Total No. of Questions : 10]

SEAT No. :

P3160

[Total No. of Pages : 2

[5354]-657
B.E. (Instrumentation & Control)
ADVANCED SENSORS
(2012 Pattern) (Elective - I:D) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) *Solve Q1 or Q2,Q3 or Q4,Q5 or Q6,Q7or Q8, Q9 or Q10.*
2) *Neat diagram must be drawn whenever necessary.*
3) *Figure to the right candidates indicate full marks.*
4) *Assume suitable data, if necessary.*

Q1) a) Explain static characteristics of sensor with examples. **[5]**

b) Give detail classification of temperature sensor with their operating principles. **[5]**

OR

Q2) a) Explain dynamic characteristics of sensor with examples. **[5]**

b) Give detail classification of flow sensor with their ranges and operating principles. **[5]**

Q3) a) Explain selection criteria for sensor fabrications in detail. **[5]**

b) With neat block diagram explain manufacturing process of sensor. **[5]**

OR

Q4) a) Discuss different techniques used for sensor fabrication. **[5]**

b) Explain recent techniques sensor fabrication. **[5]**

Q5) a) List different chemical sensing mechanisms. **[8]**

b) Give classification of biosensors. **[8]**

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OR

Q6) a) Give different types of gas sensors. Explain any one in detail. **[8]**

b) Explain working of fibre optic sensor with block diagram. **[8]**

Q7) a) Explain term smart sensor. Give importance of smart sensors in industry. **[8]**

b) Explain selection criteria for smart sensor. **[8]**

OR

Q8) a) Explain advantages of smart sensors. **[8]**

b) Enist smart temperature IC sensors. Explain any one in detail. **[8]**

Q09) a) Give various applications of Chemical sensors. **[9]**

b) Explain how and where biosensors are used in industry. **[9]**

OR

Q10) a) Explain application of fiber optic sensor with neat sketch. **[9]**

b) Discuss application gas sensors in industry. **[9]**

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