MIDTERM EXAMINATION
Spring 2013
CS602- Computer Graphics

Question No: 1 (Marks: 1) - Please choose one
DDA abbreviated for _____.

None of the given
Discrete data analyzer
Digital data analyzer
Digital differential analyzer (Page 54)

Question No: 2 (Marks: 1) - Please choose one
Save a line with both endpoints inside all clipping boundaries is called as _____.

None of the given
Total …. *(inside (maybe))*
Trivial Reject
Trivial Accept (Page 142)

Question No: 3 (Marks: 1) - Please choose one
_____ projection is obtained by projecting points along parallel lines that are not perpendicular to the projection plane.

Perspective
Orthographic
Oblique (Page 198)

Question No: 4 (Marks: 1) - Please choose one
The dot product of two vectors A and B is _____. Iff the angle between them is less than 90 or greater than 270 degrees.

Greater than zero (0) (Page 177)

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Less than zero (0)
Equal to Zero (0)
None of the given

Question No: 1 (Marks: 1) - Please choose one
This projection technique has the direction of projection perpendicular to the viewing plane, and the viewing direction is perpendicular to one of the principle faces.

metric Parallel Projection
Oblique Parallel Projection
Orthographic Parallel Projection
None of the given

Question No: 5 (Marks: 1) - Please choose one
Orthographic projections that show more than one side of an object are called _____ projections.

Cavalier
Cabinet
Axonometric (Page 196)
Perspective

Question No: 6 (Marks: 1) - Please choose one
Computer Graphics are used in _____.

Movies development
Simulations
All of the given
Game development

Question No: 7 (Marks: 1) - Please choose one
"Computer Graphics" and "Computer Vision" are _____.

Same fields
Interrelated fields
None of the given
Totally different fields http://en.wikipedia.org/wiki/Computer_vision

Question No: 8 (Marks: 1) - Please choose one
We can take transpose of _____.

matrix with 1 row 1 column
matrix with 2 rows 3 columns
matrix with 3 rows 2 columns
any matrix

Question No: 9 (Marks: 1) - Please choose one
If the polygons are _____, line-clipping techniques are sufficient for clipping.

filled
unfilled (Page 146)
half filled
All of the given

Question No: 10 (Marks: 1) - Please choose one
20: Because clipping against one edge is independent of all others, so it is _____ to arrange the clipping stages in a pipeline.

Sometimes impossible
None of the given
Possible (Page 150)
Impossible

Question No: 11 (Marks: 1) - Please choose one
Tessellation can be adaptive to the _____ degree of curvature of a surface.

Local (Page 170)
Static
Global
Variable

Question No: 12 (Marks: 1) - Please choose one
The actual filling process in boundary filling algorithm begins when a point _____ of the figured is selected.

Outside the boundary
Inside the boundary (Page 102)
At boundary
None of the above

Question No: 13 (Marks: 1) - Please choose one
Discard a line with both endpoints outside clipping boundary is called as _____

Trivial accept
Trivial reject (Page 142)
Total outside
None of the above

Question No: 14 (Marks: 1) - Please choose one
_____is the tendency of the text to flash as it moves up or down.

Flickering (Page 38)
Snow
Distortion
None of the above

Question No: 15 (Marks: 1) - Please choose one
The axonometric projection is _____ where the direction of projection makes same angle with all axes.

DIMETRIC
Isometric (Page 196)
Oblique
Trimetric

Question No: 16 (Marks: 1) - Please choose one
We can draw the circle using _____

Pentane
Hexane
Trident
Octant (Page 63)

Question No: 17 (Marks: 1) - Please choose one
_____ direct view storage tube maintains the picture display.

Electron gun
Proton gun
Flood gun (Page 29)
All of the above

Question No: 18 (Marks: 1) - Please choose one
Because clipping against one edge is independent to all others, so it is _____ arrange the clipping stages in a pipeline.

Possible (Page 150) rep
Impossible
Sometimes impossible
None of the above

Question No: 19 (Marks: 1) - Please choose one
If the polygons are _____ line clipping techniques are sufficient for clipping.

Filled
Unfilled (Page 146) rep
Half filled
All of the above

Question No: 20 (Marks: 1) - Please choose one
Polygons consisting of _____ can cause problems when rendering.

Non-coplanar vertices (Page 169)
Co-planar vertices
Any vertices
None of the above

Question No: 1 (Marks: 1) - Please choose one
In Trivial acceptance/reject test there are four bits of nine regions, Bit3 represents condition _____.

Outside half plane of left edge, to the left of left edge X < Xmin
Outside half plane of right edge, to the right of right edge X > Xmax (Page 143)
Outside half plane of bottom edge, below bottom edge Y < Ymin
Outside half plane of top edge, above top edge Y > Ymax

Question No: 2 (Marks: 1) - Please choose one
Plasma-panel displays use a gas mixture that usually includes _____.

Zinc
Iron

CS602 – Solved Quizzes (Quiz No.1 & 2)

Question No: 1 of 10 (Marks: 1) - Please choose one
A line, or straight line, is, roughly speaking, an (infinitely) thin, (infinitely) long, straight geometrical object.

