



C16-AEI-305

6217

BOARD DIPLOMA EXAMINATION, (C-16)

OCT/NOV—2017

DAEI—THIRD SEMESTER EXAMINATION

PROCESS INSTRUMENTATION

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed **five** simple sentences.

1. Define accuracy.
2. Define sensor.
3. State the principle of operation of linear potentiometer.
4. Define temperature.
5. Draw the diagram of bellows.
6. State the principle of operation of pitot tube.
7. Draw the diagram of rotameter.
8. Draw the diagram of float actuated level indicator.
9. Define density.
10. Draw the diagram of pneumatic load cell.

PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11.** (a) Classify the transducers and mention one example for each classification. 4
(b) Define the following terms : 6
(i) Linearity
(ii) Precision
- 12.** Explain the principle of operation of resistance strain gauge with diagram.
- 13.** Explain the principle of operation of thermistor with a diagram and list the applications.
- 14.** Explain the principle of operation of pressure multiplexer and state its necessity.
- 15.** Explain the principle of operation of electromagnetic flow meter with diagram.
- 16.** Explain the principle of operation of ultrasonic level gauge with diagram and list its applications.
- 17.** Explain the principle of operation of capillary viscometer with diagram.
- 18.** Explain the principle of operation of condensation type hygrometer with diagram.
