Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

## **BE - SEMESTER-VII EXAMINATION - SUMMER 2016**

	•	t Code:171904 Date:18/05/201	16	
Subject Name: Product Design and Value Engineering Time: 02:30 PM to 05:00 PM Instructions:  1. Attempt all questions.		2:30 PM to 05:00 PM Total Marks: ons:	Total Marks: 70	
	2.	. Make suitable assumptions wherever necessary Figures to the right indicate full marks.		
Q.1	(a) (b)	Discuss in detail as to how will you incorporate environmental concerns into product design?  From the view point of indentifying customers needs explain the following:-	07	
		<ul><li>(1) Gathering raw data from customers</li><li>(2) Interpreting raw data interims of customers needs</li></ul>		
Q.2	(a) (b)	Explain the life cycle cost in detail.  Explain the primary and secondary functions of the product. Discuss with illustrations.	07 07	
	<b>(b)</b>	OR Explain the FAST methodology with a suitable example.	07	
Q.3	(a)	Explain how ergonomics affects the design and development process for new	07	
	<b>(b)</b>	product. What is the importance of Value Engineering Job Plan? Explain in detail.  OR	07	
Q.3	(a) (b)	Explain in detail Generic product development process.  Explain Design for stiffness and rigidity.	07 07	
Q.4	(a)	Which are the different costs to be considered in product design? Explain in brief.	07	
	<b>(b)</b>	What can be the difficulties in designing with plastics, rubber, ceramics, glass and wood?	07	
		OR		
Q.4	(a)	When are specifications established? Differentiate target specification and final specification of product.	07	
	<b>(b)</b>	What is AMF development process? Discuss in detail.	07	
Q.5	(a)	Explain the relationship between product development and value engineering. Also explain the advantages of value engineering.	07	
(1	<b>(b)</b>	Discuss the various types of value with proper illustrations.  OR	07	
Q.5	(a) (b)	Explain Concept development phase in product development. What are the steps involved in Initiating Value Engineering Programme.	07 07	

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