

Total No. of Pages : 02

Roll No. 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Questions : 09

B.Tech. (EE / CSE / ECE / ME) (Sem.-7,8)  
**PRODUCT DESIGN AND DEVELOPMENT**

Subject Code : BTME-614-18

M.Code : 90482

Date of Examination : 02-12-2023

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

1. Answer briefly :

- a. What are the various product strategies?
- b. Explain Product Value.
- c. Define break even point.
- d. What do understand by house of quality?
- e. What do you mean by Ethics?
- f. Define allowances. What role does allowances have in product design?
- g. Write a short note on profit and competitiveness.
- h. Elaborate in detail "Functional Design Practice".
- i. What do you mean by 'Product Design'?
- j. Describe 'color as an element of design'.

## SECTION-B

2. What are the essential factors of Product Design? Write a brief note on morphology of design.
3. Describe concurrent engineering in detail. Write benefits of concurrent engineering.
4. Write a detailed note on "Casting design for economic molding".
5. Explain in detail Quality Function Deployment.
6. What do you understand by "Rapid Prototyping"? Explain its principle and applications in industry.

## SECTION-C

7.
  - a. Differentiate between "Design by Evolution" and "Design by Innovation".
  - b. Explain in detail "Production Consumption Cycle".
8. **Differentiate between producibility requirements in :**
  - a. Design of Machine Components
  - b. Pressed Component Design
  - c. Design for Machining Ease
  - d. Design for Powder Metallurgical parts.
9. **Explain :**
  - a. Break Even Analysis
  - b. Standardization, Simplification and Specialization.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**