

Program: BE Mechanical Engineering

Curriculum Scheme: Revised 2012

Examination: Fourth Year Semester VII

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

Time: 1hour

Max. Marks: 50

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Q1.	<b>The original coordinates of the point in polar coordinates are</b>
Option A:	$X' = r \cos(\Phi + \Theta)$ and $Y' = r \sin(\Phi + \Theta)$
Option B:	$X' = r \cos(\Phi + \Theta)$ and $Y' = r \cos(\Phi + \Theta)$
Option C:	$X' = r \cos(\Phi - \Theta)$ and $Y' = r \sin(\Phi - \Theta)$
Option D:	$X' = r \cos(\Phi + \Theta)$ and $Y' = r \sin(\Phi - \Theta)$
Q2.	<b>An ellipse can also be rotated about its center coordinates by rotating</b>
Option A:	End points
Option B:	Major and minor axes
Option C:	Centre
Option D:	Radius
Q3.	<b>The model which is created by using basic entities of two dimensioning is called</b>
Option A:	Surface model
Option B:	Wire frame model
Option C:	Solid model
Option D:	Isometric model
Q4.	<b>In Bresenham's algorithm, while generating a circle , it is easy to generate?</b>
Option A:	One octant first and other by successive rotation
Option B:	One octant first and other by successive translation
Option C:	One octant first and other by successive reflection
Option D:	All octants
Q5.	<b>Why a circle drawn on the screen appears to be elliptical ?</b>
Option A:	Screen has rectangular shape
Option B:	It is due to the aspect ratio of monitor
Option C:	CRT is completely spherical
Option D:	Our eyes are not at the same level on screen
Q6.	<b>Which of the following technique is used in Midpoint Subdivision algorithm ?</b>
Option A:	Heap sort

Option B:	Bubble sort
Option C:	Binary search
Option D:	Linear search
Q7.	<b>Which of the following clipping algorithm follows the Divide and Conquer strategy?</b>
Option A:	Cohen- Sutherland algorithm
Option B:	Cyrus break algorithm
Option C:	4-bit algorithm
Option D:	Midpoint algorithm
Q8.	<b>In the raster scan method for transformation, a 90° rotation can be performed by ?</b>
Option A:	by coping each row of the block into a column in the new frame buffer location
Option B:	reversing the order of bits within each row in the frame buffer
Option C:	by performing XOR on the frame buffer location
Option D:	Cohen- Sutherland algorithm
Q9.	<b>To generate a rotation, we must specify,</b>
Option A:	Rotation angle
Option B:	Distance
Option C:	Arc distance
Option D:	Rotation distance
Q10.	<b>A method used to test lines for total clipping is equivalent to the _____</b>
Option A:	logical OR operator
Option B:	logical AND operator
Option C:	both (a) and (b)
Option D:	logical XOR operator
Q11.	<b>A two dimensional rotation is applied to an object by repositioning it along a?</b>
Option A:	upward in the x-y plane
Option B:	diagonals path in the x-y plane
Option C:	circular path in the x-y plane
Option D:	straight path in the x-y plane
Q12.	<b>If an object is rotated through an angle A in clockwise direction, the rotation matrix R= .....</b>
Option A:	$\cos A \sin A - \sin A \cos A$
Option B:	$\cos A - \sin A \sin A \cos A$
Option C:	$\sin A \cos A \cos A \sin A$
Option D:	$\sin A \cos A \cos A \sin A$
Q13.	<b>Which of the following devices do not produce a hard copy?</b>

Option A:	impact printers
Option B:	plotters
Option C:	CRT terminals
Option D:	non-impact printers
Q14.	<b>In NC (Numerical Control) machine tool, the position feedback package is connected between</b>
Option A:	control unit and programmer
Option B:	programmer and machine tool
Option C:	control unit and machine tool
Option D:	programmer and process planning
Q15.	<b>In CNC machine tool, the part program entered into the computer memory</b>
Option A:	can be used only once
Option B:	can be used again and again
Option C:	can be used again but it has to be modified every time
Option D:	cannot say
Q16.	<b>In current NC programming using G codes, the cutter motion is mainly specified in terms</b>
Option A:	Feed rates of apex
Option B:	Cutter diameter
Option C:	Cutter type
Option D:	Operation type
Q17.	<b>Several machine tools can be controlled by a central computer in</b>
Option A:	NC (Numerical Control) machine tool
Option B:	CNC (Computer Numerical Control) machine tool
Option C:	DNC (Direct Numerical Control) machine tool
Option D:	CCNC (Central-Computer Numerical Control) machine tool
Q18.	<b>To solve the FEM problem it subdivided a large problem into smaller simpler parts that are</b>
Option A:	Finite Element
Option B:	Infinite Element
Option C:	Dynamic Element
Option D:	Static Element
Q19.	<b>Which of the following is not a method for calculation of the stiffness matrix?</b>
Option A:	The minimum potential energy principle
Option B:	Galerkin's Principle
Option C:	Weighted Residual Method
Option D:	Inverse Matrix Method

Q20.	<b>The function of interpolator in a CNC machine controller is to</b>
Option A:	Manufacturing and marketing
Option B:	Coordinate feed Rate of Axes
Option C:	Control Tool Raipd Speed Approach
Option D:	Perform M codes
Q21.	<b>Which one of the following rapid prototyping processes uses a photosensitive liquid polymer as the starting material?</b>
Option A:	Droplet Deposition Manufacturing
Option B:	Used-Deposition Modeling
Option C:	Laminated-Object Manufacturing
Option D:	Stereolithography
Q22.	<b>The software that enables the to implement custom application or modify the system for specialized needs is known as</b>
Option A:	operating software
Option B:	graphics software
Option C:	application software
Option D:	programming software
Q23.	<b>The primary tool used in structured design is a</b>
Option A:	structure chart
Option B:	data-flow diagram
Option C:	program flowchart
Option D:	module
Q24.	<b>From the following, in which process, the input material is in solid form?</b>
Option A:	SLA
Option B:	SLS
Option C:	FDM
Option D:	MJM
Q25.	<b>What is the full name of SLS?</b>
Option A:	Selective Laser Simulator
Option B:	Sintering Laser Simulator
Option C:	Selective Laser Sintering
Option D:	Stereolithography Laser Sintering