

6217

BOARD DIPLOMA EXAMINATIONS

OCT/NOV-2019

DAEI – THIRD SEMESTER

PROCESS INSTRUMENTATION

Time: 3 hours

Max. Marks: 80

PART – A

3 X 10 = 30

- Instructions:**
1. Answer **all** questions.
 2. Each question carries **Three** Marks.
 3. Answer should be brief and straight to the point and should not exceed five simple sentences.

1. Define hysteresis.
2. Define spam.
3. State the principle of moving coil type velocity transducer.
4. State the principle of operation of thermocouple.
5. Draw the diagram of double capsule.
6. Draw the diagram of pitot tube.
7. State the principle of operation of cup type anemometer.
8. State the principle of capacitance type level indicator.
9. State the necessity of viscosity measurement.
10. Define relative humidity.

PART – B

5 X 10 = 50

- Instructions:*
1. Answer any **Five** questions
 2. Each question carries **TEN** Marks.
 3. Answer should be comprehensive and criteria for valuation is the content but not the length of the answer.

11. a) Classify transducers and mention one example for each 4M
b) Define following errors
a) Intrinsic b) Installation error c) Operational error 6M
12. Explain the principle of operation of RVDT with diagram.
13. Explain the principle of operation of Force- Balance pressure transducer with diagram.
14. Explain the principle of operation of resistance temperature detector with diagram.
15. Explain the principle of operation of turbine flow meter with diagram.
16. Explain the principle of operation of nucleonic level gauge with a diagram and list its applications.
17. Explain the principle of operation of displacement type densitometer with diagram.
18. Explain the principle of operation of hydraulic load cell with a diagram.