

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Third Semester

Product Design and Development

PD4391 - Product Lifecycle Management

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART - A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Identify the need for product lifecycle management (PLM).	UN	1	2
2.	Infer heterogeneous data sources and their importance in PLM.	UN	1	2
3.	Outline the purpose of data vault in PLM systems.	AN	2	2
4.	Define application integration and its relevance to PLM.	RE	2	2
5.	List the primary function of the document management module in APDM/PLM software.	RE	3	2
6.	Identify the functionalities that workflow management module provides in an APDM system.	UN	3	2
7.	Summarize the key factors influencing PLM selection in the automotive sector.	AN	4	2
8.	Outline the barriers to PLM implementation.	AN	4	2
9.	Identify the main reasons organizations opt for PLM customization.	UN	5	2
10.	State the significance of integrating PLM with service lifecycle management (SLM).	UN	5	2

PART - B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Explain the essential components of a PLM/PDM infrastructure.	UN	1	7
	ii Explain the different views of PLM.	UN	1	6
	Or			
	b Illustrate Product Data Management (PDM) and Collaborative Product Definition Management (CPDM).	UN	1	13
12.	a Explain workflow and process management within PLM. How do these functions streamline product development and ensure adherence to organizational processes?	UN	2	13
	Or			
	b i Describe product structure management and its significance in managing complex product hierarchies.	UN	2	8
	ii Enumerate the role of data transport and data translation in the context of PLM.	UN	2	5

13.	a	Outline the role of Autodesk Fusion lifecycle in a small to medium-sized enterprise (SME) specializing in custom machinery. Explain how did the implementation of this cloud-based PLM solution transform their product lifecycle management and improve efficiency.	AN	3	13
		Or			
	b	Summarize the impact of a specific PDM system on a company's product development process. In your analysis, highlight the key features and characteristics of the PDM tool that contributed to increased efficiency and collaboration among teams.	AN	3	13
14.	a	Discuss the ten-step approach to PLM implementation as applied in a case study of a consumer goods company.	UN	4	13
		Or			
	b	Enumerate the role of change management in the successful implementation of PLM systems and the strategies employed to overcome resistance and ensure user adoption.	UN	4	13
15.	a	Explain the role of Enterprise Application Integration (EAI) technology (middleware) in PLM systems.	UN	5	13
		Or			
	b	Illustrate the challenges and strategies involved in integrating PLM with legacy databases.	UN	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Choose a commercial PLM tool and outline its application in the aerospace or automotive industry. Summarize how the unique features of the tool helped in complying with industry regulations and standards while managing product data.	AN	3	15
		Or			
	b	Outline the impact of PLM on organizational effectiveness in a manufacturing company. In your discussion, summarize how PLM facilitated better project management and resource allocation.	AN	4	15