Reg. No. : | | | | | | | | | | | | |

Question Paper Code:U2101

M.E. DEGREE EXAMINATION, APRIL/ MAY 2025

Second Semester

CAD / CAM

21PCD201 -DESIGN FOR SUSTAINABILITY

(Regulations 2021)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1.	(a)	Compare the position tolerancing and the symmetry tolerancing in the assembly of electronic enclosures.	CO1- U	(20)
		Or		
	(b)	Interpret the influence of new material technologies on process selection for electrical components.	CO1- U	(20)
2.	(a)	Select methods to minimize distortion in arc-welded assemblies and explain it in detail.	CO2- App	(20)
		Or		
	(b)	Choose suitable weld joint designs to optimize the strength of a bridge structure and provide suitable explanations with examples.	CO2- App	(20)
3.	(a)	Select and explain the design principles for deep-drawn components in consumer electronics.	CO3- App	(20)
		Or		
	(b)	Identify and explain the critical design aspects for optimizing material flow in metal extrusion.	CO3- App	(20)
4.	(a)	Apply and explain DFMA techniques to minimize the number of parts in a consumer product.	CO4- App	(20)
		Or		
	(b)	Identify and explain the impact of achieving larger machining tolerances on overall assembly quality.	CO4- App	(20)

5.	(a)	Organize the effect of regulatory standards on sustainable product design. Explain it in detail with a suitable product.	CO5- App	(20)
		Or		
	(b)	Apply weighted sum assessment methods to rank eco-friendly alternatives for product design. Explain it in detail with a suitable product.	CO5- App	(20)