

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E SEM-VII Examination-Nov/Dec.-2011

Subject code: 171904

Date: 26/11/2011

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) State and explain the factors responsible for product design and development. **07**

(b) Define value, value analysis and value engineering. Discuss in details. **07**

Q.2 (a) Explain Function analysis system techniques (FAST) in details. **07**

(b) Discuss the role of ergonomics in design and development of new product. **07**

OR

(b) Discuss in detail the process of product development. **07**

Q.3 (a) How will you incorporate environmental concerns into product design? Discuss. **07**

(b) Discuss Aesthetic, Ergonomics, Technical and Economic factors with illustrations for value determination. **07**

OR

Q.3 (a) Discuss the product design analysis on the basis of Functional, Aesthetic, Production design and design of Packaging. **07**

(b) Explain questionnaires technique used in value analysis. **07**

Q.4 (a) Discuss the factors responsible for unnecessary costs. **07**

(b) Discuss the link between product design and product cost. **07**

OR

Q.4 (a) How applications of value engineering/analysis enhance total productivity? **07**

(b) Discuss the elements of product design and development. **07**

Q.5 (a) Discuss the phases of value analysis procedure in details. **07**

(b) Explain the primary and secondary functions of the product. Discuss with illustrations. **07**

OR

Q.5 (a) State and explain the objectives of product design and development. **07**

(b) Product simplification and diversification. Discuss. **07**
