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C16-AEI-305

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BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

DAEIE - THIRD SEMESTER EXAMINATION

PROCESS INSTRUMENTATION

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. Define the terms range and span.
2. Define installation error.
3. State the importance of vibration monitoring.
4. Define the term temperature.
5. List any three types of electrical pressure transducers.
6. Write the principle of operation of pitot tube.
7. List any three applications of electromagnetic flow meter.
8. Write the principle of operation of resistance type level indicator.
9. State the necessity of viscosity measurement.
10. Write the principle of operation of hydraulic load cell.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. List any five types of transducers and give two examples for each type of transducer.
12. Explain the principle of capacitive proximity sensor for position measurement with diagram.
13. Explain the principle of operation of bi-metallic strip transducer with a diagram and list its applications.
14. Explain the pressure calibration using dead weight tester with diagram.
15. Explain the principle of operation of rotameter with diagram and list its applications.
16. Explain the principle of operation of capacitance type level indicator with diagram and list its applications.
17. Explain the principle of operation of displacement type density measurement with diagram.
18. Explain the principle of operation of electrolytic hygrometer.

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