C14-AEI-**306**

4219

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH /APRIL-2019

DAEIE - THIRD SEMESTER EXAMINATION

PROCESS INSTRUMENTATION-I

Time: 3 Hours] [Max. Marks : 80

PART -A **3x10=30M**

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

1) Define Resolution.

2) Define Transducer.

3) Write the expression for gauge factor of resistance strain gauge.

4) Draw the diagram of linear potentiometer.

5) Classify the temperature transducers.

6) List any three applications of Resistance Temperature detector.

7) State the effect of temperature on p^H.

8) State the principle of p^H measurement.

9) Define conductivity.

10) Define relative humidity.

PART-B 5x10=50M

Instructions: 1) Answer any **five** questions. Each question carries **ten** marks.

2) Answers should be comprehensive and the critertion for valuation is the content but not the length of answer.

11) Explain the following. (3+3+4M)

(1) Span and Error (2) Calibration (3) Reliability and maintanability.

12) Explain the principle of operation of capacitive proximity sensor for position measurement.

13) Explain the principle of operation of photo electric Tachometer.

14) Explain the principle of operation of thermistor.

15) Explain the principle of operation of radiation pyrometer.

16) Explain the digital type of p^H meter.

17) Explain the principle of operation of Electrolytic Hygrometer.

18) Explain the principle of operation of condensation type hygrometer.

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