CS602 Midterm Objective(Mcq'z) Solved with Reference
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Question # 1
Translation moves objects without _____.
Select correct option:

Scaling
Rotation
Deformation   Page no : 113
Scaling and Rotation

Question # 2

_____ transformation produces shape distortions as if objects were composed of layers that are caused to slide over each other.
Select correct option:

Rotation
Translation
Reflection
Shear   Page no :124

Ref: A transformation that distorts the shape of an object such that the transformed shape appears as if the object were composed of internal layers that had been caused to slide over each other is called a shear.

Question # 3
Computer Graphics are used in _____.
Select correct option:

Game development
Movies development
Simulations
All of the given   Page no : 6

Question # 4
A two dimensional rotation is applied to an object by repositioning it along a _____ path in the XY plane
Select correct option:

Straight
Circular   **Page no : 114**
Oval
Ellipse

Question # 5
If the value of scaling factors sx and sy is greater than 1, then size of objects will be _____.
Select correct option:

Reduced
Enlarged   **Page no : 116**
Remain same
Shear

Question # 6
Various curve functions are useful in _____.
Select correct option:

Object modeling
Graphics applications
Animation path specifications
All of the given   **Page no : 69**

Question # 7

Sutherland-Hodgeman clipping algorithm clips any polygon against a concave clip polygon
Select correct option:

True
False   **Page no :141**

Question # 8

In video text memory, _____ are used to display a character.

Select correct option:

2 bytes   **Page no :43**
4 bytes
8 bytes
16 bytes

Question # 9

Which of the following is NOT a modern application for Computer Graphics -----------
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Select correct option:

Computer Aided Geometric Design
Video Games
Stop-motion animation   **Page no : 6**
Scientific Visualization

Question # 10

A * B = |A| * |B| * cos(?) Where ? is the angle between the two vectors

Select correct option:

Cross Product
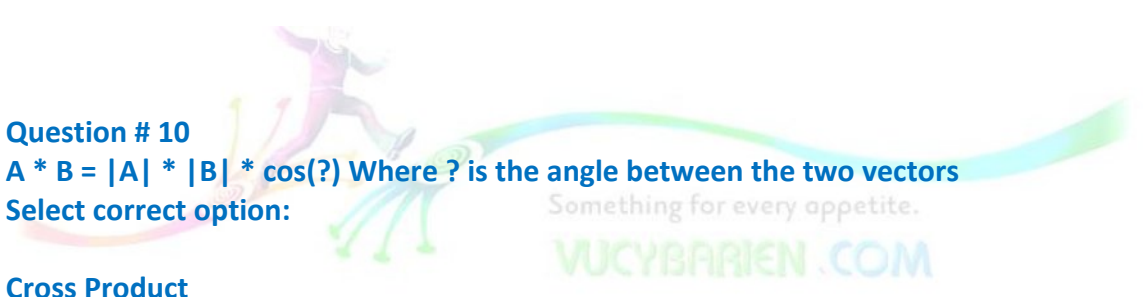**Dot Product**   **Page no : 171**

Question # 12

Cross product of two vectors results in a _____.

Vector   **Page no : 173**

Question # 13

Shortcoming of Sutherland-Hodgeman Algorithm is concave polygons may be displayed with extensors lines

True   **Page no : 244**

Question # 14

In 2D transformations, two successive rotations applied to a point P can be denoted as_____ (Where ? represents theta).

$$P' = R(\theta) \cdot P$$ **Page no : 256**

Question # 15

Global coordinate systems can be defined with respect to local coordinate system.

False   **Page no : 158**

Question # 16

Locations can be translated or "transformed" from one coordinate system to the other.

True   **Page no : 158**

Question # 17

A column matrix is also known as _____.

Column Vector   **Page no : 102**

Question # 18

Dot product of two vectors results in _____ quantity.

Scalar

Question # 19

In Trimetric the direction of projection makes unequal angles with the three principal axes

Select correct option:

 True   **Page no : 192**

False

Question # 20

_____ uses a divide-and-conquer strategy.

Select correct option:

   Pipeline Clipping
   Sutherland-Hodgeman clipping algorithm   **Page no :244**
   Weiler-Atherton clipping algorithm
   None of above

Question # 21

Finding unit vector is done by simply dividing each component by the width.

Select correct option:

   True
   False   **Page no : 169**

Question # 22

_____ is the process of describing an object or scene so that we can construct an image of it

Select correct option:

   Rendering
   Modeling   **Page no : 251**
   Meshing
   None of above

Question # 23

The process of moving the points so that the POV is at the origin looking down the +Y axis is called normalization.

Select correct option:

> True
> **False**   Page no : 175

Question # 24

A _____ can be performed relative to a selected reflection axis or with respect to a selected reflection plane.

Select correct option:

> rotation
> projection
> **reflection**   Page no : 186
> none of given

Question # 25

To show 256 colors , the no of bits required for each pixel are

8   as per formula 256 takes 2^8 so 8 –bits are required.

16

32

64

Question #26

25 * 80 resolution with 16 colors supports

Text mode   Page no : 43

Graphics mode

Both

None

Question#27

Two matrices are said to be equal, if they have

Same order

Same corresponding elements

Same order and same corresponding elements. Page no : 103

Different elements

Question#27

 Two points are said to be collinear, if they lie on the

Same line   Page no : 53

Different but parallel lines

Either on the same plane or two parallel planes different plane .

