

Code: 13A03808

B.Tech IV Year II Semester (R13) Regular Examinations April 2017

RAPID PROTO TYPING

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write the classification of RP.
 - (b) Write the applications of data files.
 - (c) Explain path generation.
 - (d) Write about LOM materials.
 - (e) Write the principles of modelers.
 - (f) Explain 3D printer.
 - (g) Define silicon rubber tooling.
 - (h) Define AIM.
 - (i) Give an account on accuracy in product development.
 - (j) Write about error in finishing.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 Explain the working principle of Stereolithography system and mention its advantages and limitations.
- OR**
- 3 Highlight the need for compression in product development, with suitable examples.

UNIT – II

- 4 Explain briefly the fusion deposition modeling. Its process details and its applications.
- OR**
- 5 What is laminated object manufacturing? Explain its process details and machine details.

UNIT – III

- 6 Explain briefly about the Genesis Xs printer HP system 5? List out the advantages and limitations.
- OR**

- 7 Discuss the following:
- (a) Thermal jet printer.
 - (b) Object quadra system.

UNIT – IV

- 8 Explain briefly the DMILS its details and applications.
- OR**
- 9 Briefly explain the differences between soft tooling and hard tooling.

UNIT – V

- 10 What are the features of process optimization in RP?
- OR**
- 11 Distinguish between part build error and data preparation errors.
