

Total number of printed pages-3

53 (IE 701) IDIN

2016

INDUSTRIAL INSTRUMENTATION

Paper : IE 701

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer ***any five*** questions.

1. (a) With a neat diagram, explain the construction and working of stroboscope. 10
- (b) Explain *any two* types of load cells with a neat diagram. 10
2. (a) Explain float type and bridge type density meter. 10

Contd.

- (b) Draw and explain variable reluctance type accelerometer and mention the merits and demerits with application. 10
3. (a) Explain the concept of vacuum measurement with *one* example. 10
- (b) Explain piezoresistive pressure sensor and capacitive pressure transducer. 10
4. (a) What are the possible sources of errors in filled system thermometers and how it is compensated? 10
- (b) Describe the construction and working of 3 wires and 4 wires RTDs? 10
5. (a) Explain the fabrication of Industrial thermocouple and Cold Junction compensation in thermocouple. 14
- (b) Explain total radiation pyrometer. 6

6. (a) Describe with neat sketches, the construction and working principle of the following types of flow meters :
- (i) Electromagnetic flow meter
 - (ii) Pitot tube. 10
- (b) Write short note on displacer liquid level measurement system and Dew point meter. 10
7. Write short notes on the following : 20
- (a) DC tachogenerator
 - (b) Saybolt viscometer
 - (c) Dead weight tester
 - (d) Head Flow Meter
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