

Roll No.

Total No. of Questions : 08]

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M.Tech.

PRODUCT DESIGN AND DEVELOPMENT

SUBJECT CODE : IE - 523 (Elective - IV)

Paper ID : [E0616]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) All questions carry equal marks.

- Q1)** (a) How creative ideas are located and how right product is selected?
(b) How curiosity and imagination is helpful in designing? Give examples.
(c) What is systematic procedure for product innovation?
- Q2)** (a) Discuss structural unit for new product development. What are the functions of new product development unit?
(b) What should be the qualification of product design engineer and what are the opportunities available for product design engineer?
- Q3)** (a) What are the preliminary studies to be made before designing? What do you understand by value of appearance? What are different types of value?
(b) Discuss various laws and principles of appearance. Also discuss how quality and reliability is incorporated in the design?
- Q4)** (a) What do you understand by man machine considerations in designing? What should be designing considerations for case of maintenance?
(b) Discuss sources of funds for development of product. How estimation of product cost is done? Explain.
- Q5)** (a) What are the different kinds of cost procedures? How cost reduction is done?
(b) Explain and discuss generation, screening and development of new product ideas.

- Q6)** (a) What is meant by product life cycle? Explain with suitable examples.
(b) How economic analysis is done after evaluation of new product ideas/concepts.
- Q7)** (a) What is value analysis?
(b) What is meant by diffusion of innovation?
(c) How test marketing of new product to be launched is done? Explain with examples.
- Q8)** (a) What is value? How value of a product is measured?
(b) What are different types of values?
(c) List and explain various economic factors influencing design.

