

University of Mumbai
Examination 2020 under cluster 4 (PCE)

Program: BE Mechanical Engineering

Curriculum Scheme: Rev2012

Examination: Final Year Semester VII

Course Code: MEC702 and Course Name: CAD/CAM/CAE

Time: 1 hour

Max. Marks: 50

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Note to the students: - All the Questions are compulsory and carry equal marks.

Q1.	Which one of the following does not belong to the family of conics?
Option A:	Parabola
Option B:	Ellipse
Option C:	Hyperbola
Option D:	Line
Q2.	The degree of the Bezier curve with has n control points is:
Option A:	n + 1
Option B:	n - 1
Option C:	n
Option D:	2n
Q3.	Interpolate function are called as
Option A:	Weight Functions
Option B:	Approximate functions
Option C:	shape functions
Option D:	Size functions
Q4.	Two curves are said to be connected at a point with second order parametric continuity C^2 if
Option A:	There is a no continuity of both the curves at that point
Option B:	The curvatures to both the curves at that point is equal
Option C:	The tangents to both the curves at that point is equal
Option D:	Both curves simply meet at that point
Q5.	A point x (2, 3) is represented in homogeneous coordinates as_____.
Option A:	(2,3)
Option B:	(2,3,5)
Option C:	(2,3,1)
Option D:	(2,3,0)
Q6.	In APT Language Point representation is
Option A:	P1 = POINT/X,Y,Z
Option B:	P1 = POINT/X,Z,Y
Option C:	P1 = POINT/Z,Y,X
Option D:	P1 = POINT/Y,X,Z
Q7.	G Code for rapid positioning is
Option A:	G00
Option B:	G01

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Option C:	G02
Option D:	G03
Q8.	After scaling a triangle having coordinates A (0, 0), B (5, 0), C (5, 5) by 2 units in X and 3 units in Y direction the new coordinates will be_____.
Option A:	A(0,0),B(10,0),C(10,15)
Option B:	A(0,0),B(10,15),C(10,0)
Option C:	A(0,0),B(0,10),C(15,10)
Option D:	A(2,3),B(10,0),C(10,15)
Q9.	In 3D transformation, Reflection is about
Option A:	a point
Option B:	A line
Option C:	A plane
Option D:	A line or plane
Q10.	A parametric Circle having the input point P1 (12, 30) and P2 (40, 60) are diametrically opposite. The radius of the circle is
Option A:	20.518
Option B:	21.258
Option C:	10.2
Option D:	50.21
Q11.	What is range of value of parameter u used for parametric representation?
Option A:	$0 \leq U \leq 1$
Option B:	$0 \geq U \geq 1$
Option C:	$0 \geq U \geq 10$
Option D:	$0 \geq U \geq 100$
Q12.	In CNC programming for milling machines, the spindle axis is taken as
Option A:	X axis
Option B:	Y axis
Option C:	Z axis
Option D:	X or Z axis
Q13.	The turning program is written for _____ movement of tool
Option A:	1 axis
Option B:	2 axis
Option C:	3 axis
Option D:	4 axis
Q14.	M code for tool change is
Option A:	M00
Option B:	M03
Option C:	M05
Option D:	M06
Q15.	Which item best describes a CAM technology?

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Option A:	Numerical Control
Option B:	Documentation
Option C:	Drafting
Option D:	Geometric Modelling
Q16.	Computerized elements of CIM system consists of:
Option A:	CAD and CAM
Option B:	CAD and Business functions
Option C:	CAD,CAM and Business functions
Option D:	CAM and Business functions
Q17.	A quadrilateral linear 2D element will have _____ shape functions
Option A:	4
Option B:	6
Option C:	8
Option D:	9
Q18.	Convergence cannot be attained by
Option A:	Increasing only no. of element
Option B:	Increasing only order of element
Option C:	Satisfying compatibility condition
Option D:	Increasing the memory of the system
Q19.	_____ is mandatory for Adaptive control
Option A:	Material handling devices
Option B:	Feedback control
Option C:	Automated storage system
Option D:	Pallet changers
Q20.	One of the benefits of CIM is:
Option A:	Increase in machine utilization
Option B:	Increase in inventory
Option C:	Increase in cost
Option D:	No customer satisfaction
Q21.	The proper definition of CIM is
Option A:	CIM is the complete integration and automation of all functions of factory that are related to manufacturing
Option B:	CIM is the incomplete integration and automation of all functions of factory that are related to manufacturing
Option C:	CIM is the complete integration and automation of some functions of factory that are related to manufacturing
Option D:	CIM is the incomplete integration and automation of some functions of factory that are related to manufacturing
Q22.	Which method does need support generation
Option A:	FDM
Option B:	SLS

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Option C:	LOM
Option D:	3D printing
Q23.	In 3D Printing Rapid Prototyping system, raw material form used is
Option A:	Wax
Option B:	Powder
Option C:	Rubber
Option D:	Wire
Q24.	STL files contain _____.
Option A:	Geometrical data
Option B:	Drawing data
Option C:	Thermal properties of model
Option D:	Mass properties of model
Q25.	The direct laser deposition process is used to make parts from
Option A:	Plastic
Option B:	Paper
Option C:	Metal
Option D:	composites

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	D
Q2.	B
Q3.	C
Q4	B
Q5	C
Q6	A
Q7	A
Q8.	D
Q9.	C
Q10.	A
Q11.	A
Q12.	C
Q13.	B
Q14.	D
Q15.	A
Q16.	C
Q17.	A
Q18.	D
Q19.	B
Q20.	A
Q21.	A
Q22.	A
Q23.	B
Q24.	A
Q25.	C

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