CBCS SCHEME

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20MCM322

Third Semester M.Tech. Degree Examination, Feb./Mar. 2022
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. Briefly explain time compression engineering with block diagram. **(10 Marks)**
b. Explain stages of RP information workflow. **(10 Marks)**

OR

2 a. What is need and importance of Rapid proto-typing? **(10 Marks)**
b. Explain process of stereo-lithography process. **(10 Marks)**

Module-2

3 a. What is selective laser sintering? Explain briefly. **(10 Marks)**
b. What are the advantages and disadvantages of selective laser sintering? **(10 Marks)**

OR

4 a. Explain briefly FDM. **(10 Marks)**
b. What are the advantages and disadvantages of FDM? **(10 Marks)**

Module-3

5 a. Explain steps involved in solid ground curing. **(10 Marks)**
b. Explain the principle and machine details of solid ground curing. **(10 Marks)**

OR

6 a. Explain system parameters of LoM. **(10 Marks)**
b. Write a note on LoM lice software. **(10 Marks)**

Module-4

7 a. Explain model maker operations. **(10 Marks)**
b. Explain various components of Z402 system. **(10 Marks)**

OR

8 What is concept modeling? Explain the applications of RP components from concept modeling. **(20 Marks)**

Module-5

9 a. What is rapid tooling? Comparing rapid tooling with conventional tooling. **(10 Marks)**
b. Write a note on spray metal tooling. **(10 Marks)**

OR

10 a. Write a note on influence of building orientation. **(10 Marks)**
b. What are the part building errors in the SL process? **(10 Marks)**

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