

CBCS SCHEME

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20MCM322

Third Semester M.Tech. Degree Examination, Jan./Feb. 2023 3D Printing and Rapid Manufacturing

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. List the phases of development leading to RP and explain. (10 Marks)
b. What are the roles of prototypes? Explain each role. (10 Marks)

OR

- 2 a. With a neat sketch, explain stereolithography process. (10 Marks)
b. Explain the strengths and weakness of SLA. (10 Marks)

Module-2

- 3 a. With a neat sketch, explain Selective Laser Sintering (SLS) process. (10 Marks)
b. Explain the materials used in SLS system. (10 Marks)

OR

- 4 a. Explain Fused Deposition Modeling with the help of diagram. (10 Marks)
b. List the strengths and weakness of FDM technology. (10 Marks)

Module-3

- 5 a. Write the specifications of Solid Ground Curling 4600 machine. (10 Marks)
b. Explain the strengths of laminated object manufacturing. (10 Marks)

OR

- 6 a. With a neat sketch, explain Laminated Object Manufacturing (LOM) process. (10 Marks)
b. List the applications of "LOM" and explain. (10 Marks)

Module-4

- 7 a. List and write the specifications of Thermal Jet Printer. (10 Marks)
b. Write a note on Sanders Model Maker. (10 Marks)

OR

- 8 a. Explain Genisys System Technical Specifications. (10 Marks)
b. Write a note on object quadra system. (10 Marks)

Module-5

- 9 a. Explain 3D Keltool process. (10 Marks)
b. List and explain the applications of Rapid Tooling Technology. (10 Marks)

OR

- 10 a. Explain errors due to tessellation and slicing. (10 Marks)
b. Explain part building errors in SL process. (10 Marks)

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.