



B.E DEGREE EXAMINATIONS: NOV/DEC 2022

(Regulation 2018)

Seventh Semester

MECHANICAL ENGINEERING

U18MEE0025 Product Lifecycle Management

COURSE OUTCOMES

- CO1: Apply concepts of product lifecycle management and visioning
 CO2: Apply relative importance of product concepts, processes and workflow
 CO3: Apply principles of collaborative product development
 CO4: Outline considerations in system architecture understand the industrial process
 CO5: Apply product lifecycle management strategy and assessment of current systems and applications.
 CO6: Apply the infrastructure assessment, assessment of current systems and applications.

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

(Answer not more than 40 words)

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|--|-----|-------------------|
| 1. State product lifecycle management. | CO1 | [K ₂] |
| 2. Mention the PLM stages in which negative cash flow will occur. | CO1 | [K ₂] |
| 3. Write down few characteristics of product lifecycle management | CO2 | [K ₂] |
| 4. List down the major elements of product lifecycle management. | CO2 | [K ₁] |
| 5. Write a short note on product reuse. | CO3 | [K ₂] |
| 6. State the importance of Engineering Change request. | CO3 | [K ₂] |
| 7. Distinguish fundamental and incidental interactions, in system architecture. | CO4 | [K ₂] |
| 8. Write a short note on interaction matrix. | CO4 | [K ₂] |
| 9. Mention the importance of assessing the current systems, during PLM implementation. | CO5 | [K ₂] |
| 10. List out few considerations carried out during PLM assessment. | CO5 | [K ₂] |

Answer any FIVE Questions:-

PART B (5 x 16 = 80 Marks)

(Answer not more than 400 words)

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|-------|---|----|-----|-------------------|
| 11. a | Discuss the business value framework of digital thread in detail, with a neat sketch. | 8 | CO1 | [K ₂] |
| b | Classify the Enovia PLM Centrals, based on their major heads. | 8 | CO1 | [K ₂] |
| 12. | Describe conceptualization, design, development, and validation in detail. | 16 | CO2 | [K ₂] |

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|-----|--|----|-----|-------------------|
| 13. | Explain the engineering change management with its major components. | 16 | CO3 | [K ₂] |
| 14. | Explain the incidental interaction graph in detail, with the help of a case study. | 16 | CO4 | [K ₃] |
| 15. | Describe in detail about the importance of vision of tomorrow, in strategic planning. | 16 | CO5 | [K ₂] |
| 16. | Explain the behavior of customer relationship management and supply chain management, in terms of elements of PLM, with a neat sketch. | 16 | CO2 | [K ₂] |
