Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code:712804N
Subject Name: Rapid Prototype and Tooling

Date: 04 /02 /2011 **Time: 02.30 pm – 05.00 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	How would you define prototype in the context of modern product development? What are the main roles and functions for prototypes?	**07**
	(b)	Explain the process of Reverse Engineering in details.	**07**
Q.2	**(a)**	What is the Scope of Computer Integrated Manufacturing?	**07**
	(b)	Concurrent Engineering is the need for today's manufacturing world: Justify.	**07**
		OR	
	(b)	Classify Geometric Models with examples and neat sketch.	**07**
Q.3	**(a)**	What are STL files and IGES Data? How STL file can be generated in Pro/Engineer?	**07**
	(b)	What are the fundamentals of Rapid Prototyping? Mention the Problems with Rapid Prototyping Techniques.	**07**
		OR	
Q.3	**(a)**	Explain the step by step process of Finite Element Analysis.	**07**
	(b)	How can you classify the Product Data in Product data Management?	**07**
Q.4	**(a)**	Name all the methods of Rapid Prototyping. Explain one powder based RPT system.	**07**
	(b)	Elaborate the terms N.C., C.N.C., D.N.C. and part programming codes.	**07**
		OR	
Q.4	**(a)**	Explain Stereo lithography.	**07**
	(b)	How CAPP and Expert system are related.	**07**
Q.5	**(a)**	Explain Product Development Cycle in brief.	**07**
	(b)	What do you understand by Indirect rapid tooling process?	**07**
		OR	
Q.5	**(a)**	Write a short note on Laminated object manufacturing (LOM).	**07**
	(b)	Write a short note on Robot Control Systems.	**07**

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