

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***UG/PG DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2026*****Second Semester******Product Design and Development*****PPDT2424 - DESIGN FOR MANUFACTURE AND ASSEMBLY*****Regulations - 2024******Duration: 3 Hrs.******Maximum: 100 Marks******PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)***

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	List the types of tolerance analysis.	L1	1	2
2.	Differentiate between linear and non-linear tolerance analysis.	L2	1	2
3.	Write about Taguchi quality loss function.	L2	2	2
4.	Mention the advantages of quadratic loss function in tolerancing.	L2	2	2
5.	Define form controls in GD&T.	L1	3	2
6.	Write about tolerance of position in GD&T.	L2	3	2
7.	State arithmetic ground rules for tolerance charts.	L1	4	2
8.	Why is tolerance buildup analysis important?	L1	4	2
9.	List DFM guidelines for casting design.	L1	5	2
10.	What is the Boothroyd and Dewhurst method of DFMA?	L2	5	2

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

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11. a	Illustrate Taguchi's approach to tolerance design with a case study.	L3	1	16
	Or			
b	Critically analyze the effects of tolerance variations on product performance.	L3	1	16
12. a	Explain the role of computer-aided tolerancing in modern manufacturing.	L2	2	16
	Or			
b	Describe the effectiveness of selective assembly in minimizing tolerance issues.	L2	2	16
13. a	Explain the fundamental concepts of GD&T with practical applications.	L2	3	16
	Or			

	b	Discuss the various types of tolerance controls in GD&T.	L2	3	16
14.	a	Evaluate the importance of tolerance charting in manufacturing accuracy.	L4	4	16
		Or			
	b	Evaluate the use of automated tolerance charting software in modern industries.	L4	4	16
15.	a	Explain the role of DFMA in reducing manufacturing costs.	L2	5	16
		Or			
	b	Evaluate the effectiveness of non-metallic part DFM guidelines.	L2	5	16
