Sea	ıt No.:	Enrolment No		
		GUJARAT TECHNOLOGICAL UNIVERSITY		
α .	• .	ME – SEMESTER IV (NEW) – • EXAMINATION – WINTER 2016	1.	
	-	Code: 2740801 Date: 26/10/202	16	
Subject Name: RAPID PROTOTYPING AND TOOLING Time:02:30 pm to 05:00 pm Total			Marks: 70	
	tructio	ons:	, ,	
		Attempt all questions. Make suitable assumptions wherever necessary.		
		Figures to the right indicate full marks.		
Q.1	(a)	Write the difference between rapid prototyping and computer numerical	07	
	(1 -)	control.	07	
	(b)	Discuss the applications of rapid prototyping in various fields.	07	
Q.2	(a)	Explain the working principle of photopoymerization process.	07	
	(b)	Discuss the problems associated with the STL files.	07	
	(b)	OR	07	
	(b)	Explain the direct and adaptive slicing.	U/	
Q.3	(a)	Discuss the different scan patterns use in stereolithography (SL).	07	
	(b)	Write the applications of powder bed fusion processes. OR	07	
Q.3	(a)	Discuss the technical challenges of 3D printing.	07	
Q.L	(b)	Write the applications of extrusion-based processes.	07	
Q.4	(a)	Explain the working principle of laminated object manufacturing (LOM)	07	
V. T	(a)	process with neat sketch.	07	
	(b)	Write the difference between soft toolings and hard toolings methods.	07	
		OR		
Q.4	(a)	Explain the working principle of direct metal deposition process with neat sketch.	07	
	(b)	Classify the rapid toolings with suitable examples.	07	
Q.5	(a)	What do you mean by reverse engineering (RE)? Discuss the techniques use	07	
		for DE		

(a) Enlist the names of different types of bonding that can employ in laminate type of rapid prototyping processes. Also write their advantages and disadvantages.

(b) Discuss the various post-processing errors occur in rapid prototyping errors.

OR

(b) Enlist the different part building errors occur in SLA and SLS.

Q.5

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