

Program: SE Computer Engineering

Curriculum Scheme: Revised 2012

Examination: Second Year semester:IV

Course Code: **CSC406** and Course Name: **Computer Graphics**

Time: 1 hour

Max. Marks: 50

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

Q1.	The roll-back of electron beams from one frame to another is referred to as _____ and the roll-back of electron beams from one scanline to another is referred to as _____
Option A:	Vertical retrace , Horizontal retrace
Option B:	Anti-aliasing, Aspect ratio
Option C:	Horizontal retrace , Vertical retrace
Option D:	Aspect ratio, Anti-aliasing
Q2.	We can combine the multiplicative and translational terms for 2D into a single matrix representation by expanding
Option A:	2 by 2 matrix into 4*4 matrix
Option B:	2 by 2 matrix into 3*3
Option C:	3 by 3 matrix into 2 by 2
Option D:	3 by 3 matrix into 4*4
Q3.	Reflection of a point about x-axis, followed by a counter-clockwise rotation of 90° is equivalent to reflection about the line _____.
Option A:	X=-Y
Option B:	Y=-X
Option C:	X=Y
Option D:	X+Y=1
Q4.	Two consecutive translations on t1 and t2 are _____ and Two consecutive Scaling on t1 and t2 are _____
Option A:	Additive, Subtractive
Option B:	Subtractive, Additive
Option C:	Multiplicative, Additive
Option D:	Additive, Multiplicative
Q5.	Three types of axonometric projections are _____, _____, _____
Option A:	Serial , Parallel, isometric
Option B:	Parallel, Perspective , Isometric
Option C:	Isometric, diametric, trimetric
Option D:	Parallel, Oblique, Normal
Q6.	The oblique projections are classified as _____ and _____ projections.

Option A:	Cavalier and Cabinet
Option B:	Serial & Parallel
Option C:	Parallel & Perspective
Option D:	Isometric & diametric
Q7.	In the Cohen Sutherland line clipping algorithm, if the codes of the two point P&Q are 0101 & 0001 then the line segment joining the points P&Q will be _____ the clipping window.
Option A:	Totally outside
Option B:	Partially outside
Option C:	Totally inside
Option D:	Partially inside
Q8.	The orthographic projections have the projectors where
Option A:	The direction of these projectors is parallel to the view plane
Option B:	The direction of these projectors is perpendicular to the image plane
Option C:	The direction of these projectors is perpendicular to the view plane
Option D:	The direction of these projectors is parallel to the image plane
Q9.	In OpenGL, 2 in the <code>glVertex2i()</code> stands for
Option A:	Number of arguments
Option B:	Type of arguments
Option C:	Do not signify anything
Option D:	Number of times calling of function
Q10.	_____ Line clipping algorithm uses parametric form of equation of line.
Option A:	Liang Barsky
Option B:	Cohen Sutherland
Option C:	Midpoint Subdivision
Option D:	Sutherland Hodgeman
Q11.	Consider the line from (1, 1) to (5,5). Use the simple DDA algorithm to rasterize this line. Which are the correct sequence of plotted pixels
Option A:	(2,2) (3,3) (4,5)
Option B:	(2,2) (3,4) (4,5)
Option C:	(2,3) (3,3) (4,5)
Option D:	(2,3) (3,4) (4,5)
Q12.	In midpoint method of circle generation, if decision function (P_k) value is negative then decision function for the next iteration is given as _____ otherwise P_k gets updated as _____
Option A:	$P_k + 2 X_{k+1} + 1$ and $P_k + 2 X_{k+1} + 1 - 2Y_{k+1}$
Option B:	$P_k + 2 X_{k+1} - 1$ and $P_k - 2 X_{k+1} + 1 - 2Y_{k+1}$
Option C:	$P_k + 2 X_{k+1} + 1$ and $P_k + 2 X_{k+1} + 1 + 2Y_{k+1}$
Option D:	$P_k - 2 X_{k+1} + 1$ and $P_k + 2 X_{k+1} + 1 - 2Y_{k+1}$

Q13.	In the Midpoint ellipse generation method, after plotting pixel at (X_k, Y_k) , at which of the following location (position) the decision function is applied to decide the next pixel along the elliptical path in region 1?
Option A:	Pixel at $(X_{k-1}, Y_{k-1/2})$ level
Option B:	Pixel at $(X_k, Y_{k-1/2})$ level
Option C:	Pixel at $(X_{k+1}, Y_{k-1/2})$ level
Option D:	Pixel at (X_{k+1}, Y_k) level
Q14.	What is the initial value for the decision parameter in the midpoint circle algorithm?
Option A:	$5/4-r$
Option B:	$r-5/4$
Option C:	$r-4/5$
Option D:	$4/5-r$
Q15.	_____ is the example of non-seed fill algorithms.
Option A:	Boundary Fill
Option B:	Flood Fill
Option C:	Bucket Fill
Option D:	Scanline
Q16.	If the circle has to be drawn using a midpoint method with the center $(10, 10)$ and radius 10, then which point will lie on the circle.
Option A:	$(18, 19)$
Option B:	$(9, 10)$
Option C:	$(20, 30)$
Option D:	$(12, 20)$
Q17.	The method which is based on the principle of checking the visibility point at each pixel position on the projection plane are called
Option A:	Object-space methods
Option B:	Image-space methods
Option C:	Object and Image space method
Option D:	Image based method
Q18.	A Bezier curve is a polynomial of degree _____ the no of control points used.
Option A:	One more than
Option B:	One less than
Option C:	Two less than
Option D:	Two more than
Q19.	The types of hidden surface algorithms are
Option A:	Z Buffer, Back face removal
Option B:	Cohen Sutherland, Liang Barsky
Option C:	Sutherland Hodgeman
Option D:	Bresenham's

Q20.	Which surface algorithm is based on perspective depth?
Option A:	Depth comparison
Option B:	Z-buffer or depth-buffer algorithm
Option C:	subdivision method
Option D:	back-face removal
Q21.	Which is the shading model, based on one lightning calculation per vertex.
Option A:	Flat Shading
Option B:	Gouraud shading
Option C:	Phong shading
Option D:	Lightning model
Q22.	Shading interpolates linearly and so can make the highlight much bigger, this is the problem with which type of shading?
Option A:	Flat Shading
Option B:	Gouraud shading
Option C:	Phong shading
Option D:	Lightning model
Q23.	A process with the help of which images or picture can be produced in a more realistic way is called
Option A:	Fractals
Option B:	Quad tree
Option C:	Rendering
Option D:	Animation
Q24.	When an object is viewed from different directions and at different distances, the appearance of the object will be different. Such view is called _____
Option A:	oblique projection
Option B:	perspective view
Option C:	axometric projection
Option D:	isometric projection
Q25.	Given a bezier curve with 4 control points- $B_0[1 \ 0]$, $B_1[3 \ 3]$, $B_2[6 \ 3]$, $B_3[8 \ 1]$ Determine value of the coordinate at 't' = 0.5
Option A:	4.5, 2.375
Option B:	5.984 ,2.233
Option C:	8,1
Option D:	1,0