Code: 13A03808

R13

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)
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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.

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