Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER - IV(NEW) - EXAMINATION – SUMMER - 2017

Subject Code: 2742803 Subject Name: Rapid Prototyping, Tooling and Synergi Time:02:30 pm to 05:00 pm		Name: Rapid Prototyping, Tooling and Synergic Integration	Date:03/05/2017 c Integration Total Marks: 70	
	tructio	ons: Attempt all questions. Make suitable assumptions wherever necessary.		
Q.1	(a) (b)	Discuss the evolution of RP systems indicating the history and their growth rate in the industrial sector. Explain with an example the application of RP in Automotive industry	07 07	
Q.2	(a) (b)	Explain in detail the common information indicating the main stages of RP systems workflow. Describe the applications of virtual and augmented reality.	07 07 07	
	(b)	OR Describe the Generative type CAPP systems with example.	07	
Q.3	(a) (b)	List the types of sensors used in industrial robots and describe any two. List the various types of solid models and explain constructive solid geometry models with the advantages and disadvantages.	07 07 07	
Q.3	(a) (b)	OR Explain the different phases of FEA and enlighten the concept of discretization with example. Write the guidelines for "Design for assembly (DFA)" with neat sketches.	07 07	
Q.4	(a) (b)	State the features of CNC Machine Tool. State the benefits of product data management system. OR	07 07	
Q.4	(a) (b)	How the synergic integration technologies help in rapid product development? Explain concurrent engineering system architecture.	07 07	
Q.5	(a) (b)	With a neat sketch explain Selective Laser Sintering. Write the short note on epoxy tooling process. OR	07 07	
Q.5	(a) (b)	Narrate Laminated Object manufacturing with neat sketch. List the Difference between following tooling types. 1) Soft tooling and hard tooling. 2) Direct Tooling and Indirect Tooling.	07 07	
