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Total No. of Pages : 02

Total No. of Questions : 09

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

Subject Code : BTME-614-18

M.Code : 90482

Date of Examination : 06-05-2024

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. Write briefly :

- a) Write importance of product design in industry.
- b) What do you mean by design by innovation?
- c) Write various product design strategies.
- d) What do you mean by standardization of product design?
- e) Discuss economic aspects of product development.
- f) Differentiate between forging and casting design.
- g) Write a note on design of powder metallurgy parts.
- h) Write environmental considerations in product design.
- i) Define QFD.
- j) Write applications of rapid prototyping.

SECTION-B

2. Discuss in detail the product consumption cycle with the help of an example.
3. Explain basic design considerations in detail.
4. How to consider ease of location and clamping in design for production? Discuss.
5. Discuss the concept of break-even analysis with the help of an example.
6. Discuss in detail the modern approaches to product design.

SECTION-C

7. Write a note on following strategies in product design :
 - a) time to market
 - b) analysis of the product
 - c) functional design practice.
8. Discuss manufacturing and economic aspects of product development.
9. Discuss in detail the principles of rapid prototyping.

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.