

Code: MEMD1T5C

**I M.Tech-I Semester-Regular Examinations-April 2013**

**RAPID PROTOTYPING  
(MACHINE DESIGN)**

Duration: 3 hours

Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. In detail explain the need of Rapid Prototyping and tooling in product development. 14M
2. Describe the five steps involved in a general RP process chain? 14M
3. Explain strength and weaknesses of the SLA 14 M
4. Explain the working principle and details of process Parameters of an SGC. 14 M
5. Explain the working principle and details of process Parameters of an FDM machine. 14 M
6. (a) What are the advantageous and disadvantageous shape deposition manufacturing processes? 7 M  
  
(b) Mention the applications of MJM with suitable examples. 7M

7. Explain how SLS process can be used to produce direct and in-direct prototypes. 14 M
8. (a) What are the advantageous and disadvantageous with LENS? 7M
- (b) Mention the applications of LENS with suitable examples? 7 M