

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION – WINTER • 2014

**Subject Code: 171904**

**Date: 27-11-2014**

**Subject Name: Product Design and 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) Define Product design. Explain importance of Product design. 07  
(b) Enlist and Explain major techniques of Product design and development 07
- Q.2** (a) Enlist and Explain various factors to contribute new product development. 07  
(b) Describe concept development techniques (front end process) 07
- OR**
- (b) Explain different kind of organizations used for product development 07
- Q.3** (a) Discuss product life cycle respect to technology life cycle with neat sketch. 07  
(b) Explain new product development funnel with neat sketch. 07
- OR**
- Q.3** (a) Write a brief note on Quality Function Deployment 07  
(b) What is NPD process? Explain six phases of NPD process. 07
- Q.4** (a) Explain process of Value Engineering. Discuss reasons for value analysis. 07  
(b) What are the areas of application of value engineering? 07
- OR**
- Q.4** (a) Discuss function evaluation techniques. 07  
(b) Explain classification of functions. 07
- Q.5** (a) Explain different value engineering job plan. 07  
(b) Explain project selection 07
- OR**
- Q.5** (a) Explain importance of rotational job assignment. 07  
(b) Explain FAST diagram procedure and its importance. 07

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