24 JAN 2023

Reg. No.												

Question Paper Code	11673

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

Fourth Semester

Mechanical Engineering

20MEPC403 - COMPUTER AIDED DESIGN AND MANUFACTURING

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level,CO
1.	Define the design conceptualization.	*2,K1,CO1*
2.	Define Concurrent engineering.	*2,K1,CO1*
3.	What are the important properties of Bezier Curve?	*2,K1,CO2*
4.	Define Surface patch.	*2,K1,CO2*
5.	What is visual realism?	*2,K1,CO3*
6.	What are simulation models?	*2,K1,CO3*
7.	Define graphics standards.	*2,K1,CO4*
8.	What is the Graphical Kernel System (GKS)?	*2,K1,CO4*
9.	List the elements of NC system.	*2,K1,CO5*
10.	Give the general form of a program line.	*2,K1,CO5*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Elaborate on the basic requirements that CAD software has to satisfy.	*13,K2,CO1*
		OR	
	b)	What is meant by Interactive Computer Graphics? Explain its various elements.	*13,K2,CO1*
12.	a)	Discuss the modeling guidelines to be followed by the user while constructing a surface model as a CAD/CAM system.	*13,K3,CO2*
		OR	
	b)	Briefly explain CSG and B–Rep of solid modeling techniques.	*13,K3,CO2*
13.	a)	Explain Z buffer algorithm with its operations.	*13,K2,CO3*
		OR	
	b)	Explain various shading techniques with neat sketch.	*13,K2,CO3*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

14. a) Compare various testing methods of IGES processors. *13,K2,CO4*

OR

b) Explain about Graphics Kernel System (GKS). *13,K2,CO4*

15. a) Explain the various elements of NC machines with a closed loop control system and its implications on NC control. *13,K2,CO5*

OR

b) Briefly explain the Canned cycle in manual part programming. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Describe the various database models which are generally used. *15,K3,CO3*

OR

b) With the aid of block diagram explain the steps involved in computer assisted part programming. *15,K3,CO3*