PVP 17

Code: **17MEMD1T5C**

I M.Tech - I Semester - Regular Examinations – February 2018

RAPID PROTOTYPING
(MACHINE DESIGN)

Duration: 3 hours Max. Marks: 60

Answer the following questions.

1. a) Define Rapid prototyping and explain fundamental steps in RP techniques with suitable sketch. 7 M
   b) Explain the classification of Rapid prototyping techniques. Discuss the roles of prototype. 8 M

(OR)

2. a) Explain the historical development of rapid prototyping technology. 7 M
   b) Discuss the direct & indirect benefits of Rapid prototyping. 8 M

3. a) Explain stereo lithography process with a neat sketch. 8 M
   b) What is Rapid Freezing Prototyping and explain the advantages? 7 M

(OR)

4. a) What are the advantages and limitations of solid based system compared with liquid based system? 8 M
   b) With the help of neat sketch explain the SGC process? 7 M

5. a) What are the merits and demerits of laminated Object manufacturing? 8 M

b) Describe the process flow of LOM process: list the practical applications? 7 M

(OR)

6. a) Write the limitations and advantages of FDM process. 8 M

b) Explain SDM process. What are the advantages, disadvantages and application of system? 7 M

7. a) Differentiate SLA and SLS in Rapid prototyping. 8 M

b) Explain with a suitable example the application of Rapid Prototyping in Aerospace Industry. 7 M

(OR)

8. a) Explain in detail the LENS process with a neat diagram. Also write the advantages and disadvantages. 8 M

b) Write the advantages, disadvantages and applications of selective laser sintering process. 7 M