

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER-VIII EXAMINATION- SUMMER 2020****Subject Code:2181913****Date: 02/11/2020****Subject Name: Product Design and Value Engineering****Time:02.30 PM TO 05.00 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	(a) Explain briefly how to reduce the cost of component.	03
	(b) What is meant by worth of product? How it affect value of the product?	04
	(c) Discuss how the customer's needs are interpreted during product development process.	07
Q.2	(a) Explain the importance of product specifications?	03
	(b) Discuss briefly Product simplification and diversification.	04
	(c) Describe generic product development process in detail.	07
OR		
	(c) How the final specification of product are being achieved. Elaborate steps involved.	07
Q.3	(a) Distinguish Product Development Cycle and Product Life Cycle.	03
	(b) What is Product Life Cycle Cost? Explain its limitations.	04
	(c) Explain different types of organization structure used in product development organizations.	07
OR		
Q.3	(a) What is Engineering Design? List the steps of design process.	03
	(b) What is product? Explain competitive strategy for new product.	04
	(c) What is AMF development Process?	07
Q.4	(a) Distinguish between Contractual training and informal training.	03
	(b) List out the characteristics of successful product development process and explain any two in briefly.	04
	(c) Discuss the product design analysis on the basis of Functional, Aesthetic, Production design and design of Packaging.	07

- Q.4** (a) What are the tools and charts used for product analysis? Explain Gozinto chart. **03**
- (b) Explain Function analysis system techniques (FAST) briefly. **04**
- (c) You are appointed as a senior Product design engineer in a multinational motor bike company. It is required to develop a new improved model of motor bike. How will you carry out the work assign to you? Explain. **07**
- Q.5** (a) Explain Value, Value Analysis and Value engineering. **03**
- (b) List and explain the advantages of value engineering. **04**
- (c) Explain the importance of Leadership, Team work and Communication in Value Engineering. **07**

OR

- Q.5** (a) Explain the term 'Basic Function' and 'secondary' function used in Value Engineering. **03**
- (b) What are the steps involved in initiating Value Engineering Program. **04**
- (c) Discuss different methods used for 'Value Engineering Project selection. **07**

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