Total No. of Questions : 4]

SEAT No. :

PD200

[Total No. of Pages : 1

[6410]-526

T.E. (Robotics and Automation) (Insem)

MICRO ELECTRO MECHANICAL SYSTEMS

(2019 Pattern) (Semester - II) (Elective - II) (311511A - I)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Answer Q1 or Q2, Q3 or Q4.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data if necessary.***

UNIT - I

Q1) a) What is tortional deflection in MEMS component. **[5]**

b) Discuss Evolution of Micro fabrication. **[5]**

c) Discuss characteristics of MEMS. **[5]**

OR

Q2) a) Differentiate between microsystem and microelectronics. **[5]**

b) Discuss applications of MEMS in various sectors in detail. **[5]**

c) Write a short note on Multidisciplinary Nature of Microsystems in MEMS. **[5]**

UNIT - II

Q3) a) Discuss microelectronics fabrication process. **[5]**

b) Why study of foundry process required in MEMS. **[5]**

c) Write a short note on Photolithography. **[5]**

OR

Q4) a) Why study of LIGA Process is required? Discuss it. **[5]**

b) Explain Thin film deposition. **[5]**

c) Write a short note on new materials in MEMS. **[5]**

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