Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

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

Subject Code: 2161502 **Date: 01/05/2017**

Subject Name: Product Development & Value Engineering

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.**

Q.1		**Short Questions**	**14**
	1	Why design of product is important?	
	2	What is product development?	
	3	Why product design and value engineering process Simultaneously?	
	4	What is feasibility study?	
	5	Why market research is necessary in product Development?	
	6	How will you know customers needs about your future product?	
	7	What is value engineering?	
	8	What are the phases /steps of value engineering?	
	9	Why product fail in market?	
	10	What is product analysis?	
	11	What is use value?	
	12	In which types of product, esteem value important?	
	13	What are important factors for material selection?	
	14	How PDVE is importance for industrial engineer?	
Q.2	**(a)**	Explain product analysis process with example.	**3**
	(b)	How can you say that a particular product will fail in market as a designer point of view?	**4**
	(c)	Give product classification of different types of product available in market. Explain for which type of product , design process is very difficult?	**7**
		OR	
	(c)	Explain product design process of any product available in market, with example.	**07**
Q.3	**(a)**	Write note: State basic and secondary functions of dust bean.	**3**
	(b)	Explain the importance of material selection process in design of any product with example	**4**
	(c)	Explain the value analysis process to be followed by any industry, with example.	**7**
		OR	
Q.3	**(a)**	Write note: State basic and secondary functions of pen.	**3**
	(b)	Write note: Value engineering job plan.	**4**
	(c)	Explain, how productivity can be improved with VE?	**7**
Q.4	**(a)**	"The value of the product may differ person to person" .Criticize the statement.	**3**
	(b)	Write note: DIFFERENT VALUES in VE.	**4**
	(c)	Define the various values and explain these values by considering the following products: a. Fan ,b. Lathe.	**7**

OR

Q.4	**(a)**	Explain "all cost is for function".	**3**
	(b)	Write note: reasons of poor values and its remedies.	**4**
	(c)	Define the various values and explain these values by considering the following products: a. Mobile phone b. chair	**7**
Q.5	**(a)**	Discuss importance of market research in product development.	**3**
	(b)	Explain the importance of creativity in value engineering	**4**
	(c)	Write note: FAST diagram: what and why?	**7**

OR

Q.5	**(a)**	How VE is cost reduction tool, explain with example.	**3**
	(b)	Write short note: Role of Ergonomics in product design	**4**
	(c)	Explain FAST diagram with example.	**7**

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