BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Science (Honours) in Computer Science
Course Name – Computer Graphics
Course Code - BCSC602
(Semester VI)

Time allotted : 1 Hrs.15 Min. **Full Marks : 60**

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question) 1 x 60=60

Choose the correct alternative from the following :

(1) Which keys allows user to enter frequently used operations in a single key stroke?
a) Function keys b) Cursor control keys
c) Trackball d) Control keys

(2) The device which is used to position the screen cursor is
a) Mouse b) Joystick
c) Data glove d) Both joystick & data glove

(3) Trackball is
a) Two-dimensional positioning device b) Three- dimensional positioning device
c) Pointing device d) None of these

(4) _____ is used for 3D positioning and modeling, animation and other application.
a) Space ball b) Trackball
c) Spac ball d) All of these

(5) Which is the device that is constructed with the series of sensors that detects hand and finger motion?
a) Digitizers b) Data glove
c) Joystick d) Track ball

(6) On raster system, lines are plotted with
a) Lines b) Dots
c) Pixels d) None of these

(7) In color raster system, the number of color choices available depends on
a) colors in frame buffer b) Amount of storage provided per pixel in frame

buffer

c) RGB color

d) Neither colors in frame buffer nor Amount of storage provided per pixel in frame buffer

(8) The color code “000” is for

a) White
b) Black
c) Blue
d) Green

(9) Color information can be stored in

a) Main memory
b) Secondary memory
c) Graphics card
d) Frame buffer

(10) Whenever a particular color code is specified in an application program, the corresponding binary value is placed in?

a) Color look-up table
b) Directly in frame buffer
c) Color look-up table or Directly in frame buffer
d) Video lookup table

(11) The sampling of object characteristic at a high resolution and displaying the result at a lower resolution is called?

a) Super-sampling
b) Post-filtering
c) Anti-aliasing
d) None of these

(12) Anti-aliasing by computing overlap areas is referred to as

a) Area-sampling
b) Super-sampling
c) Pixel phasing
d) None of these

(13) Area-sampling is also known as

a) Pre-filtering
b) Pixel phasing
c) Post-filtering
d) Anti-aliasing

(14) Raster objects can also be anti-aliased by shifting the display location of pixel areas is known as

a) Super-sampling
b) Pixel shaping
c) Pixel phasing
d) Any of these

(15) If we want to use more intensity levels to anti-alias the line, then

a) We increase the number of sampling positions
b) We decrease the number of sampling positions
c) We increase the number of pixels
d) None of these

(16) The procedure that increases the number of intensity levels for each pixel to total number of sub-pixels is

a) Area-sampling
b) Anti-aliasing
c) Super-sampling procedure
d) None of these

(17) Drawing of number of copies of the same image in rows and columns across the interface window so that they cover the entire window is called _____

a) Roaming
b) Panning
c) Zooming
d) Tiling

(18) Electron gun section _____

a) provides sharp beam
b) provides poorly focused beam
c) doesn’t provide any beam
d) provides electrons only

(19) What determines light intensity in a CRT?

a) voltage
b) current

c) momentum of electrons
d) fluorescent screen

(20) Deflection system of a CRT consists of _____

a) 4 plates
b) 6 plates
c) 2 plates
d) 8 plates

(21) Expand JPEG

a) Joint Photo Experts Gros
b) Joint Photographic Experts Gross
c) Joint Photographic Experts Group
d) Joint Photographic Expression Group

(22) Expand GIF?

a) Graphic Information File
b) Graphic Interchange Format
c) Graphic Information Format
d) Graphic Interchange File

(23) Which compressions provide some loss of quality?

a) Lossy
b) Loss less
c) Cel based
d) Object based

(24) Which of the following is a computer based presentation technique?

a) Slides
b) Tutorial
c) Mutimedia
d) Data processing

(25) What does MMS stand for

a) Mutimedia System
b) Mutimedia Messaging System
c) Mutimedia Messaging Services
d) Multimedia Services

(26) The Cartesian slope-intercept equation for a straight line is

a) y = m.x + b
b) y = b.x + m
c) y = x.x + m
d) y = b + m.m

(27) For lines with slope magnitude |m|<1, ?x can be_____

a) A set corresponding vertical deflection
b) A set proportional to a small horizontal deflection voltage
c) Only A set corresponding vertical deflection
d) All of these

(28) Expansion of line DDA algorithm is

a) Digital difference analyzer
b) Direct differential analyzer
c) Digital differential analyzer
d) Data differential analyzer

(29) Which algorithm is a faster method for calculating pixel positions?

a) Bresenham's line algorithm
b) Parallel line algorithm
c) Mid-point algorithm
d) DDA line algorithm

(30) The disadvantage of lineDDA is

a) Time consuming
b) Faster
c) Neither time consuming nor faster
d) None of these

(31) The midpoint circle drawing algorithm also uses the __of the circle to generate?