Question#28

A Polygon is convex, if the line connecting:

Any two points outside the polygon intersects its boundary

Any two points inside the polygon don't intersect any edges of the polygon.

A point inside the boundary with any point outside, does not intersect the polygon boundary

Any two vertices, intersects some edge of polygon.   Page no: 78

Question#29

The father of Computer Graphics is:

Robert Burton

Ivan Sutherland

Pytor Tchaikovsky

Turner Whitted

Question#30

The equation of hyperbola centered at origin (if the transverse axis is along x -axis) can be given as:

x2 b2+ y2 a2–1 = 0

x2 b2+ y2 a2+1 = 0

$x2\ a2-\ y2\ b2-1 = 0$

$x2\ b2\ -\ y2\ a2-1 = 0$

Question#31

Which of the following statements is not true about flood-fill and boundary-fill?
Algorithms?

Both are used for filling of close figure

Both can be implemented as recursive as well as iterative methods

Flood-fill is best for filling of triangle

A complex polygon can be filled with 8 connected approaches

Question#32

Which one is not valid out code to perform trivial accept / reject test in line clipping:

1101

1001

0101

0110

Question#33

Which one of the following is not the graphics library is use:

FastGL

OpenGL

DirectX

EasyGL

Question#34

The circle and ellipse are symmetric across 8 octants.

True

False   Page no : 66

Question#35

UV light is used in Plasma Panel displays to excite phosphor.

    True   Page no : 30

    False

Question#36

Which of the following is not true about matrices?

    A + B = B + A

    a(A + B) = aA + aB

    $(A^T)^T = A^T$ Page no :107

    A + (B + C) = (A + B) + C

Question#37

According to Odd Parity Rule, a point is inside the polygon, if:

Line from an outside point to this point does not cross the edges odd number of times

Line from any point to this point crosses the edges odd number of times.   Page no: 80

Line from an outside point to this point crosses the edges odd number of times

Line from this point to any point outside the polygon intersects any edge

Question # 38

As opposed to direct memory access method, BIOS routines provide an easier and faster method of drawing pixels on screen.

    True

    False   Page no : 48

Question # 39

A Polygon is complex, if the line connecting:

    Any two points outside the polygon intersects its boundary

    Any two points inside the polygon intersects its boundary

    A point inside the boundary with any point outside, does not intersect the polygon boundary

    Any two vertices, intersects some edge of polygon.

Ref: Complex polygons are basically concave polygons that may have self-intersecting edges. I think no any option is true.

Question # 40

When a point P(x,y) is rotated by θ the coordinates of transformed point P' are given as:

x' = x cos(θ) – y sin(θ), y' = x sin(θ) + y cos(θ)

x' = y cos(θ) – x sin(θ), y' = y sin(θ) + x cos(θ)

x' = x cos(θ) + y sin(θ), y' = x sin(θ) – y cos(θ)

x' = y cos(θ) + x sin(θ), y' = y sin(θ) – x cos(θ)

Question # 41

The amount of time it takes to illuminate a specific location on phosphor coated screen is called Persistence.

True   Page no : 27

False

Question # 42

Incremental line drawing algorithm makes use of the equation of straight line.

True   Page no : 53

False

Question # 43

In matrix multiplication:

The two matrices must be square

The number of rows of 1st matrix must be the same as the number of columns of the second.

The two matrices must either be row matrices or column matrices

The number of columns of 1st matrix must be the same as the number of rows of the second.

Ref: http://en.wikipedia.org/wiki/Matrix_multiplication

Question # 44

In Horizontal retrace, after completion of all the pixels in a scan line, the refreshing continues from the 1st pixel of the next scan line.

True

False

Question # 45

Parity Rule is used to determine whether a pixel is inside a polygon or not.

True   Page no : 80

   False

Question # 45

In Pixmap exactly one bit is used to hold color value of each pixel.

   True

False   Page no : 28

  Question # 46

When dot product of two vectors equals zero, this implies that the two vectors are:

   Parallel to each other

Orthogonal (perpendicular) to each other.   Page no : 172

   Intersect each other

   Equal to each other

  Question # 47

The Boundary Fill and Flood Fill algorithms:

   Must use 4-connected approach

   Must use 8-connected approach

May use 4-connected or 8-connected approach   Page no : 100

   Must not use recursive approach

  Question # 48

Intensity of the electron beam is controlled by setting _____ levels on the control grid, a metal cylinder that fits over the cathode.

Amplitude

Current

Voltage   Page no : 26

Electron

  Question # 49

Using Cohen-Sutherland line clipping, it is impossible for a vertex to be Labeled 1111.

True

False

Question # 50

Shadow mask methods can display a _____ range of colors.

Small

 Wide   **Page no : 20**

Random

crazy

 Question # 51

Which one of the following step is not involved to write pixel using video BIOS services.

Setting desired video mode

Using bios service to set color of a screen pixel

Calling bios interrupt to execute the process of writing pixel.

Using OpenGL service to set color of a screen pixel   **Page no :45**

Question # 52

Each number that makes up a matrix is called an _____ of the matrix.

Element   **Page no : 101**

Variable

Value

Component