Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

		M. E SEMESTER - II • EXAMINATION - WINTER • 2014	
Su	bject	code: 1720809 Date: 05-12-2014	
Su	bject	Name: Product Design and Development	
Ti	me: 0	2:30 pm - 05:00 pm Total Marks: 70	
In	struc	etions:	
		Attempt all questions.	
	2.	• •	
	3.	Figures to the right indicate full marks.	
Q.1	(a) (b)	What Factors should be considered in selecting the method of prototyping? Explain the Fuzzy approach for the material and process selection.	07 07
Q.2	(a) (b)	Compare in detail point wise Top-down and Bottom-up approaches for product design. Explain how Ashby Chart can help in selecting material for flywheel?	07 07
	(b)	OR Discuss House of Quality from perspective of product design & development.	07
Q.3	(a) (b)	Discuss the advantages and economic considerations in the use of rapid prototyping Explain how concurrent engineering helps in reducing design delivery time.	07 07
		OR	. –
Q.3	(a)	Why is the selection of materials and manufacturing Processes necessary during the formative stages of the design?	07
	(b)	Explain different types of costs to be considered in product design and development.	07
Q.4	(a) (b)	Explain in detail concept generation methods. Why is study of time value of money important in Product design and development?	07 07
0.4	(a)	OR What are the phases of product development cycle for a new product? Discuss in brief.	07
Q.4	(a) (b)	What can be the causes of failure of acceptance of a new product design launched in the market?	07
Q.5	(a)	Supplier has to be the part of Product design team. Do you agree with the statement? Justify your answer.	07
	(b)	Explain in detail DFM	07
	` /	OR	
Q.5	(a) (b)	Explain with a neat sketch stereo lithography method of Rapid Prototyping Explain in detail Assembly modeling	07 07
