

HALL TICKET NUMBER

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PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

IV B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH-2023

CAD/CAM

(Common to ME & AME Branches)

Time: 3 hours

Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-AAnswer **all** the questions in Part-A (5X2=10M)

Q.No.	Questions	Marks	CO	KL
1.	a) Write the applications of CAD	[2M]	1	1
	b) Define geometric modeling	[2M]	2	1
	c) Write about the NC coordinate system for prismatic parts	[2M]	3	1
	d) What is the motivation for the development of GT?	[2M]	4	1
	e) Differentiate between inspection and testing	[2M]	5	5

PART-BAnswer **One** Question from each UNIT (5X10=50M)

Q.No.	Questions	Marks	CO	KL
UNIT-I				
2.	a) Explain the conventional product development cycle and explain why CAD is needed	[5M]	1	2
	b) What are various input devices used in CAD? Explain any one of them	[5M]	1	1
OR				
3.	a) Write the benefits of CAD over conventional design	[5M]	1	1
	b) What do you understand by interactive computer graphics? Explain	[5M]	1	1
UNIT-II				
4.	a) Enumerate various requirements of geometric models	[5M]	2	3
	b) What are various surface modelling techniques used in CAD? Explain B-Rep in detail	[5M]	2	1
OR				
5.	a) Explain the characteristics of a B-Spline curve.	[5M]	2	2
	b) Derive the parametric equation of a Bezier curve	[5M]	2	3
UNIT-III				
6.	a) Describe the functions of the basic components of an NC system	[5M]	3	3
	b) Write about absolute Vs Incremental programming with a suitable example	[5M]	3	1
OR				
7.	a) With a neat sketch, explain the working of Distributed Numerical Control	[5M]	3	3
	b) Explain various components of MCU of a CNC machine	[5M]	3	1
UNIT-IV				
8.	a) Explain any one of the coding systems popularly used in GT	[5M]	4	2
	b) What do you understand by CAPP? Explain generative CAPP system	[5M]	4	1
OR				
9.	a) Explain the importance of Production planning and control	[5M]	4	2
	b) What is a group technology cell? Explain	[5M]	4	1

UNIT-V					
10.	a)	What are the functions of human operator in FMS? Explain	[5M]	5	1
	b)	Explain various configurations of FMS	[5M]	5	2
OR					
11.	a)	Explain the benefits and applications of non-contact inspection techniques	[5M]	5	2
	b)	Explain the working of a coordinate measuring machine (CMM)	[5M]	5	2
