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

Question Paper Code:92P02

M.E.DEGREE EXAMINATION, MAY 2024

CAD/CAM

19PCD202 - Applied Materials Engineering

(Regulation 2019)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1.	(a)	Classify the crystal defects based on their dimensions. With suitable illustrations describe their features and significance.	CO1-Ana	(20)
		Or		
	(b)	The strength of resin and glass fiber are 120 and 800MPa, a composite of strength of 180Mpa is needed, find the amount of fiber to be added.	CO1-Ana	(20)
2.	(a)	How is the fatigue growth study on a compact tensile specimen conducted and the results plotted? What is Paris equation? State its use.	CO2-U	(20)
		Or		
	(b)	Write note on low cycle fatigue test and its outcome.	CO2- U	(20)
3.	(a)	Explain in detail about creep failure of steel.	CO3- U	(20)
		Or		
	(b)	How the selection of materials is done by based on mechanical properties. Explain in detail.	CO3-U	(20)
4.	(a)	What are the constituents of a composite. Write note on Fiber reinforced plastics(FRP).	CO4- U	(20)
		Or		
	(b)	List the properties and applications of any four thermosetting plastics.	CO4- U	(20)

5.	(a)	Give the various elements on weldability and explain the various defects of welding.	CO5-U	(20)
		Or		
	(b)	Write note on functionality gradient materials.	CO5-U	(20)