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BIMEE-002

**B.TECH. - VIEP - MECHANICAL ENGINEERING
(BTMEVI)**

Term-End Examination, 2019

**BIMEE-002 : PRODUCT DEVELOPMENT
AND DESIGN**

Time : 3 Hours]

[Maximum Marks : 70

Note : Answer any five questions. All questions carry equal marks.

1. (a) Discuss the role of technology forecasting in developing a new product. [7]
- (b) Compare and contrast the "Interview method" and "Questionnaire method" for design a product.[7]
2. (a) What is benchmarking ? With suitable example, elaborate on the significance of benchmarking in product development. [7]
- (b) Explain life cycle assessment. Describe its role in environment impact analysis. [7]

3. (a) What are the different phases of product design ? Explain them in brief. [7]
- (b) With the help of suitable examples explain man-machine interface. [7]
4. (a) Define 'Anthropometry'. Discuss the importance of anthropometric data in designing. [7]
- (b) Differentiate between 'need-based developments' and 'technology based developments'. [7]
5. (a) Describe 'Brain storming' technique. Discuss its advantages with suitable example. [7]
- (b) Explain the terms 'Utility concept', 'Utility value' and 'Utility index'. [7]
6. (a) What is the role of reliability in Product Design ? Discuss in brief. [7]
- (b) Explain different types of cost associated with break even analysis. [7]

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