

GUJARAT TECHNOLOGICAL UNIVERSITY**BVOC - SEMESTER-VI EXAMINATION – SUMMER 2022****Subject Code:1160301****Date:02-06-2022****Subject Name:Rapid Prototyping and Reverse Engineering****Time:10:30 AM TO 12:30 PM****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) State the difference between rapid prototyping and CNC.	05
	(b) State the different types of CAD formats. Explain STEP format in detail?	05
Q.2	(a) Write and Explain steps involved in 3D-printing?	05
	(b) Define Rapid prototyping. State the application of rapid prototyping.	05
OR		
	(b) State the factors to be considered while selecting part orientation and support generation.	05
Q.3	(a) Explain working of SLS process with neat sketch?	05
	(b) Explain powder bed fusion process with neat sketch?	05
OR		
Q.3	(a) Explain direct metal deposition method with advantages and disadvantages?	05
	(b) What is top down and bottom approach in 3D printing?	05
Q.4	(a) State the difference between conventional tooling and rapid tooling?	05
	(b) Explain RSP tooling method with neat sketch.	05
OR		
Q.4	(a) Define rapid tooling and state the classification of rapid tooling?	05
	(b) State the importance of rapid tooling and explain soft and hard tooling in detail?	05
Q.5	(a) Explain reverse engineering methodology in detail?	05
	(b) State the application of rapid prototyping in the field of medical.	05
OR		
Q.5	(a) Define reverse engineering and state its advantages and disadvantages.	05
	(b) State and explain steps involved in RP planning process.	05
