Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. – SEMESTER – IV EXAMINATION – OCTOBER 2012

Subject code: 740801 **Date: 25-10-2012**

Subject Name: Rapid Prototyping and Tooling

Time: 2:30 pm – 5:00 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)	Explain impact of innovation on product development by considering product and process innovation.	07
	(b)	Discuss design for environment, ergonomics and reliability.	07
Q.2	(a)	Explain types of CAPP systems.	07
	(b)	Explain concurrent engineering system architecture.	07
		OR	
	(b)	Explain types of CAPP systems. Explain concurrent engineering system architecture.	07
Q.3	(a)	What is objective of automatic mesh generation? Explain based on nodal density distribution and volume density distribution.	07
	(b)	Explain types of geometric models and why CAD model is required to convert into STL file format in RP process.	07
		OR	
Q.3	(a)	Explain concurrent engineering system architecture.	07
	(b)	Define product data management and what its benefits are.	07
Q.4	(a)	Explain Steriolithography and states its limitation	07
	(b)	Explain liquid based RP process.	07
		OR	
Q.4	(a)	What is product development cycle?	07
	(b)	Compare product development cycle with product life cycle.	07
Q.5	(a)	What is product development cycle?	07
	(b)	Compare product development cycle with product life cycle.	07
		OR	
Q.5	(a)	How data points are acquired in reverse engineering? Explain various methods	07
	(b)	Discuss case problem of solid modeling of RP in brain tumor.	07

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