Reg. No.															

Question Paper Code	13685

M.E. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Second Semester

M.E. - CAD/CAM

24PCDPC201 - DESIGN FOR MANUFACTURE, ASSEMBLY AND ENVIRONMENTS

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Write the importance of evaluation of concept.	2	K1	CO1
2.	Define process capability.	2	K1	CO1
3.	List out the factors involved in form design.	2	K1	CO2
4.	List the various Steps involved in Material choice.	2	K1	CO2
5.	Classify the types of keyways.	2	K2	CO3
6.	Distinguish between clampability and accessibility.	2	K2	CO3
7.	Summarize the various factors involved in uneconomical design.	2	K2	CO4
8.	List the merits of implementing computer application in DFMA process.	2	K1	CO4
9.	State the objectives of Environmental design.	2	K1	CO5
10.	Explain Design for disassembly.	2	K2	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Describe the design principle for manufacturability in DFMA.	13	K2	CO1
		OR			
	b)	Explain in details about the assembly limits, datum features and to tolerance stack.	13	K2	CO1
12.	a)	Explain the various steps for material selection in the form design.	13	K2	CO2
		OR			
	b)	Explain in detail about the impact of various defects in welding and casting Process in form design.	13	K2	CO2
13.	a)	Explain in detail economic and product design considerations in casting.	13	K2	CO3
		OR			

	b)	Explain the significance of machinability in the DFMA associated with Machining process with neat sketch.	*13*	*K2*	*CO3*
14.	a)	Explain the methods of redesigning of castings based on parting line.	*13*	*K2*	*CO4*
		OR			
	b)	Explain the various computer applications in DFMA process with neat sketch.	*13*	*K2*	*CO4*
15.	a)	Discuss the design for the environment. Explain the design guidelines for DFE.	*13*	*K2*	*CO5*
		OR			
	b)	Summarize the list and explain techniques used to reduce environment impacts.	*13*	*K2*	*CO5*

PART - C (1 × 15 = 15 Marks)

16.	a)	Explain the procedure for how components are manufactured in the industries based on machining area with neat sketch.	*15*	*K2*	*CO3*
		OR			
	b)	Outline DFMA in forging with example.	*15*	*K2*	*CO3*