Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. (Full Time) - END SEMESTER EXAMINATIONS, APRIL/MAY 2025

Manufacturing Engineering
VI Semester
ME5083 PRODUCT LIFE CYCLE MANAGEMENT
(Regulation 2019)

Time: 3hrs Max.Marks: 100

CO 1	Explain the history, concepts and terminology of PLM
CO 2	Apply the functions and features of PLM/PDM
CO 3	Apply different modules offered in commercial PLM/PDM tools.
CO 4	Implement PLM/PDM approaches for industrial applications.
CO 5	Integrate PLM/PDM with legacy data bases, CAx & ERP systems

BL – Bloom's Taxonomy Levels
(L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

PART- A (10 x 2 = 20 Marks)
(Answer all Questions)

Q. No	Questions	Marks	CO	BL
1	Give any four examples of product data in PLM paradigm.	2	1	L1
2	When does a firm require PDM software?	2	1	L2
3	Differentiate Utility functions and User functions of a PLM software.	2	2	L2
4	Mention the significance of system administration function in PLM.	2	2	L1
5	Mention any 4 capabilities of WINDCHILL PLM.	2	3	L1
6	Mention any 4 capabilities of ARAS PLM.	2	3	L1
7	What are the barriers to the implementation of PLM?	2	4	L1
8	Why does a satisficing mindset considered a success factor in PLM implementation strategy.	2	4	L1
9	What are the different softwares that may need to integrate with PLM software.	2	5	L1
10	What is Sales Configurator in PLM.	2	5	L1

PART- B (5 x 13 = 65 Marks)

Q. No	Questions	Marks	CO	BL
11 (a)	Analyse the role of Engineering Data Management in product life cycle with necessary sketches.	13	1	L4
	OR			
11 (b)	Compare and contrast the differences between Product Content Collaboration (PCC), Collaborative Product Definition Management (CPDM) and Collaborative Product Commerce (CPC).	13	1	L4

12 (a)	Illustrate the Workflow Management and Program Management functions of PLM software.	13	2	L3
	OR			
12 (b)	Illustrate the Product Structure management and Classification Management functions of PLM software.	13	2	L3
13 (a) (i)	Review any 5 modules of TEAMCENTER PLM software.	10	3	L4
13 (a) (ii)	How does the TEAMCENTER PLM software support Industry 4.0.	3	3	L4
	OR			
13 (b) (i)	Review any 5 modules of ENOVIA PLM software.	10	3	L4
13 (b) (ii)	How does the ENOVIA PLM software support Industry 4.0.	3	3	L4
14 (a)	Analyse the ten-step approach involved in the PLM and explain how each activity supports effective PLM implementation.	13	4	L4
	OR			
14 (b)	Evaluate the reasons for developing PLM vision and factors that have an impact on PLM while starting the visioning process	13	4	L4
15 (a)	Compare and Contrast different methods of integration of PLM.	13	5	L3
	OR			
15 (b)	Apply the concept of CAD and PLM integration to describe how engineering data is managed efficiently.	13	5	L3

PART- C (1 x 15 = 15 Marks)

(Q.No.16 is compulsory)

Q. No	Questions	Marks	CO	BL
16.	Develop a PLM software solution with the necessary basic and advanced features and functions that meets the requirements of trends in modern manufacturing. The software is expected to not only handle the traditional tasks but also adapts to world of smart manufacturing.	15	3	L5