



**B.E DEGREE EXAMINATIONS: APRIL / MAY 2023**

(Regulation 2018)

Seventh Semester

**AERONAUTICAL ENGINEERING**

U18AEE0220: Product Life Cycle 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  
**CO6:** Apply the infrastructure assessment, assessment of current systems and applications.

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

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|--|-----------------------|
| 1. List the stages of Product lifecycle                  | CO1 [K <sub>1</sub> ] |
| 2. Write a short note on SaaS Solutions.                 | CO1 [K <sub>2</sub> ] |
| 3. Mention few characteristics of Maturity level in PLM. | CO2 [K <sub>2</sub> ] |
| 4. Write a short note on Conceptualization.              | CO2 [K <sub>2</sub> ] |
| 5. Mention the importance of engineering vaulting.       | CO3 [K <sub>2</sub> ] |
| 6. List out few objectives of Design for Environment.    | CO3 [K <sub>2</sub> ] |
| 7. Classify the interactions between chunks              | CO4 [K <sub>2</sub> ] |
| 8. Write a short note on system architecture.            | CO4 [K <sub>2</sub> ] |
| 9. Explain the term "Product Data"                       | CO5 [K <sub>1</sub> ] |
| 10. List the Importance of Product Data in PLM           | CO6 [K <sub>2</sub> ] |

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**(Answer not more than 400 words)**

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|---|-----------------------|
| 11. Discuss about Product Lifecycle Management Visioning.                               | CO1 [K <sub>2</sub> ] |
| 12. Explain the elements of Product Lifecycle Management in detail, with a neat sketch. | CO2 [K <sub>2</sub> ] |

13. Explain the Engineering Change Management in detail. CO3 [K<sub>2</sub>]
14. a) Explain the various types of Product Data with example. 8 CO4 [K<sub>2</sub>]  
b) Explain the following features of PLM systems. 8 CO4 [K<sub>2</sub>]  
i) Bill of Materials (BOM)  
ii) Computer-Aided Design (CAD) Tools and Management  
iii) Product Data Management (PDM)  
iv) Product Regulation and Governance
15. a) Explain the four elements of PLM strategy. 8 CO5 [K<sub>2</sub>]  
b) With the aid of Advanced Market Research studies, prove the impact on the organization of developing a strategy for PLM? 8 CO5 [K<sub>3</sub>]
16. Explain the important parameters to be considered while conducting infrastructure assessment in PLM. CO6 [K<sub>2</sub>]

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