Reg. No.											

Question Paper Code	11491

B.E./B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022
Sixth Semester
Mechanical Engineering
ME8691- COMPUTER AIDED DESIGN AND MANUFACTURING
(Regulations 2017)

Duration: 3 Hours   Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks, K-Level, CO
1.	What is Homogeneous Coordinates? Give Examples.	2,K2, CO1
2.	What are the main types of 2D transformations?	2,K2, CO2
3.	What do you meant by curve and continuity?	2,K2, CO2
4.	Compare PHIGS and IGES.	2,K2,CO3
5.	What are metafile standards?	2,K2,CO3
6.	Write the difference between incremental and absolute system.	2,K2,CO4
7.	List the features of NC part programming.	2,K1, CO4
8.	List out the differences between NC and CNC Systems.	2,K1,CO5
9.	Mentions the benefits of Group Technology.	2,K2,CO5
10.	What is a flexible manufacturing system?	2,K2,CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11.	a)	(i) Explain any two 2D Transformations with appropriate examples.	04, K2,CO1
		(ii) Explain DDA Line Drawing Algorithm.	09,K2, CO1

OR

	b)	With a block diagram describe the various stages involved in product life cycle process in CAD/CAM.	13,K2 ,CO1

12.	a)	Explain in detail about the representation, and characteristics of Bezier Curves. Provide adequate sketches.	13,K2,CO2

OR

	b)	Discuss surface modeling. Discuss the various types of it in component drawing techniques.	13,K2,CO2

13.	a)	What is Graphic Kernel System? Explain the functions of GKS in detail.	13,K2,CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **11491**

1

OR

b) Explain IGES with its description, data representation, file structure and format, processors.
13,K2,CO3

14. a) Explain the main difference between point to point and continuous path of numerically controlled machine tools, with a specific example.
13,K2,CO4

OR

b) Compare and contrast NC with CNC machine tools.
13,K1,CO4

15. a) Explain the working of CNC machines with neat sketch.
13,K2,CO5

OR

b) Write a manual part program for Simple Turning Operation for the component shown in figure below. (All dimensions are in mm)
13,K3,CO5
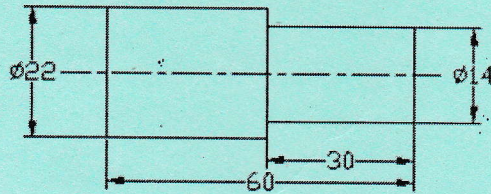
PART - C (1 × 15 = 15 Marks)

16. a) Formulate different STEP architecture with neat sketch and justify the suitable one for graphics standard.
15,K2, CO6

OR

b) Explain Part families and classification methods in Group Technology.
15,K2, CO6