



C09-AEI-306

3216

BOARD DIPLOMA EXAMINATION, (C-09)

OCT / NOV-2015

DAEI - THIRD SEMESTER EXAMINATION

PROCESS INSTRUMENTATION

Time : 3 hours]

[Total Marks : 80

PART - A

3 X 10 = 30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.

1. Define the following :
 - (a) Linearity
 - (b) Span
2. Define the following :
 - (a) Hysteresis
 - (b) Threshold
3. Draw the diagram of toothed rotor variable reluctance tachometer.
4. State the principle of linear potentiometer.
5. List the thermocouple laws.
6. State the principle of Diaphragm.
7. State the principle of pressure switches.
8. Draw the diagram of Pitot tube.
9. Draw the diagram of liquid level sight glass.
10. Define moisture.

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[Contd...

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PART - B

10 X 5 = 50

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

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

11. Classify transducers and mention two transducers under each category.
12. Explain the principle of operation of LVDT with diagram.
13. Explain the principle of operation of the following :
 - (a) AC tacho generators
 - (b) Thermistor
14. Explain the principle of operation of resistance temperature detector with diagram.
15. Explain with diagram the principle of operation of variable capacitance pressure transducer.
16. Explain the principle of operation of ultrasonic flow meter with a diagram.
17. Explain the principle of operation of the following :
 - (a) Hot-wire anemometer.
 - (b) Resistive-type level indicator.
18. Explain the principle of operation of electrolytic hygrometer with a diagram.

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