Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

		M. E SEMESTER – II • EXAMINATION – WINTER • 2013	
Su	ıbjec	t code: 1722803 Date: 31-12-2013	
Su	ıbjec	t Name: Product Design For Manufacturing	
Ti	me:	10.30 am – 01.00 pm Total Marks: 70	
In	stru	ctions:	
	2	Attempt all questions.Make suitable assumptions wherever necessary.Figures to the right indicate full marks.	
	4	l. Symbols and notations carry usual meaning.	
Q.1	(a) (b)	Explain the material selection criteria for gear used for machining application. Explain parametric design for manufacturability of power screw.	07 07
Q.2	(a) (b)	Discuss various stages of product design. Explain the influence of tooling on the design of cast product.	07 07
	(b)	OR Discuss the manufacturing process of lathe bed in view its functional	07
	(0)	requirement.	07
Q.3	(a)	Explain the influence of process on the design of components made by joining process with an example.	07
	(b)	How does surface modification in materials help in improving the life of a product.	07
		OR	
Q.3	(a) (b)	Quoting an example discuss any recent development in forming process. Explain the product design procedure for high speed automatic assembly.	07 07
Q.4	(a) (b)	What is anthropomorphy? Discuss its significance in product manufacturing. Discuss various automated systems in applying the principles of ergonomics. OR	07
Q.4	(a)	What is meant by concept of order with variety?	07
	(b)	Explain the process of selection of plastics in kitchenware articles.	07
Q.5	(a)	Discuss generating conceptual alternatives from manufacturing point of view in product design.	07
	(b)	How do composites play a role in manufacturing of cutting tool used in machining?	07
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Q.5	(a) (b)	Explain the influence of tooling on the design of cast product. Discuss sheet metal design for manufacturing car body.	07 07
