Code: 13A03808 **R13**

B.Tech IV Year II Semester (R13) Advanced Supplementary Examinations July 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) Give an account on Growth of RP system.
(b) Explain data preparation in RP.
(c) What are the process parameters?
(d) Write the Applications of solid ground curing.
(e) Explain working principle of 3D printer.
(f) Sketch the Modeler used for multi edge products.
(g) Write short notes on Aluminum filled epoxy tooling.
(h) What is cost kriksite?
(i) What are the data preparation errors?
(j) Briefly discuss part building error.

PART – B

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

UNIT – I

2 Explain the various activities of rapid prototyping. Discuss about the history of rapid prototyping.

OR

3 (a) Explain the applications of rapid prototyping in the medical field.
(b) What are the direct and indirect methods of rapid prototyping?

UNIT – II

4 Explain briefly the principles and process parameters of laminated object manufacturing and its applications.

OR

5 What is solid ground curing? Explain its process parameters & machine details.

UNIT – III

6 Explain briefly the thermal jet printers and sanders MOC maker.

OR

7 Explain the following:

(a) Genesis XS printer HP system.
(b) Object Quadra system.

UNIT – IV

8 What is hard tooling? Explain with suitable examples.

OR

9 Sketch and explain the silicon rubber tooling with suitable examples.

UNIT – V

10 Explain the detailed procedure involved in the RP implementation.

OR

11 Discuss the various errors involved in stereo-lithography and layered manufacturing.

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