



C14-AEI-306

4219

**BOARD DIPLOMA EXAMINATION, (C-14)**  
**OCT/NOV—2018**  
**DAEIE—THIRD SEMESTER EXAMINATION**  
**PROCESS INSTRUMENTATION-I**

Time : 3 hours ]

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**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 accuracy.
2. Give the examples of active transducers.
3. Define sensor.
4. Draw the diagram of AC tachogenerator.
5. Classify the temperature transducers.
6. List the any three applications of resistance temperature detector.
7. Define pH.

- \* 8. List the any tress specifications of digital type of pH meter.
- 9. Define conductivity.
- 10. Draw the diagram of Electrolytic Hygrometer.

**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. (a) Define calibration and state the importance of calibration. 3+4=7  
(b) Define precision. 3
- 12. Explain the linear variable differential transformer (LVDT) with diagram. 10
- 13. Explain the principle of operation of moving iron type velocity transducer with a diagram. 10
- 14. Explain the principle of operation of Thermocouple and mention its range and applications. 10
- 15. Explain the principle of operation of Infrared pyrometer with diagram. 10
- 16. Explain digital type of pH meter with a diagram. 10
- \* 17. Explain the principle of operation of conductivity meter with a diagram. 10
- 18. Explain the principle of operation of condensation type hygrometer with a diagram.

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