



# PRESIDENCY UNIVERSITY

BENGALURU

Roll No.													
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## End - Term Examinations – MAY 2025

Date: 29-05-2025

Time: 09:30am – 12:30pm

<b>School:</b> SOE	<b>Program:</b> B.Tech. [MECHANICAL ENGINEERING]	
<b>Course Code:</b> MEC4010	<b>Course Name:</b> Product Life Cycle Management	
<b>Semester:</b> VI	<b>Max Marks:</b> 100	<b>Weightage:</b> 50%

CO - Levels	C01	C02	C03	C04	C05
Marks	16	14	24	24	22

### Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

### Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Define Product Life Cycle Management	2 Marks	L1	C01
2.	What is the meaning of Bill of Materials (BOM)?	2 Marks	L1	C03
3.	What is the purpose of recording the Phase in a BOM?	2 Marks	L1	C03
4.	What are the key components of Digital Manufacturing?	2 Marks	L1	C04
5.	Define Digitization.	2 Marks	L1	C04
6.	What is Strategy in business?	2 Marks	L1	C05
7.	What are the key stages of the Product Life Cycle?	2 Marks	L1	C01
8.	List and explain any two internal drivers of PLM.	2 Marks	L2	C02
9.	How does Engineering Change Management (ECM) contribute to PLM?	2 Marks	L2	C02
10.	What are the benefits of PLM implementation in an organization?	2 Marks	L1	C01

## Part B

**Answer the Questions.**

**Total Marks 80M**

11.	a.	What is the role of document management in PLM? How does it help with centralized data sharing?	10 Marks	L3	C01
	b.	Explain the drivers of PLM and their impact on the product development process.	10 Marks	L2	C02
Or					
12.	a.	Explain the concept of Product and Process Verification in PLM with real-world applications.	10 Marks	L2	C01
	b.	Explain the drivers of PLM and their impact on the product development process.	10 Marks	L2	C02
13.	a.	Evaluate how BOM management improves supplier collaboration.	10 Marks	L2	C03
	b.	Suggest a digital strategy to optimize BOM management across geographically distributed teams.	10 Marks	L3	C03
Or					
14.	a.	Examine how using Single Level BOM vs Multilevel BOM affects product complexity management.	10 Marks	L3	C03
	b.	How can a company manage multiple revisions of a BOM during a product's lifecycle?	10 Marks	L2	C03
15.	a.	How could Digital Manufacturing help reduce ramp-up time for a new product?	10 Marks	L2	C04
	b.	Analyze the role of Digital Twins in predictive maintenance.	10 Marks	L4	C04
Or					
16.	a.	Apply IoT integration to improve real-time production monitoring	10 Marks	L3	C04
	b.	Evaluate challenges faced during Digital Transformation of manufacturing.	10 Marks	L5	C04
17.	a.	Suggest how to measure the success of a PLM Strategy implementation.	10 Marks	L3	C05
	b.	Apply the concept of PLM Templates to simplify requirement gathering	10 Marks	L3	C05
Or					
18.	a.	Evaluate the risks of choosing the wrong PLM software vendor.	10 Marks	L5	C05
	b.	Propose a strategy for role-based PLM user training in a manufacturing organization.	10 Marks	L6	C05