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BOARD DIPLOMA EXAMINATION, (C-14)**MARCH/APRIL-2019****DAEIE - FOURTH SEMESTER EXAMINATION****PROCESS INSTRUMENTATION – II**

Time: 3Hrs

Max. Marks: 80

PART-A**10x3=30M**

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

- 1) Draw the diagram of helical bourdon tube.
- 2) State the principle of strain gauge pressure transducer.
- 3) Draw the diagram of venturi tube.
- 4) State the principle of pitot tube for flow measurement.
- 5) Draw the diagram of float actuated level indicator.
- 6) Define density.
- 7) State the necessity of viscosity measurement.
- 8) Mention any three applications of ultra sonic level gauge.
- 9) Draw the diagram of pneumatic load cell.
- 10) State the principle of operation of Flame sensor.

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PART-B

10x5=50M

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

- 11) Explain the principle of operation of thin film pressure transducer with diagram.
- 12) Explain the dead weight tester for pressure calibration with diagram.
- 13) a) Explain the principle of LVDT type of electrical pressure transducer. 5M
b) Explain the principle of hot wire anemometer. 5M
- 14) Explain the principle of operation of turbine flow meter with diagram.
- 15) Explain the principle of operation of ultrasonic flow meter with diagram.
- 16) Explain the principle of operation of liquid level sight glass with diagram.
- 17) Explain the principle of operation of capacitance type densitometer with diagram.
- 18) Explain the principle of operation of strain gauge torque transducer with diagram.

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