



CBCS SCHEME

17ME835

Eighth Semester B.E. Degree Examination, June/July 2023 Product Life Cycle Management

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define PLCM. List and explain the different phases of Product Life Cycle Management (PLCM). (08 Marks)
- b. Explain the various components of PLCM. (06 Marks)
- c. Explain the opportunities and benefits of PLCM. (06 Marks)

OR

- 2 a. What is PLCM strategy? Explain in detail all elements of the strategy. (08 Marks)
- b. What is product data management? List the various advantages and limitations of PDM. (06 Marks)
- c. What do you mean by PLCM feasibility study? Explain. (06 Marks)

Module-2

- 3 a. Explain in detail with example the various steps involved in product design. (08 Marks)
- b. Discuss the importance of concurrent engineering in product design and development. (06 Marks)
- c. Write a short note on Product recycling. (06 Marks)

OR

- 4 a. What is design for 'X' in product design? List the various advantages of Design for X system in comparison to traditional design. (08 Marks)
- b. Briefly discuss the various human factors to be incorporated during product design. (06 Marks)
- c. Discuss the benefits of modelling and simulation in product design. (06 Marks)

Module-3

- 5 a. Define New Product Development (NPD). Explain in detail need and reasons for new product development. (08 Marks)
- b. What is Decision Support Systems (DSS)? Discuss the components for building DSS. (06 Marks)
- c. What are the different factors for estimating market opportunities for new product? (06 Marks)

OR

- 6 a. Discuss in detail the various steps involved in redesign of product. (08 Marks)
- b. Write a short note on "Launching and Tracking new product". (06 Marks)
- c. List the various steps involved in implementing new product development. (06 Marks)

Module-4

- 7 a. Explain the following in connecting with technology forecasting:
 - i) Brainstorming
 - ii) Trend Extrapolation
 - iii) Growth curve(08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8=50, will be treated as malpractice.

- b. Define technology change. What are the impacts of technological change on society? (06 Marks)
- c. Explain in detail why technological forecasting is important planning activities. (06 Marks)

OR

- 8 a. Discuss the use of morphological analysis in technological forecasting. (08 Marks)
- b. What are the basic approach behind integrating technological product innovation and product development with an enterprises. (06 Marks)
- c. Briefly explain the various methodologies and tools in product innovation process. (06 Marks)

Module-5

- 9 a. Explain the following in detail in connecting with product building :
i) Digital Mock-up
ii) 3D CAD System (08 Marks)
- b. Discuss the need and benefits of virtual product development. (06 Marks)
- c. Classify the product data technology (06 Marks)

OR

- 10 a. Explain in detail the following in connecting with product structures/building:
i) Variant Management
ii) Data Models. (08 Marks)
- b. Write a short note on "Product Configuration". (06 Marks)
- c. Explain in detail the categories of Status of items. (06 Marks)

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