a) two-way symmetry
b) four-way symmetry
c) eight-way symmetry
d) None of these

(32) The basic principle of Bresenham`s line algorithm is__?

a) to select the optimum raster locations to represent a straight line
b) to select either Δx or Δy, whichever is larger, is chosen as one raster unit
c) we find on which side of the line the midpoint
d) both to select the optimum raster locations to

lies

represent a straight line & to select either Δx or Δy, whichever is larger, is chosen as one raster unit

(33) Which of the following is the basic attribute of a character?

a) Font
b) Size and color
c) Orientation
d) All of these

(34) Attribute can be set for

a) Entire character strings
b) Individual characters defined as marker symbol
c) Neither Entire character strings nor Individual characters defined as marker symbol
d) Both Entire character strings & Individual characters defined as marker symbol

(35) When a character string is to be displayed, the which color is used to set the pixel value in frame buffer?

a) White color
b) Current color
c) Black color
d) Any color

(36) The distance between the bottom-line and the top-line of the character body is

a) Same for all character
b) Different for all character
c) Same for some character
d) Different for some character

(37) Raster curves of various widths can be displayed using

a) Horizontal or vertical spans
b) Horizontal spans
c) Vertical spans
d) Horizontal and vertical spans

(38) If the slope magnitude is 1, then circles, ellipse and other curves will appear

a) Thick
b) Thinnest
c) Big
d) Rough

(39) The pixel masks for implementing line-type options are also used in the following algorithm to generate dashed and dotted patterns.

a) Raster line algorithm
b) Raster scan algorithm
c) Raster curve algorithm
d) Random curve algorithm

(40) If we want to display constant-length dashes, then we need to do the following.

a) We need to adjust the number of pixels plotted in each dash
b) We need to adjust the number of dots
c) We must use line-type functions
d) None of these

(41) The width of the text or character can be set using the function

a) setCharacterExpansionFactor (cw)
b) SetCharacterExpansionFactor (cw)
c) setCharacterFactor (cw)
d) setCharacterExpansionfactor (cw)

(42) The purpose of flood gun in DVST is .....

a) To store the picture pattern
b) To slow down the flood electrons
c) To enable color pixels
d) To focus the electron beam

(43) Identify the features of DVST from the following.

a) Monochromatic, Flicker free, Low resolution
b) Monochromatic, Flicker free
c) Color screens, Refresh monitors, High resolution
d) Expensive, Low resolution

(44) Video devices with reduced volume, weight and power consumption are collectively known as .....

a) Light weight monitors
b) Flat-panel displays
c) CRT
d) Portable display

(45) Gray scale is used in .....

a) A Monitor that have color capability
b) A Monitor that have no color capability
c) Random scan display
d) Raster scan display

(46) Two dimensional color model are

a) RGB and CMKY
b) RBG and CYMK
c) RGB and CMYK
d) None

(47) RGB model are used for

a) Computer display
b) Printing
c) Painting
d) None of these

(48) CMYK model are used for

a) Computer display
b) Printing
c) Painting
d) None of these

(49) The simplest output primitive is .....

a) Straight line
b) Straight line segment
c) Point
d) Circle

(50) A translation is applied to an object by

a) Repositioning it along with straight line path
b) Repositioning it along with circular path
c) All of these
d) None of these

(51) Polygons are translated by adding _____ to the coordinate position of each vertex and the current attribute setting.

a) Straight line path
b) Translation vector
c) Differences
d) None of these

(52) To change the position of a circle or ellipse we translate

a) Center coordinates
b) Center coordinates and redraw the figure in new location
c) Outline coordinates
d) All of these

(53) The basic geometric transformations are

a) Translation
b) Rotation
c) Scaling
d) All of these

(54) A two dimensional rotation is applied to an object by

a) Repositioning it along with straight line path
b) Repositioning it along with circular path
c) Any of these
d) None of these

(55) To generate a rotation , we must specify

a) Rotation angle Θ
b) Distances dx and dy
c) Rotation distance
d) All of these

(56) Positive values for the rotation angle Θ defines

a) Counterclockwise rotations about the end points
b) Counterclockwise translation about the pivot point
c) Counterclockwise rotations about the pivot point
d) Negative direction

(57) The rotation axis that is perpendicular to the xy plane and passes through the pivot point is

known as

a) Rotation
b) Translation
c) Scaling
d) Shearing

(58) The original coordinates of the point in polor coordinates are

a) X'=r cos (Φ +Θ) and Y'=r cos (Φ +Θ)
b) X'=r cos (Φ +Θ) and Y'=r sin (Φ +Θ)
c) X'=r cos (Φ -Θ) and Y'=r cos (Φ -Θ)
d) X'=r cos (Φ +Θ) and Y'=r sin (Φ -Θ)

(59) _____ is the rigid body transformation that moves object without deformation.

a) Translation
b) Scaling
c) Rotation
d) Shearing

(60) An ellipse can also be rotated about its center coordinates by rotating

a) End points
b) Major and minor axes
c) All of these
d) None of these