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BOARD DIPLOMA EXAMINATION, (C–14)

MARCH/APRIL—2017

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) Answers 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 necessity of pressure multiplexer.

3. State the principle of laser anemometers.

4. List any three applications of turbine flowmeters.

5. List any three applications of float actuated level indicators.

6. State the necessity of level measurement.

7. Define viscosity.

8. State the necessity of density measurement.

9. State the principle of strain gauge load cells.

10. State the principle 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. Explain the principle of operation of strain gauge pressure transducer with a legible diagram.

12. Explain the pressure calibration using deadweight tester with a legible diagram.

13. *(a)* Explain the principle of operation of piezoelectric pressure transducer. 5

(b) Explain the principle of operation of electromagnetic flow-meters. 5

14. Explain the principle of operation of ultrasonic flowmeters with a legible diagram.

15. Explain the principle of operation of rotameter with a legible diagram.

16. Explain the principle of operation of ultrasonic level gauge with a legible diagram.

17. Explain the principle of operation of fluid dynamic-type densitometer with a legible diagram.

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

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