

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

May 2023 Semester End Make-Up Examinations

Programme: B.E.

Branch: Industrial Engineering and Management

Course Code: 20IM5DEPDD

Course: Product Design & Development

Semester: V

Duration: 3 hrs.

Max Marks: 100

Date: 17.05.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I

- 1 a) Elaborate on the various Challenges of the Product Development process. **10**
- b) What are the reasons for following a well-defined development process? Explain. **10**

OR

- 2 a) What intrinsic attributes make Product Development “interesting yet challenging”? **10**
- b) Explain the product planning process taking an inkjet printer as an example **10**

UNIT - II

- 3 a) Elaborate on the art of eliciting customer needs. **10**
- b) What are the steps required to establish Target Specifications? **10**

UNIT - III

- 4 a) Why is a structured method preferable during the concept selection process? **10**
- b) What are the different ways to communicate concepts to the customer during Concept Testing? **10**

OR

- 5 a) What is the Concept Screening stage in Product Development? Explain briefly. **10**
- b) What are the different types of modularity used in Product Architecture? **10**

UNIT - IV

- 6 a) Explain the different phases in the Industrial Design process. **10**
- b) What are the purposes for which prototypes are required? **10**

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

UNIT - V

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|---|----|---|-----------|
| 7 | a) | What are the 3 conditions required for patentability of a product? | 10 |
| | b) | Discuss the following i) Copyright ii) Trademark iii) Registered Design | 10 |

B.M.S.C.E. - ODD SEM 2022-23