R18

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year I Semester Regular Examinations Feb-2021
CAD/CAM
(Mechanical Engineering)

Time: 3 hours   Max. Marks: 60

PART-A
(Answer all the Questions 5 x 2 = 10 Marks)

1	a	List the types of 2D geometric transformation	2M
	b	What is the main drawback of wire frame modeling?	2M
	c	Write the main functions of CNC.	2M
	d	Define Group Technology (GT).	2M
	e	State the functions of shop floor control	2M

PART-B
(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2	a	With neat sketch explain the main elements of CIM systems.	5M
	b	Briefly explain the term scaling, translation and rotation used in Graphics.	5M

OR

3	a	Describe briefly about 2D and 3D transformations.	5M
	b	Briefly explain the computer graphics and Graphics package functions.	5M

UNIT-II

4	a	Explain the Constructive Solid Geometry (CSG) method to create models.	5M
	b	Explain about Parametric and non-Parametric representations.	5M

OR

5	a	Compare 2-D and 3-D wire frame models.	5M
	b	Describe briefly about B-spline surface modeling with a few application example.	5M

UNIT-III

6	a	Differentiate Manual part programming and Computer assisted part programming.	5M
	b	Briefly explain about NC Coordinate systems.	5M

OR

7	a	Explain detail about cutter radius compensation.	4M
	b	List out and explain about basic components of CNC system.	6M

UNIT-IV

8	a	Short notes on Part families and manufacturing system.	5M
	b	Briefly explain optical non-contact inspection methods.	5M

OR

9	a	Explain detail about Machine cell design.	4M
	b	Write brief notes on Group Technology and parts classification and coding.	6M

UNIT-V

10	a	Explain the generative CAPP type system with neat sketch.	5M
	b	Write advantage and disadvantage of computer aided processes planning.	5M

OR

11	a	Explain capacity planning in detail.	5M
	b	Write short notes on MRP-II with advantage and disadvantage.	5M

END