

GBCS SCHEME

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18MT642

Sixth Semester B.E. Degree Examination, June/July 2023 Rapid Prototyping

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Classify Rapid Prototyping System and explain any one class. (10 Marks)
b. Explain the growth of Rapid Prototyping in the Industry. (10 Marks)

OR

- 2 a. With a neat sketch, explain stereolithography process. (10 Marks)
b. Explain the advantages and applications of Rapid Prototyping. (10 Marks)

Module-2

- 3 a. With a neat sketch explain the working of fusion deposition modeling. (10 Marks)
b. Explain solid ground curing with neat diagram. (10 Marks)

OR

- 4 a. Describe laminated object manufacturing process involving solid sheets. (10 Marks)
b. List LOM materials and explain the applications of LOM. (10 Marks)

Module-3

- 5 a. With a neat sketch, explain selective Laser Sintering Technology. (10 Marks)
b. Briefly explain the Data Preparation for Selective Laser sintering Process. (10 Marks)

OR

- 6 a. Explain the raw materials used for SLS technology. (10 Marks)
b. Explain the applications SLS process. (10 Marks)

Module-4

- 7 a. Compare rapid tooling with convectional tooling. (10 Marks)
b. With a neat sketch, explain the direct ACES injection molding setup. (10 Marks)

OR

- 8 a. Explain Spray Metal Tooling. (10 Marks)
b. Briefly explain quick cost process. (10 Marks)

Module-5

- 9 a. List the internet based software for Rapid Prototyping. (10 Marks)
b. Write a short note on Magic's and Mimics. (10 Marks)

OR

- 10 a. Explain the requirements that must be followed during STL file generation. (10 Marks)
b. Briefly explain data preparation error. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.