Seat 1	No.: _	Enrolment No	
		GUJARAT TECHNOLOGICAL UNIVERSITY	
		M. E SEMESTER – II • EXAMINATION – SUMMER • 2014	
y .			
U		lame: Product Design for Manufacturing	
		30 pm - 05:00 pm Total Marks: 70	
Instr	uction		
		Attempt all questions. Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	Explain the stages of product design in detail.	07
	(b)	Explain the importance of ergonomics in product design. Discuss with	07
		illustration.	
Q.2	(a)	Compare polymers and ceramics materials with their properties and application.	07
	(b)	What do you understand by anthropomorphic data? State its importance in	07
		product design. OR	
	(b)	Discuss ergonomics and automation system.	07
Q.3	(a)	Explain the types of plastics and its specific engineering application with the	07
~	(4)	properties.	07
	(b)	Explain the criteria for selection for lathe bed material.	07
		OR	
Q.3	(a)	Explain the plastic and composite materials with their properties and applications.	07
	(b)	Explain the material selection criteria for hooks and chain used in material	07
	()	handling equipment.	0,
Q.4	(a)	Explain various factors are to be considered in product design.	07
	(b)	Explain the factors are to be considered for work place design.	07
		OR	
Q.4	(a)	Explain in detail morphology of design	07
	(b)	Explain various working environmental factors to be consider at work place.	07
Q.5	(a)	Explain the design for robustness.	07
	(b)	Explain in detail parametric design for manufacturing.	07
Q.5	(a)	OR Explain the limitations of anthropomorphic data in ergonomic design.	07
	(b)	Explain the importance of safety, reliability and maintainability in design of	07
		manufacturing.	