

**M.Tech.**

**PRODUCT DESIGN AND DEVELOPMENT**

**SUBJECT CODE : PE - 524 (Elective - IV)**

**Paper ID : [E0459]**

[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) What is difference between creative idea and innovation? Discuss various factors affecting product design.
- (b) Discuss various techniques of product designing. Explain in detail the product design methodology.
- Q2)** (a) Discuss the procedure of product development. What do you understand by product graphics?
- (b) What is product testing? How it is done?
- Q3)** (a) What is value? What are different types of values? Explain with suitable examples.
- (b) What do you understand by value engineering? What are advantages of value engineering?
- Q4)** (a) List various packaging materials available. Distinguish them in accordance with their characteristics.
- (b) What are various packaging design considerations? Discuss the applications of various packaging materials.
- Q5)** (a) How ergonomic considerations are useful in product design? What are various elements and concepts of visual design?
- (b) What are the principal requirements of good product design? What is importance of product design in industry?
- Q6)** (a) What is value analysis? What are various value engineering techniques? How value of a product is measured?

(b) How analysis of functions of product is done? Also list the ways by which functions of product are evaluated?

**Q7)** (a) What are the preliminary studies to be made before designing? What do you understand by value of appearance?

(b) How estimation of product cost is done? Explain.

**Q8)** (a) What do you understand by generation of idea? Give suitable example.

(b) How economic analysis is done after evaluation of new product ideas/concepts.

