

BRAINWARE UNIVERSITY

Term End Examination 2021 - 22 Programme – Bachelor of Technology in Computer Science & Engineering Course Name – Computer Graphics Course Code - BCSE403 (Semester IV)

(Semester IV) Time allotted: 1 Hrs.25 Min. Full Marks: 70 [The figure in the margin indicates full marks.] Group-A (Multiple Choice Type Question) 1 x 70=70 Choose the correct alternative from the following: (1) In graphical system, the array of pixels in the picture are stored in a) Memory b) Frame buffer c) Processor d) All of these (2) The graphics can be a) Drawing b) Photograph, movies d) All of these c) Simulation (3) Vector graphics is composed of a) Pixels b) Paths d) None of these c) Palette (4) Raster images are more commonly called a) Pix map b) bitmap d) None of these c) both pix map and bit map (5) Each pixel has basic color components. a) Two or three b) Two or three c) Three or four d) None of these

(6) Higher the number of pixels, the image quality.

a) Bad b) Better

c) Smaller d) None of these

(7) A bitmap is bit(s) per pixels.

a) 0 b) 1

c) 2 d) 3

(8) In information technology, LCD stands for

a) 5

a) Liquid Crystal Display b) Low Cost Display

c) Local Current Directory d) Liquid Cathode Display

(9) To minimize eyestrain, you should adjust your monitor to a degree angle of

(5) To minimize eyestram, you should adjust your moment to a degree ungle e

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b) 10

c) 15	d) 90
(10) Term which refers to the sharpness or clarity of an im	nage, is
a) pitch	b) pixel
c) resolution	d) signal
(11) Refresh rate is measured in	
a) mbps	b) hertz
c) kilo hertz	d) mega hertz
(12) The stopping criteria of Bresenham circle drawing alg	gorithm is
a) x=y	b) x>y
c) x	d) x<=y
(13) Expansion of line DDA algorithm is	
a) Digital difference analyzer	b) Direct differential analyzer
c) Digital differential analyzer	d) Data differential analyzer
(14) Which algorithm is a faster method for calculating pix	xel positions?
a) Bresenham's line algorithm	b) Parallel line algorithm
c) Mid-point algorithm	d) Bresenham's line algorithm
(15) If the boundary is specified in a single color, and if the boundary color is encountered is called	e algorithm proceeds pixel by pixel until th
a) Scan-line fill algorithm	b) Boundary-fill algorithm
c) Flood-fill algorithm	d) Parallel curve algorithm
(16) If we want to recolor an area that is not defined within	n a single color boundary is known as
a) Boundary-fill algorithm	b) Parallel curve algorithm
c) Flood-fill algorithm	d) None of these
(17) In Bresenham's algorithm error term is initialized to ?	
a) 0	b) 1
c) -(1/2)	d) None of these
(18) The basic element of a picture in volume graphics is?	
a) pixel	b) volse
c) voxel	d) None of these
(19) A circle, if scaled only in one direction becomes a?	
a) parabola	b) hyperbola
c) ellipse	d) remains a circle
(20) (2,4) is a point on a circle that has center at the origin circle?	. Which of the following points are also on
a) (2,-4)	b) (-2,4)
c) (4,-2)	d) All of these
(21) Aspect ratio is generally defined as the ratio of the?	
a) a) Vertical to horizontal points	b) b) Horizontal to vertical points
 c) Either a) or b), depending on the convention follo wed 	d) Vertical to (horizontal + vertical) points
(22) The maximum number of points that can be displayed s?	d without overlap on a CRT is referred to a
a) Resolution	b) Persistence
c) Attenuation	d) None of these
(23) The center of display screen is computed as	
a) Xmax, Ymax	b) Xmax/2, Ymax/2
c) Xmax/3,Ymax/3	d) None of these

