Register No : ____________________

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

M.E DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Third Semester

Product Design and Development

PD4004–Quality and Financial Concepts in Product Development

Regulations - 2021

Duration : 3 Hrs ***Maximum : 100 Marks***

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

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	List the seven tools of quality.	L1	1	2
2.	Differentiate between producer’s risk and consumer’s risk.	L2	1	2
3.	Describe the bench marking process.	L2	2	2
4.	List the applications of QFD.	L2	2	2
5.	Why do we need six sigma?	L2	3	2
6.	List the objectives of TPM.	L1	3	2
7.	Differentiate robust design and embodiment design.	L2	4	2
8.	Write the objectives of FEMA.	L1	4	2
9.	Outline the functional areas of financial management.	L1	5	2
10.	Discuss the significance of risk and uncertainty in investment decision making.	L2	5	2

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

Q.No			*Questions*	*BLT*	*CO*	*Marks*
11.	a		Explain the multivariable chats and 3D plot with suitable example.	L3	1	16
			Or			
	b		Construct and explain the pareto diagram with suitable example.	L3	1	16
12.	a		Create the QFD of washing machine and discuss it.	L5	2	16
			Or			
	b	i	Explain the reliability design process with neat sketch.	L3	2	8
		ii	Find out the system reliability for a serial and parallel configuration with two components.	L3	2	8

13.	a	Explain the concept and objectives of six sigma with suitable example.	L3	3	16
		Or			
	b	Demonstrate the lean manufacturing process with suitable example.	L4	3	16
14.	a	Explain the three phases of embodiment design activities with suitable example.	L3	4	16
		Or			
	b	Explain the four stages of FEMA methodology.	L3	4	16
15.	a	Analyze the functions of financial manager in large industrial establishments.	L4	5	16
		Or			
	b	Explain the significance and assessment of working capital management.	L3	5	16