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C09-AEI-306

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BOARD DIPLOMA EXAMINATION, (C-09)

MARCH/APRIL—2021

DAA - THIRD SEMESTER EXAMINATION

PROCESS INSTRUMENTATION

Time : 3 hours]

[Total Marks : 80

PART—A

4×5=20

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

1. Give the classification of the transducers.
2. Define sensor.
3. Write the principle of hall probe.
4. Write the principle of linear potentiometer.
5. List the applications bi metal strip.
6. Write the principle of piezoelectric pressure transducer.
7. Write the principle of potentiometric device.
8. List the applications of electromagnetic flow meter.
9. List the applications of liquid level sight glass.
10. Write the principle of electrolytic hygrometer.

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PART—B

15×4=60

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

11. List different types of transducers and mention few transducers under each category.
12. Explain the principle of operation of inductive proximity sensor for position measurement with diagram.
13. Explain principle of operation, range and application of thermistor.
14. Explain the principle of operation of any instrument with diagram.
15. Explain principle of operation of thin film pressure transducer with diagram.
16. Explain the principle of (a) float actuated level indicator and (b) cup type anemometer.
17. Explain the principle of operation of pitot tube with diagram.
18. Explain the principle of operation of resistive type level indicator with diagram.

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