

Roll No.

Total No. of Pages : 01

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M.Tech (ME) (Sem.-2)

PRODUCT DESIGN AND DEVELOPMENT

Subject Code : MTME-213

M.Code : 74989

Date of Examination : 14-12-22

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. What is the product success strategy of an organization, and how does it affect the design of the product?
2. a) What is meant by new product development? Describe the functions of the new product development unit.
b) What is the difference between idea and concept? Illustrate with an example. Which tool is used to evaluate a concept?
3. What are the 7 steps required for product development? What are the major factors that contributes towards product reliability and safety?
4. a) How will you incorporate quality and reliability into the product design? Explain.
b) What do you understand by maintainability-based design? Explain with the help of a suitable example.
5. a) What are different cost procedures? Explain.
b) Explain the procedure of estimating the product cost in the product development process.
6. What is the principle of Rapid Prototyping? List out its applicable technologies and explain any two most applicable technologies.
7. Define Value Engineering. Explain the application of the value engineering concept with the help of two case studies.
8. Explain the following: a) Creative & Brainstorming techniques
b) Man-machine considerations in product design.

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.