



Code: 9D04206a

M.Tech I Semester Supplementary Examinations August/September 2018

RAPID PROTOTYPING

(Production Engineering)

(For students admitted in 2013, 2014, 2015 & 2016 only)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Define prototype in the context of modern product development. Discuss the evolution of rapid prototyping.
(b) Classify rapid prototyping systems and distinguish between digital prototyping and virtual prototyping.
- 2 Explain stereo lithography system with a neat diagram. Also, mention its advantages, limitations and applications.
- 3 Explain fusion deposition modeling process with a neat diagram and write the applications of it.
- 4 Describe the process flow of Cubital's solid ground curing system with a neat diagram.
- 5 Explain the principle, process parameters and applications of 3D printing.
- 6 (a) Classify different types of rapid tooling process. Briefly describe spray metal deposition process.
(b) Explain the features of Magics communicator RPT software.
- 7 Discuss the various factors influencing accuracy in rapid manufacturing process and briefly explain data preparation error.
- 8 Explain the process of surface generation and surface modification.
