

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2181913

Date: 04/05/2017

Subject Name: Product Design and Value Engineering(Department Elective II)

Time: 10:30 AM to 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	Short Questions	14
	1 Write a full form of “QFD”	
	2 What is Risk assessment?	
	3 Define: Design for Stiffness	
	4 Explain different types of engineering properties of rubber.	
	5 What is a Value Engineering job plan?	
	6 What is a Value Standard?	
	7 Give two applications of “VE METHODOLOGY.”	
	8 Define: Team Organization and responsibility.	
	9 Why use Value Engineering?	
	10 What is Break-even Analysis?	
	11 What is Primary Processes?	
	12 Give two name of different types of fast diagramming.	
	13 What is a function of cost modeling?	
	14 Define: Rapid Prototyping.	
Q.2	(a) What is the importance of product specifications?	03
	(b) Explain Reduction of cost of components.	04
	(c) Explain the following with reference to identifying customers’ needs: -	07
	(1) Gathering raw data from customers	
	(2) Interpreting raw data interims of customers’ needs.	
	OR	
	(c) Explain difference phases of industrial design process.	07
Q.3	(a) Define value, value Analysis and Value engineering.	03
	(b) Explain Rigidity and Creativity.	04
	(c) Explain important properties of ceramic materials considered in design of ceramic components.	07
	OR	
Q.3	(a) What AMF development Process?	03
	(b) Define: Product life cycle.	04
	(c) What is cost? Explain the procedure for calculating the Life Cycle Cost.	07
Q.4	(a) What is Fast diagram?	03
	(b) Discuss:	04
	(1) Contractual training	
	(2) Informal training	
	(c) What are the steps involved in Initiating Value Engineering Programme?	07

OR

Q.4	(a)	Define:	03
		(1) Economic Value	
		(2) Social Value	
		(3) Religious Value	
	(b)	Explain consumer product structures.	04
	(c)	What are specifications? Explain setting the final specification.	07
Q.5	(a)	What is design for production?	03
	(b)	Discuss steps involved in product planning process.	04
	(c)	Explain Project selection.	07
OR			
Q.5	(a)	Discuss considerations of Human Aspects in Value Engineering.	03
	(b)	Discuss duration and cost of product development.	04
	(c)	Discuss function evaluation techniques.	07
