Hall Ticket Number:

Code No. : 16537 AS

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD
Accredited by NAAC with A++ Grade
B.E. (Mech. Engg.) VI-Semester Advanced Supplementary Examinations, August-2022
CAD/CAM

Time: **3 hours**   Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	Distinguish between Conventional Design & Computer Aided Design.	2	1	1	3
2.	List the drawbacks with wireframe model representation.	2	2	1	2
3.	List the elements in PDES format?	2	2	2	2
4.	Write the transformation matrix for rotation of an object about an arbitrary point?	2	2	2	2
5.	Write about Post processor?	2	1	3	1
6.	What is tool length compensation?	2	1	3	2
7.	What is the configuration and feature of a DNC?	2	1	4	1
8.	What are wrist motions in a robot?	2	1	4	1
9.	What is CAD/CAM Integration?	2	1	5	2
10.	Explain the importance of CAPP in automation?	2	2	5	3

Part-B (5×8 = 40 Marks)

11. a)	Write and explain the use of non parametric and parametric form of circle?	4	1	1	4
b)	Explain B-spline curve with it's significant features.	4	2	1	3
12. a)	Discuss the tabulated cylinder and Cubic surface?	4	3	2	3
b)	Show that reflection of point about line Y=X is same as scaling followed by rotation about origin?	4	3	2	1
13. a)	Write the part programming using G and M codes for turning of the component shown in Fig.1	4	4	3	4

3x45⁰

14.5

28.6

34.5

62

Fig.1

		M	L	CO	PO
	b) Explain the elements of NC with a sketch.	4	4	3	3
14.	a) Explain about the memory devices used in NC, CNC and DNC systems?	4	3	4	2
	b) Explain various controls used and programming methods adopted in robotics?	4	2	4	2
15.	a) Discuss in brief the different stages of a group technology plan. Classify a component using any one type of coding system?	4	3	5	3
	b) What do you understand by Computer Aided Process Planning and discuss about Retrieval CAPP.	4	2	5	2
16.	a) Compare the splines for the same control points created by B-splines and Bezier spline techniques?	4	2	1	1
	b) Describe various commonly used primitives for solid modeling and explain the Boolean operations used in CSG Technique?	4	3	2	3
17.	Answer any *two* of the following:				
	a) What are canned cycles explain any one with example.	4	2	3	3
	b) Differentiate between ACC and ACO adaptive control system with the applications	4	3	4	3
	c) Describe building blocks in FMS?	4	3	5	2

M : Marks;   L: Bloom's Taxonomy Level;   CO; Course Outcome;   PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	35%
iii)	Blooms Taxonomy Level – 3 & 4	45%

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