain its working.
 - (e) Explain working of Wheatstone's bridge.
- 4. Attempt any THREE of the following : 12**
- (a) Explain application of temperature measurement.
 - (b) Draw a block diagram of Data Acquisition System. Explain function of each block.
 - (c) Explain working of level measurement by sight glass method.
 - (d) Explain the working of photoelectric transducer.
 - (e) Explain amplitude demodulation.
- 5. Attempt any TWO of the following : 12**
- (a) Explain with neat sketch of linear variable differential transformer. State its applications.
 - (b) Explain with neat sketch construction and working of RTD. State its advantages and disadvantages.
 - (c) Explain with neat sketch of hot wire anemometer.
- 6. Attempt any TWO of the following : 12**
- (a) Draw the generalized block diagram of measuring system and explain working of each block.
 - (b) Explain with neat sketch of optical pyrometer.
 - (c) Explain with neat sketch humidity measurement using sling psychrometer. State atleast two applications.
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