True (Page 53)
False

Question No: 2 of 10 (Marks: 1) - Please choose one
Both Boundary Filling and Flood filling algorithms are _____ as compared to scan line filling algorithm.

Better
Worse
Almost same
Good

Question No: 3 of 10 (Marks: 1) - Please choose one
(x^2 / a^2) + (y^2 / b^2) = 1 is an equation of _____.

Parabola
Hyperbola
Ellipse (Page 70)
Circle

Question No: 4 of 10 (Marks: 1) - Please choose one
We can draw the circle using _____.

Pentane
Hexanes
Trident
Octants (Page 63) rep

Question No: 5 of 10 (Marks: 1) - Please choose one
A scaling transformation alters the _____ of an object.

Shape
Position
Size (Page 120)
Rotation

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 6 of 10 (Marks: 1) - Please choose one
Boundary Filling Algorithm can work for complex polygons.

True
False

Question No: 7 of 10 (Marks: 1) - Please choose one
A _____ is the set of all points (x , y) that are the same distance from the directrix and focus not on the directrix.

Circle
Hyperbola
Parabola (Page 73)
Ellipse

Question No: 8 of 10 (Marks: 1) - Please choose one
Monochrome Adapter (MA) is a single color adapter

True (Page 38)
False

Question No: 9 of 10 (Marks: 1) - Please choose one
If the value of scaling factors sx and sy is greater than 1, then size of objects will be _____.

Reduced
Enlarged (Page 121)
Remain same
Shear

Question No: 10 of 10 (Marks: 1) - Please choose one
In _____ algorithm(s), old color must be read before it is invoked.

Scan line filling
Flood filling (Page 104)
Both scan line and flood filling
Scan filling

Question No: 1 of 10 (Marks: 1) - Please choose one

Parity is a concept used to determine which _____ lie within a polygon.

Edge
Vertices
Pixels (Page 80)
Points

Question No: 2 of 10 (Marks: 1) - Please choose one
Various curve functions are useful in _____.

Object modeling (Page 69)
Graphics applications
Animation path specifications
All of the given

Question No: 3 of 10 (Marks: 1) - Please choose one
polygons are basically concave polygons that may have self-intersecting edges.

Complex (Page 79)
Hybrid
Convex
Convex and Hybrid

Question No: 4 of 10 (Marks: 1) - Please choose one
Concave polygons are a superset of _____ polygons, having fewer restrictions than _____ polygons.

Hybrid, Complex
Concave, Complex
Convex, Convex (Page 79)
Complex, Complex

Question No: 5 of 10 (Marks: 1) - Please choose one
There are _____ basic types of polygon.

2
3 (Page 78)
4
5

Question No: 6 of 10 (Marks: 1) - Please choose one
We can draw eight points corresponding to each (x , y) point calculation in _____ drawing algorithm.

Sutherland
Mid Clipping
Mid Point Circle
Sutherland Clipping

Question No: 7 of 10 (Marks: 1) - Please choose one
the horizontal refresh ----------

Is no longer used in any system
Is distracting and can cause eye fatigue
eye into thinking the horizontal refresh rate is faster

Question No: 8 of 10 (Marks: 1) - Please choose one
Computer graphics is very helpful in producing graphical representations for scientific visualization.

True (Page 9)
False

Question No: 9 of 10 (Marks: 1) - Please choose one
In video text memory, _____ are used to display a character.

2 bytes (Page 43)
4 bytes
8 bytes
16 bytes

Question No: 10 of 10 (Marks: 1) - Please choose one
The basis functions fi(u) in Bezier curve must be symmetric with respect to u and (u-2)

Yes
No (Page 341)

Question No: 1 of 10 (Marks: 1) - Please choose one
Three or more points that lie on the same line are called _____.

Singular
Collinear (Page 53)
Line slop
Line slop and Singular

Question No: 2 of 10 (Marks: 1) - Please choose one
Cross product of two vectors result in a _____.
Magnitude
Vector (Page 116)
Scalar
Value

Question No: 3 of 10 (Marks: 1) - Please choose one
To move a _____ from one location to another, we translate the center point and redraw the same using new center point.

Hyperbola
Parabola
Circle (Page 119)
Line

Question No: 4 of 10 (Marks: 1) - Please choose one
_____ is the set of points that are equidistant from its origin.

Line
Parabola
Circle (Page 59)
Ellipse

Question No: 5 of 10 (Marks: 1) - Please choose one
It is safe to assume that all raster-type monitors can accept the same input

True
False

Question No: 6 of 10 (Marks: 1) - Please choose one
Twice the radius of circle is called as _____.

Area
Diameter (Page 59)
2*Pi Radian
Circumference

Question No: 7 of 10 (Marks: 1) – Please choose one
Both Boundary Filling and Flood filling algorithms are non-recursive techniques.

1. True
2. **False (Page 102)**

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 8 of 10 (Marks: 1) - Please choose one
We can take transpose of any matrix.

