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Code No. : 18532 (B) N/O

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS), HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (Mech. Engg.) VIII-Semester Main & Backlog Examinations, May-2023

Product Life Cycle Management (PE-VI)

Time: 3 hours

Max. Marks: 60

Note: Answer all questions from Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	List the threads of PLM and mention their role in the implementation of PLM.	2	1	1	1
2.	How singularity of data helps in the implementation of PLM?	2	1	1	1
3.	Define Product Data Management.	2	1	2	1
4.	What is Metadata with respect to Product Data Management?	2	1	2	1
5.	Distinguish Bill of Materials and Bill of Processes.	2	3	3	1
6.	How digital Mockup helps in reduction of costs in an industry?	2	1	3	1,5
7.	List the various CAD Data formats.	2	1	4	1
8.	Define Parameterization of design.	2	1	4	1
9.	Discuss the Ramp-up stage in Digital Manufacturing.	2	4	5	1,5
10.	What is Capability Maturity Model?	2	1	5	1
Part-B (5 × 8 = 40 Marks)					
11. a)	Sketch the PLM graph and explain all its stages.	4	2	1	1
b)	Discuss any four characteristics of PLM in detail.	4	2	1	1
12. a)	Explain how Product Data Management is beneficial for an industry.	4	2	2	1
b)	What is versioning? What are the advantages of having data versions?	4	1	2	1
13. a)	Distinguish Start parts and Smart parts.	4	3	3	1
b)	With an Example, Explain how virtual testing of objects is advantageous to the company in cutting down costs.	4	2	3	2,3
14. a)	How to create assembly instructions using 3DVIA composer?	4	1	4	1,5
b)	Discuss the best practices in Product design optimization.	4	2	4	1

Contd... 2

15. a)	Briefly explain every factor that impacts the Manufacturing of the first component in Digital Manufacturing.	4	1	5	1,5
b)	With the help of a graph, Explain how leadership effects the strategy of PLM?	4	3	5	1
16. a)	Discuss any two Internal and two External drivers of PLM.	4	2	1	1
b)	Explain how a uniform Set of BOM helps in the implementation of PDM in an industry?	4	2	2	1
17.	Answer any <i>two</i> of the following:				
a)	Engineering Change Management.	4	1	3	1
b)	Creation of pdf for 3D CAD drawing.	4	1	4	1,5
c)	Impact of a strategy.	4	1	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	50%
ii)	Blooms Taxonomy Level – 2	30%
iii)	Blooms Taxonomy Level – 3 & 4	20%
