



C16-AEI-305

6217

BOARD DIPLOMA EXAMINATION, (C-16)

JUNE—2019

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 linearity.
2. Define threshold.
3. State the importance of vibration monitoring.
4. List any three temperature transducers.
5. Draw the diagram of c-shaped bourdon tube.
6. Draw the diagram of venturi tube.
7. State the principle of operation of hot wire anemometer.
8. Draw the diagram of liquid level sight glass.
9. Define viscosity.
10. Draw the diagram of electrolytic hygrometer.

*

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. a) Define calibration and state the need of calibration. (2+3M)
b) List any five basic requirements of transducers. (5M)
12. Explain the principle of operation of linear variable differential transformer (LVDT) type displacement transducer with diagram.
13. Explain the principle of operation of total radiation pyrometer with diagram.
14. Explain the principle of operation of piezoelectric pressure transducer with diagram.
15. Explain the principle of operation of ultrasonic flow meter with diagram.
16. Explain the principle of operation of resistive type level indicator with diagram.
17. Explain the principle of operation of capacitance type densitometer with a diagram.
18. Explain the principle of operation of strain gauge load cell with diagram.

*