



C14-AEI-306

4219

BOARD DIPLOMA EXAMINATION, (C-14)
OCT/NOV—2017
DAEI—THIRD SEMESTER EXAMINATION
PROCESS INSTRUMENTATION—I

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 term span.
2. Define calibration.
3. State the importance of vibration monitoring.
4. State the principle of photoelectric tachometer.
5. List any three applications of bi-metal strip.
6. Write the principle of thermocouple.
7. State the effect of temperature on pH.

- * 8. List any three specifications of digital type of pH meter.
9. State necessity of conductivity cells.
10. Define relative humidity.

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. Explain the basic requirements of transducer.
12. Explain the moving coil type velocity transducer for linear velocity measurement with diagram.
13. Explain the construction, principle of operation of Linear Variable Differential Transformer (LVDT) with diagram.
14. Explain the principle of operation, range and application of INFRARED pyrometer with diagram.
15. Explain the principle of operation, rang and application of Resistance Temperature Detector (RTD) with diagram.
16. Explain the measuring and reference electrodes used for pH measurement with diagram.
- * 17. Explain the principle of operation of electrolytic hygrometer with diagram.
18. Explain the principle of operation of conductivity meter with diagram.