(24) Bresenham's Algorithm seeks to select the optimum	raster locations that represent a
a) Straight line	b) curve line
c) polygon	d) None of these
(25) The DDA algorithm is a faster method for calculating ion using $y = m*x + c$, because	g pixel positions than direct use of line equat
a) it eliminates floating point addition	b) it eliminates floating point multiplication
c) it eliminates rounding operation that drift away fr om true line path	d) none of these
(26) In Bresenham's circle algorithm, if points are general e the Coordinate of last scan converted pixel then the	
a) $(x+1,y+1)$ or $(x-1,y-1)$	b) $(x+1,y)$ or $(x,y+1)$
c) $(x,y+1)$ or $(x+1,y-1)$	d) $(x+1,y)$ or $(x+1,y-1)$
(27) Slope of the line joining the points $(1, 2)$ and $(3, 4)$ is	S
a) 0	b) 1
c) 2	d) 3
(28) In Bresenham's circle generation algorithms. If (x, y) e of the next pixel position is) is the current pixel position then the x-valu
a) x	b) x+1
c) x-1	d) x+2
(29) CMY coordinates of a colour at $(0.2, 1, and 0.5)$ in the	ne RGB space are
a) (1.2,2,1.5)	b) (2.2,2,2.5)
c) (0.8,0,0.5)	d) (0.1,0.5,0.25)
(30) A translation is applied to an object by	
a) Repositioning it along with straight line path	b) Repositioning it along with circular path
c) Both repositioning it along with straight line path and circular path	d) All of these
(31) The two-dimensional translation equation in the matr	rix form is
a) $P'=P+T$	b) P'=P-T
c) P'=P*T	d) P'=P
(32) To change the position of a circle or ellipse we transl	ate
a) Center coordinates	b) Center coordinates and redraw the figure in new location
c) Outline coordinates	d) All of these
(33) To generate a rotation, we must specify	
a) Rotation angle	b) Distances dx and dy
c) Rotation distance	d) All of these
(34) The transformation that is used to alter the size of an	object is
a) Scaling	b) Rotation
c) Translation	d) Reflection
(35) A composite transformation matrix can be made by a dividual transformation .	determining the of matrix of the in
a) Addition	b) Subtraction
c) Product	d) None of these
(36) The transformation in which the dimension of an obj point is called	ect are changed relative to a specified fixed
a) Translation	b) Scaling
c) Rotation	d) Reflection
(37) What are the types of polygon?	

a) Convex polygon	b) Concave polygon
c) Both Convex polygon and Concave polygon	d) None of these
(38) If a line joining any two of its interior points lies not c	completely inside are called
a) Convex polygon	b) Concave polygon
c) Both Convex polygon and Concave polygon	d) None of these
(39) If the visit to the vertices of the polygon in the given of lled	order produces an anticlockwise loop are ca
a) Negatively oriented	b) Positively oriented
c) Both Negatively oriented and Positively oriented	d) None of these
(40) If the visit to the vertices of the polygon in the given of	order produces an clockwise loop are called
a) Negatively oriented	b) Positively oriented
c) Negatively oriented and Positively oriented	d) None of these
(41) The transformation that produces a parallel mirror image	age of an object are called
a) Reflection	b) Shear
c) Rotation	d) Scaling
(42) In which transformation the shape of an object can be as in both the direction depending upon the value assignment.	
a) Reflection	b) Shearing
c) Rotation	d) Scaling
(43) The rectangle portion of the interface window that def re called	fines where the image will actually appear a
a) Transformation viewing	b) View port
c) Clipping window	d) Screen coordinate system
(44) The getpixel function gives the of specified pi	xel.
a) colour	b) Size
c) intensity	d) Shape
(45) Seed fill algo for filling polygon is algorithm	m.
a) recursive	b) non-recursive
c) Both recursive and non-recursive	d) None of these
(46) Scan line algorithm for filling polygon is algo	rithm.
a) recursive	b) non-recursive
c) Both recursive and non-recursive	d) None of these
(47) The process of cutting off the line which are outside the	ne window are called
a) Shear	b) Reflection
c) Clipping	d) Clipping window
(48) A finite world co-ordinate area selected to perform Vi	ewing transformation for display is called a
a) Window	b) Segment
c) Clip	d) View port
(49) The transformation which maps the viewing co-ordinated	ates to normalized device co-ordinate is call
a) Viewing transformation	b) translation
c) normalization transformation	d) homogeneous transformation
(50) If both end points of a line are completely to the right	of clipping window,
a) the line is interior to the clipping window	b) the line is not necessarily completely exterior to t he clipping window
c) the line is completely exterior to the clipping win dow	d) None of these

