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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.

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		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	(1037 1)
4	a.	Explain briefly FDM.	(10 Marks)
	b.	What are the advantages and disadvantages of FDM?	(10 Marks)
_		Module-3	(10 Marks)
5	a.	Explain steps involved in solid ground curing.  Explain the principle and machine details of 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)
U	b.	Write a note on LoM lice software.	(10 Marks)
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		Module-4	
7	a.	Explain model maker operations.	(10 Marks)
	b.	Explain various components of Z402 system.	(10 Marks)
	ft.	OR '	
8	4.1	What is concept modeling? Explain the applications of RP components fr	
		modeling.	(20 Marks)
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		Module-5  Module-5  Module-5  Module-5	(10 Marks)
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)
10	b.	What are the part building errors in the SL process?	(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.