

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) 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.