(51) In Cohen-Sutherland subdivision line clipping algorit	hm, bit 1 in region code is set if
a) end point of line is to the left of the window	b) end point of line is to the right of the window
c) end point of line is to the above of the window	d) end point of line is to the below of the window
(52) In Cohen-Sutherland subdivision line clipping algorit	hm, bit 4 in region code is set if
a) end point of line is to the left of the window	b) end point of line is to the right of the window
c) end point of line is to the below of the window	d) end point of line is to the above of the window
(53) In Cohen- Sutherland subdivision line clipping algori on with two end point region codes is not 0000	thm, if the result of the logical AND operati
a) the line is Completely inside the clipping region	b) the line is Completely outside the clipping region
c) the line is Completely left to the clipping region	d) the line is Completely right to the clipping region
(54) f (x,y,w), w=0, is a point in the homogeneous coordinate mensional system is	nate system than its equivalent in the two di
a) $(x,y,1)$	b) (x,y,0)
c) (x/w,y/w)	d) (x,y, x-y)
(55) An object is viewed by using perspective transformat ishing point(s) possible is	ion. The maximum number of principal van
a) 1	b) 2
c) 3	d) infinite
(56) Reflection of an object is same as rotation with angle	
a) 45	b) 90
c) 180	d) 360
(57) In a convex polygon, each of the interior angles is les	s thandegrees.
a) 45	b) 90
c) 180	d) 360
(58) A three dimensional object can also be represented us	sing
a) Method	b) Equation
c) Point	d) None of these
(59) A Bezier curve is a polynomial of degree	the no of control points used.
a) One more than	b) One less than
c) Two less than	d) None of these
(60) The first point on circumference of circle centered on t circle drawing algorithm is	origin with radius 'r' drawn using Midpoin
a) (0,0)	b) (0,r)
c) (r,0)	d) (r,r)
(61) Z-Buffer algorithm is	
a) line drawing algorithm	b) line clipping algorithm
c) depth sorting algorithm	d) polygon clipping algorithm
(62) The orthographic projections have the projectors whe	ere
a) The direction of these projectors is parallel to the view plane	b) The direction of these projectors is perpendicular to the image plane
c) The direction of these projectors is perpendicular t o the view plane	d) The direction of these projectors is parallel to the image plane
(63) A projection in which all three foreshortening factors	are kept equal is called as
a) Isometric projection	b) Diametric projection
c) Trimetric projection	d) None of these
(64) The types of projection are	
a) Parallel projection and perspective projection	b) Perpendicular and perspective projection
c) Parallel projection and Perpendicular projection	d) None of these

(65) The types of parallel projection are	
a) Orthographic projection and quadratic projection	b) Orthographic projection and oblique projection
c) Oblique projection and quadratic projection	d) None of these
(66) The projection in which the projection plane is allow stances is	wed to intersect the x, y and z-axes at equal di
a) Isotonic projection	b) Constructive solid geometry projection
c) Isometric projection	d) Back face removal projection
(67) In which projection ,the plane normal to the project	ion has equal angles with these three axes
a) Wire frame projection	b) Constructive solid geometry
c) Isometric projection	d) Perspective projection
(68) How many matrices are involved in rotating a point	P(x,y) about $Q(4,3)$.
a) 1	b) 2
c) 3	d) 5
(69) CMY coordinate of (0.2,1,0.5) in RGB space is	
a) (1.2, 2, 1.5)	b) (0.8, 1, 0.5)
c) (1.2, 0, 0.5)	d) (0.8, 0, 0.5)
(70) BSP Tree method stands for	
a) both side partition	b) b-spline partition
c) binary space partitioning	d) none of these