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<p>B. Tech. (Sem. VII) (Main/Back) Examination, December-2012 Mechanical Engg. 7ME5 Product Development & Launching</p>		

Time : 3 Hours]

[Maximum Marks : 80

[Min. Passing Marks : 24

*Attempt any five questions. Selecting one question from each unit.
 All questions carry equal marks. Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used / calculated must be stated clearly.*

Use of following supporting material is permitted during examination.
 (Mentioned in form No. 205)

1. _____ Nil

2. _____ Nil

UNIT - I

- 1 Define 'Product Development'. Explain the different phases in the new product development process, with the help of a diagram indicating the sequence of various phases incurring.

2+10+4=16

OR

- 1 Classify the products from the point of view of new product development. Discuss the product development process for a process based product (give suitable example) and establish the difference from a customized product.

4+8+4=16

UNIT - II

- 2 Explain the various steps in need identification and analysis, while launching a new product in the market. Why the establishment of the 'Need of the product' is important task before launching a new product ? Justify.

12+4=16

OR



- 2 Discuss why accurate and precise statement of the problem in Engineering design (of a new product) is essential. How the specifications of a product are developed ? Discuss the details of the specifications for a standard product, giving appropriate examples.

4+6+6=16

UNIT - III

- 3 (a) Describe any three tools of creativity used for generation of alternatives and concept selection. Compare and contrast these with regard to their merits, demerits and applicability.
- (b) What are the barriers to creative thinking while developing the new product ? Discuss any two giving appropriate examples.

4+6=10

6

OR

- 3 (a) Explain the concept generation process and its dependence on creativity. How the feasibility of a design concept is tested ?
- (b) Differentiate between the specification limits and control limits. Give suitable example for classification.

8+4=12

4

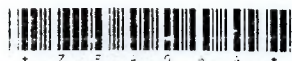
UNIT - IV

- 4 (a) Discuss the following : (any three)
- (i) Design for manufacturing
 - (ii) Aesthetics in new product design
 - (iii) Ergonomical considerations in product development.
 - (iv) Preparation of assembly drawings.
- (b) Discuss the purpose of design review. What information is collected before initiating a design review.

4×3=12

2+2=4

OR



4 (a) Describe the contents of a preliminary design and its subsystems (for a particular product). How the Quantity and design of the components involved in a product influences the reliability of the product.

8+4=12

(b) Discuss any two of the following :

- (i) Modular design
- (ii) Standardization (in design)
- (iii) Simplification (in design)

8

UNIT - V

5 (a) Discuss the role of Top Management in managing the launch of a new product successfully. How the Top Management support helps in promoting culture and creativity ?

4+3=7

(b) What are the challenges faced in managing the development and launch of a new product ? Give examples.

5

(c) Describe the organization of design team in brief.

4

OR

5 Explain any two of the following :

- (i) Project scheduling
- (ii) Project Task matrix
- (iii) Product launch strategies.

8x2=16

