Code: P18MET17

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HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
IV B.TECH I SEMESTER END REGULAR EXAMINATIONS, NOV-2022
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-A

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

Q.No.		Questions	Marks	CO	KL
1.	a)	Write the applications of CAD.	[2M]	1	2
	b)	List out various types of modelling techniques.	[2M]	2	1
	c)	Write the basic structure of a block of a part program mentioning each word clearly.	[2M]	3	2
	d)	Define part family. Write different ways of making part families.	[2M]	4	1
	e)	What are the major components of FMS?	[2M]	5	1

PART-B

Answer One Question from each UNIT (5X10=50M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
2.	a)	Write the benefits of CAD over conventional design.	[5M]	1	2
	b)	What are various output devices used in CAD? Explain any one of them.	[5M]	1	1
		OR			
3.	a)	Explain the product development cycle with CAD incorporated.	[5M]	1	2
	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	1
	b)	What are various surface modelling techniques used in CAD? Explain CSG 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	1
		UNIT-III			
6.	a)	Describe about the basic components of an NC system.	[5M]	3	1
	b)	Explain various interpolation methods in CNC machines.	[5M]	3	2
		OR			
7.	a)	With a neat sketch, explain the working of Direct Numerical Control.	[5M]	3	1
	b)	Explain various components of MCU of a CNC machine.	[5M]	3	2
		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 retrieval CAPP system.	[5M]	4	1
		OR			
9.	a)	Explain the functions of Production planning and control.	[5M]	4	2
	b)	Write the benefits and applications of GT.	[5M]	4	2
		UNIT-V			
10.	a)	What are the functions of computer in FMS? Explain.	[5M]	5	1

	b)	Explain various configurations of FMS.	[5M]	5	2
		OR			
11.	a)	Differentiate contact and non-contact inspection techniques.	[5M]	5	1
	b)	Explain the working of a coordinate measuring machine (CMM).	[5M]	5	2

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