

B.Tech III Year II Semester (R09) Supplementary Examinations May/June 2017

**MEMS & NANOTECHNOLOGY**

(Mechatronics)

Time: 3 hours

Max. Marks: 70

(Minimum of two questions from each part should be chosen for answering FIVE questions)

All questions carry equal marks

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**PART – A**

- 1 (a) Explain about integrated circuits.  
(b) Write a note on modeling and simulation.
- 2 (a) Discuss the phenomenon involved in photolithography.  
(b) Explain thin film deposition technique.
- 3 (a) Explain about modeling of system.  
(b) Describe the modeling elements in mechanical system.
- 4 (a) Explain about passive components.  
(b) Write a note on passive mechanical system.

**PART – B**

- 5 Explain the magnetic phenomena in solids.
- 6 (a) Explain the applications of silicon carbide materials.  
(b) Explain the preparation procedure of nano materials.
- 7 (a) Explain the sintering of nano particles.  
(b) Explain the advantages of nano composites.
- 8 (a) Explain the mechanical properties of nano materials.  
(b) Explain the principle of electron microscopy.

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