

Code: 9D04206a

M.Tech I Semester Regular & Supplementary Examinations February 2016

**RAPID PROTOTYPING**

(Production Engineering)

(For students admitted in 2014 & 2015 only)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) What is meant by rapid prototyping? List the classification of RP systems.  
(b) What is the need for the compression in product development?
- 2 (a) With a neat sketch, explain the working of stereolithography technique.  
(b) What are the limitations of SLA process?
- 3 (a) How FDM is used in RP? What are the process parameters which influence FDM process?  
(b) List the advantages and limitations of FDM.
- 4 Explain solid ground curing process with a neat sketch.
- 5 (a) What are concept modelers? Explain the applications of RP components from concept modeling.  
(b) Explain the working of thermal jet printer.
- 6 Explain with neat sketch the following indirect tooling techniques:  
(a) Aluminum filled epoxy tooling.  
(b) Spray metal tooling.
- 7 Explain briefly:  
(a) Factors influencing accuracy.  
(b) Error in data preparation and finishing.
- 8 Write short notes on:  
(a) Surface digitizing.  
(b) Surface modification.

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