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C14-AEI-405

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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2016

DAEIE—FOURTH SEMESTER EXAMINATION

PROCESS INSTRUMENTATION—II

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

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

1. Draw the diagram of corrugated diaphragm.
2. State the principle of bellows.
3. State the principle of orifice plate.
4. Draw the diagram of Rotameter.
5. State the principle of resistive type level indicator.
6. Draw the diagram of float actuated level indicator.
7. Define density.
8. State the necessity of viscosity measurement in process industries.

* 9. Draw the diagram of strain gauge load cell.

10. State the principle of operation of flame sensor.

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. State the necessity and explain the principle of operation of pressure multiplexer.

12. Explain the principle of operation of force balance pressure transducer with a diagram.

13. (a) Explain the principle of operation of thin-film pressure transducer. 5

(b) Explain the principle of hot-wire anemometer. 5

14. With a legible sketch, explain the principle of operation of electromagnetic flowmeter.

15. Explain the principle of operation of thermal flowmeter with diagram.

16. With the help of diagram, explain the principle of operation of ultrasonic level gauge.

* 17. Explain the principle of operation of capillary viscometer with the help of a diagram.

18. Explain the principle of operation of pneumatic load cell with a diagram.
