

Roll No

MMIP-204**M.E./M.Tech., II Semester**

Examination, December 2017

Rapid Prototyping and Rapid Tooling*Time : Three Hours**Maximum Marks : 70*

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain product development cycle. What is the necessity of product development? 7
b) State the problems faced during product development? Why do you need rapid product development? 7
2. a) Differentiate virtual reality from Augmented reality? Explain virtual manufacturing. 7
b) What do you mean by reverse engineering? State the application of reverse engineering in industries. 7
3. Explain Fused Deposition Modelling (FDM) under following heads: 14
 - a) Process
 - b) Principle
 - c) Machines used
 - d) Materials
 - e) Advantages and Limitations

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4. Explain 3D printing? Describe the process of getting a STL file from CAD model. 14
5. Write short notes on: 14
 - a) Shape Deposition Modeling
 - b) Contour Crafting
 - c) Droplet Deposition Methods
6. a) Explain Epoxy Tooling. Describe its process in brief. 7
b) Explain Cast-Kirksite Tooling. State its advantages and limitations. 7
7. a) Explain the application of rapid prototyping in Medical field. 7
b) Describe Selective Laser Sintering. 7
8. Explain Laminated Object Manufacturing (LOM) under following heads: 14
 - a) Principle
 - b) Machines used
 - c) Materials
 - d) Applications
 - e) Advantages and Limitations

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