

Total No. of Questions—8]

[Total No. of Printed Pages—2

Seat No.	
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[5057]-2071

S.E. (Instrumentation & Control) (First Semester)

EXAMINATION, 2016

SENSORS AND TRANSDUCERS—I

(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

- N.B. :—** (i) Neat diagrams must be drawn wherever necessary.
(ii) Figures to the right indicate full marks.
(iii) Assume suitable data, if necessary.

1. (a) Explain in detail the classification of transducers. [4]
(b) Define Accuracy, Precision, repeatability, Dead Zone. [4]
(c) What are different types of strain gauges ? [4]

Or

2. (a) Draw the diagram of L.V.D.T. and its characteristics. [4]
(b) Explain with neat sketch Hall Effect. [4]
(c) Draw the schematic diagram of General measurement system. [4]

3. (a) Draw and label neat sketch of rotary Encoder. [4]
(b) Explain working principle of Techometer for speed measurement. [4]
(c) Explain working of principle of load cell for force measurement. [4]

Or

4. (a) Explain with neat sketch any vibration sensor. [4]
(b) Explain working of strain gauge torque meter. [4]
(c) Explain working of any one Dynamometer. [4]

P.T.O.

5. (a) Explain with neat sketch working of bourdon tube. [8]
(b) Give in detail classification pressure sensors. [5]

Or

6. (a) Draw and explain working principle of ionization gauges. [8]
(b) Explain the basic principle of Dead weight tester. [5]

7. (a) Draw and explain working principle of RTD ? Draw Wheatstone bridge. [8]
(b) Give in detail classification of temperature sensor. [5]

Or

8. (a) Draw and explain working principle of thermocouple and what are types of thermocouple. [8]
(b) Explain the basic principle of optical pyrometer. [5]