

Total No. of Questions : 10]

SEAT No. :

P2984

[5154]-539

[Total No. of Pages : 2

B.E. (Mechanical)

PRODUCT DESIGN & DEVELOPMENT

(2012 Pattern) (Semester - I) (Elective - II) (402045B)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Neat diagrams must be drawn wherever necessary.*
- 2) Figures to the right side indicate full marks.*
- 3) Assume suitable data, if necessary.*

Q1) Elaborate the concept of Product Design Team. Explain any six Roles in Team in Detail. **[10]**

OR

Q2) a) Discuss in detail how Technical Questioning and Mission Statement contribute to Product Design Phase. **[6]**

b) Discuss the concept of Simplification and standardization. **[4]**

Q3) a) Explain Subtract and Operate Procedure Technique with suitable example. **[6]**

b) Discuss the concept of Functional Modeling. **[4]**

OR

Q4) a) What is Market Segment? Explain criteria affecting on Segmentation. **[6]**

b) What is necessity of Technology Forecasting? Explain. **[4]**

Q5) What is Product Tear Down? Explain the Tear Down Process in detail. Explain any two Techniques applied in Tear Down. **[18]**

OR

Q6) Define Benchmarking. What are objectives of Benchmarking? Explain the Procedure for Benchmarking. Explain any two tools applied in Benchmarking. **[18]**

Q7) a) Explain the guidelines of Design for Manufacture in detail. **[5]**

b) What are guidelines for Design for Safety? Discuss and Elaborate **[5]**

c) Explain the guidelines for Design for Casting. **[6]**

OR

P.T.O.

- Q8)** a) Discuss in detail Manufacturing Cost Analysis. [6]
b) Discuss various Regional and Global issues of Environmental Pollution. [6]
c) What are guidelines for Design for Robustness? Discuss. [4]

- Q9)** a) What is product Life Cycle? Elaborate the phases of life cycle with suitable example. [8]
b) Elaborate the concept of Product Life Cycle Management. [8]

OR

- Q10)** a) Explain the Elements of PLM in detail. [8]
b) Discuss the concept of Product Data and Product Work flow in PLM. [8]

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