



C14-AEI-405

4417

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—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) Answers should be brief and straight to the point and shall not exceed *three* simple sentences.

1. Draw the diagram of double capsule.
2. State the necessity of pressure multiplexer.
3. List any three applications of laser anemometers.
4. State the principle of electromagnetic flowmeters.
5. State the necessity of level measurement.
6. List any three applications of liquid level sight glass.
7. Define density.

- * 8. State the necessity of viscosity measurement.
- 9. State the principle of pneumatic load cells.
- 10. List any three applications of audio 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 piezoelectric pressure transducer with a legible diagram.
- 12. Explain the principle of operation of strain-gauge pressure transducer with a neat diagram.
- 13. (a) Explain the principle of operation of variable capacitance pressure transducer with a legible diagram. 5
- (b) Explain the principle of operation of turbine flowmeter with a legible diagram. 5
- 14. Explain the principle of operation of ultrasonic flowmeters with a legible diagram.
- 15. Explain the principle of operation of rotameter with a neat diagram.
- 16. Explain the principle of operation of resistive-type level indicator with a legible diagram.
- * 17. Explain the principle of operation of displacement-type density measurement with a legible diagram.
- 18. Explain the principle of operation of hydraulic load cells with a legible diagram.
