

# CBCS SCHEME

17ME835



USN

--	--	--	--	--	--	--	--	--	--

**Eighth Semester B.E. Degree Examination, June/July 2023**

## **Product Life Cycle Management**

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)

- 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 (08 Marks)
- ii) 3D CAD System (06 Marks)
- b. Discuss the need and benefits of virtual product development. (06 Marks)
- c. Classify the product data technology (06 Marks)

CMRIT LIBRARY  
BANGALORE - 560 037

OR

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

\*\*\*\*\*