Register No : ________________

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025

First Semester

Product Design and Development

PPDT2414 - Integrated Product Development

Regulations – 2024

Duration: 3 Hrs *Maximum: 100 Marks*

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

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Define integrated product design.	L1	1	2
2.	List down the steps for identifying customer needs.	L2	1	2
3.	Mention the impact of brainstorming in concept generation.	L2	2	2
4.	How the products quality is quantified mathematically?	L2	2	2
5.	Write in short about “Delayed Differentiation”.	L2	3	2
6.	Write about related system level design issues.	L1	3	2
7.	Define Robust design.	L1	4	2
8.	List out the factors that influence on DFM decisions.	L1	4	2
9.	Outline about break-even point in a project.	L1	5	2
10.	Recall about the role of project managers during project execution.	L2	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*16= 80)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
11.	a	Discuss the role of Cross functional teams in product development, using an example to highlight benefits.	L3	1	16
		Or			
	b	Explain how customer feedback is incorporated into the product planning process. Describe how you would use customer input to refine a product before its final launch.	L3	1	16
12.	a	Explain the process of prioritizing and defining product specifications when customer requirements vary.	L3	2	16
		Or			
	b	Discuss the impact of a weighted scoring system. Using a scoring matrix, analyze how weighting criteria influence final concept selection.	L3	2	16
13.	a	Summarize the main steps in establishing product architecture along with its functional and physical elements.	L2	3	16
		Or			
	b	Discuss the factors that influence the quality of industrial design with the key stages in managing and accessing the process.	L2	3	16

14.	a	Illustrate the procedure in estimation of manufacturing cost and reducing the component costs with some real time examples.	L4	4	16
		Or			
	b	Outline various types of prototyping technologies used in industrial sectors and state the steps in planning prototype development.	L4	4	16
15.	a	Interpret the difference between fixed costs and variable costs. How do these concepts impact economic analysis in a business context?	L3	5	16
		Or			
	b	Describe the concept of baseline project planning along with the primary components of a project baseline.	L3	5	16