GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR
(GIET UNIVERSITY)
M.Tech. (Second Semester) Regular Examinations, July – 2025
24MMDPE12001: Computer Aided Design
(Machine Design)

Time: 3 hrs   Maximum: 60 Marks

(The figures in the right hand margin indicate marks)

PART – A		**(2 x 5 = 10 Marks)**

Q.1. Answer **ALL** questions

		CO #	Blooms Level
a.	Define extension is used for an AutoCAD drawing file.	CO1	K1
b.	Define software design.	CO1	K1
c.	Tell the command used for creating rectangles in AutoCAD.	CO3	K1
d.	State the display devices used in computer graphics design.	CO3	K2
e.	Define the functions of IGC.	CO4	K2

PART – B		**(10 x 5 = 50 Marks)**

Answer **ALL** the questions

		Marks	CO #	Blooms Level
2. a.	Elaborate on the basic requirements that CAD software has to satisfy.	5	CO1	K3
b.	Explain the different schemes used to generate a solid model.	5	CO1	K3
	(OR)			
c.	Explain how the curves are represented in parametric form.	5	C02	K4
d.	Describe the PDES methodology.	5	C02	K4
3.a.	Explain how feature representation and parametric constraints assist in solid modelling.	5	CO3	K3
b.	Compare Hermite, Bezier, and B-Spline surfaces. Provide examples where each is used.		CO4	K4
	(OR)			
c.	Briefly explain CSG and B-Rep of solid modelling techniques.	5	CO3	K3
d.	Explain how a Bezier curve is defined.	5	CO3	K3
4.a.	Define feature entities and list different types of features used in solid modelling.	5	CO3	K1
b.	What is Boundary Representation (B-Rep)? Mention its main components.	5	CO3	K2
	(OR)			
c.	Compare various testing methods of IGES processors.	5	CO3	K3
d.	Explain briefly with sketches any six tests used for hidden line identification.	5	CO1	K3
5.a.	Describe the constructional details of CNC machine tools.	5	CO4	K4
b.	Briefly explain the different types of control systems in NC.	5	CO4	K4
	(OR)			
c.	Explain CAD interference checking capabilities.	5	CO4	K4
d.	Explain how the curves are represented in Generic form.	5	CO2	K4
6.a.	Briefly explain the Canned cycle in manual part programming.	5	CO2	K4
b.	Describe the effect of characteristic polyhedron over the resulting Bezier surface.	5	CO4	K4
	(OR)			
c.	Explain how the curves are represented in Generic form.	5	CO2	K4
d.	Briefly explain any one of the known graphic standards.	5	CO4	K4

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