

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: **7**
a. Mobile phone b. chair

- 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**
