

Eighth Semester B.E. Degree Examination, July/August 2022 Additive Manufacturing

Time: 3 hrs.

Max. Marks: 80

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

Module-1

1	a. b.	2	(08 Marks) (08 Marks)	
OR				
2	a.	List out the post processing technique of additive manufacturing parts. Explain techniques.	any three (08 Marks)	
	b.	Explain the application of additive manufacturing.	(08 Marks)	
Module-2				
3	a.	With a neat sketch, explain the working of hydraulic motors.		
			(08 Marks)	
	b.	With Torque – speed curve, explain compound motor.	(04 Marks)	
	c.	List advantages and disadvantages of DC motors.	(04 Marks)	
OR				
4		Explain briefly with neat diagrams the following : i) Thyristors ii) Triacs iii	i) Diodes	
		iv) Shape memory alloy.	(16 Marks)	
Module-3				
5	a.	List out the polymers used for Additive manufacturing process, with a neat skete	ch explain	
			(08 Marks)	
	b.	Explain with neat sketch compression moulding of polymers.	(08 Marks)	
OR				
6	a.	Explain the various steps involved in production of a power metallurgy component		
			(08 Marks)	
	b.	Explain the applications of powder metallurgy components.	(08 Marks)	
	Module-4			
7	a.		(08 Marks)	
	b.	With a neat sketch explain flame assisted ultrasonic spray phyrolysis process.	(08 Marks)	
OR				
8	a. b.	With a neat sketch, explain Electron probe Micro Analyzer. List its advan	(08 Marks) tages and (08 Marks)	

Module-5

9 a. List out the advantages of CNC machines over NC machine.(06 Marks)b. Explain briefly the various strategies for automation and process improvement.(10 Marks)

OR

10a. Explain with a block diagram the levels of automation.(10 Marks)b. Distinguish between continuous and discrete control in manufacturing industries.(06 Marks)