

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014****Subject Code: 161502****Date: 21-05-2014****Subject Name: Product Development & Value Engineering****Time: 10:30 am - 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** (a) List and explain the characteristics of successful product development. **07**
(b) Define Product. Classify various products available in market. How will you say that particular product is excellent or robust? Explain. **07**
- Q.2** (a) Explain the importance of product planning. Explain product planning process in detail. **07**
(b) Explain with example the role of market research / survey in design phase. **07**
OR
(b) Explain the importance of duration and cost of product development in product development. **07**
- Q.3** (a) “Most of excellent product fails in market and bad product success in market” This statement is true or false? Discuss with your view points. **07**
(b) Explain the following in connection with design for manufacturing:- **07**
1. Reduction of cost of components
2. Reduction of cost of assembly.
OR
- Q.3** (a) Write short note on “Role of allowance, tolerance in detailed design and assembly” **07**
(b) Write short note on “Standardization and its role in product design”. **07**
- Q.4** (a) Define VE. What is value? Explain various types of value with examples. **07**
(b) Explain the project selection and methods selection with reference to selection of evaluation of value engineering projects. **07**
OR
- Q.4** (a) You are appointed as a senior engineer (Product design) in a ceramic company. It is required to develop a new improved design of ceramic tiles. How will you carry out the work assign to you? **07**
(b) Explain the life cycle cost in detail. **07**
- Q.5** (a) You are appointed as a Product design and development engineer (Product design) in a multinational home appliance company. To develop new/improved models of various home appliances, how will you attempt this task? While developing any appliance which parameters you will consider? **07**
(b) Write short note on “Material and process selection in value engineering” **07**
OR
- Q.5** (a) Explain the different phases of value engineering job plan in detail. **07**
(b) “Value engineering raises production and productivity” Criticize the statement. **07**
