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BOARD DIPLOMA EXAMINATION, (C-14)
JUNE-2019
DAEIE - FOURTH SEMESTER EXAMINATION
PROCESS INSTRUMENTATION – II

Time: 3Hours

Max.Marks: 80

PART - A

10x3=30

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

- 1) Draw the diagram of double capsule.
- 2) State the principle of potentiometric pressure transducer.
- 3) Draw the diagram of pitot tube.
- 4) State the principle of thermal flow meter
- 5) State the principle of float actuated level indicator.
- 6) Mention any three applications of capacitance type level indicator.
- 7) Define viscosity.
- 8) State the necessity of density measurement in process industries.
- 9) State the principle of audio sensor.
- 10) Draw the diagram of pneumatic load cell.

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PART - B

10x5=50

Instructions: 1) Answer any **five** questions.

2) Each question carries **ten** marks

3) Answer should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11) Explain the principle of operation of piezoelectric pressure transducer with the help of a diagram.
- 12) Explain the pressure calibration using dead weight tester with a diagram.
- 13) a) Draw the diagram of venturi tube and state its principle. 3+2M
b) Explain the principle of operation of variable reluctance pressure sensor. 5M
- 14) With the help of a diagram, explain the principle of operation of positive displacement type flow meter.
- 15) Explain the principle of operation of ultrasonic flow meter with diagram.
- 16) With the help of a legible sketch, explain the principle of operation of nucleonic level gauge.
- 17) Explain the principle of operation of capacitance type densitometer with a diagram.
- 18) Explain the principle of operation of strain gauge torque transducer with a diagram.

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