- **True**
- False

Question No: 9 of 10 (Marks: 1) - Please choose one

Normalized cross product of two vectors on that surface provides normal vector

YES (Page 347)

NO

Question No: 10 of 10 (Marks: 1) - Please choose one

Set up your tripod and pointing the camera at the scene

projection transformation

viewport transformation

modeling transformation

viewing transformation (Page 372)

Question No: 1 of 10 (Marks: 1) - Please choose one

_____ is based on characteristic size or scale

Fractal Geometry

Traditional Geometry

Euclidean Geometry

None of Above

Question No: 2 of 10 (Marks: 1) - Please choose one

Bernstein polynomial functions are the basic functions of _____ curves.

NURBS

Bezier

Both NURBS and Bazier (Page 342) not confirm

None of the given

Question No: 3 of 10 (Marks: 1) - Please choose one

Silhouette edges occur when dot product of surface normal vector and the view vector is _____.

Zero (Page 345)

One

Both zero and one

None of the given

Question No: 4 of 10 (Marks: 1) - Please choose one

A fractal is generally a property called _____.

Fractal Dimension

Self-similarity

Koch Curve

None of above

Question No: 5 of 10 (Marks: 1) - Please choose one

The curve is always contained within the _____ of the control points

Tangents

Convex Hull (Page 340)

Subdivision

None of Above

Question No: 6 of 10 (Marks: 1) - Please choose one

_____ OpenGL function is used for aiming and positioning the camera towards the object

glLoadIdentity()

gluLookAt() (Page 374)

glFrustum()

None of Above

Question No: 7 of 10 (Marks: 1) - Please choose one

Bezier curve can represent the more complex piecewise _____ curve.
Polynomial (Page 338)
Exponential
Cubic
None of above

Question No: 8 of 10 (Marks: 1) - Please choose one
Perspective projection is specified with the function glFrustum().
Yes (Page 376)
No

Question No: 9 of 10 (Marks: 1) - Please choose one
Line connecting any two points within a polygon does not intersect any edge, then it will be a _____ polygon.
Convex (Page 79)
Concave
Complex
None of the given

Question No: 10 of 10 (Marks: 1) - Please choose one
The _____ tests are performed for the midpoints between pixels near the circle path at each sampling step.

Parabola function
Eclipse function
Circle function (Page 62)
Line function

Question No: 1 of 10 (Marks: 1) - Please choose one
actual filling process in boundary filling algorithm begins when a point _____ of the figure is selected.
Outside the boundary
Inside the boundary (Page 102) rep
At boundary
None of the given

Question No: 2 of 10 (Marks: 1) - Please choose one
Each hyperbola consists of two _____ .
Vertices
Nodes
Branches (Page 70)
Points

Question No: 3 of 10 (Marks: 1) - Please choose one

Rotating a point requires
The coordinates for the point
The rotation angles
Both of above (Page 180)
None of given

Question No: 4 of 10 (Marks: 1) - Please choose one
Vectors can be multiplied in a way
Dot product
Cross product
Both of above (page 176)
None of given

Question No: 5 of 10 (Marks: 1) - Please choose one
Shortcoming of Sutherland-Hodgeman Algorithm is concave polygons may be displayed with extensors lines
True (Page 244)
False

Question No: 6 of 10 (Marks: 1) - Please choose one
The process of subdivision an entity or surface into one or more non-overlapping primitives.

Rendering
Modeling
Meshing
None of above (page 259)

Question No: 7 of 10(Marks: 1) - Please choose one
In Trivial acceptance/reject test there are four bits of nine regions, Bit 4 represents condition _____.

Outside half plane of left edge, to the left of left edge X < Xmin (Page 143)
Outside half plane of right edge, to the right of right edge X > Xmax
Outside half plane of bottom edge, below bottom edge Y < Ymin
Outside half plane of top edge, above top edge Y > Ymax

Question No: 8 of 10 (Marks: 1) - Please choose one
In Trivial acceptance/reject test there are four bits of nine regions, Bit 2 represents condition _____.

Outside half plane of left edge, to the left of left edge X < Xmin
Outside half plane of right edge, to the right of right edge X > Xmax
Outside half plane of bottom edge, below bottom edge Y < Ymin (page 143)
Outside half plane of top edge, above top edge Y > Ymax

Question No: 9 of 10 (Marks: 1) - Please choose one

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

Rendering
Modeling (Page 164)
Meshing
None of above

Question No: 10 of 10 (Marks: 1) - Please choose one
Sutherland-Hodgeman clipping algorithm clips any polygon against a concave clip polygon

True
False (Page 244)

Question No: 1 of 10 (Marks: 1) - Please choose one
Process of moving points in space is called

Rendering
Modeling
Meshing
None of above (Page 259)

Question No:2 of 10 (Marks: 1) - Please choose one
When scaling factor Sx and Sy are assigned the same value, _____ scaling is produced that maintains relative object proportions.

Uniform (page 121)
Unequal
Multiform
Equal

Question No: 3 of 10 (Marks: 1) - Please choose one
_____ transformation produces shape distortions as if objects were composed of layers that are caused to slide over each other.

Rotation
Translation
Reflection
Shear (Page 129)

Question No: 4 of 10 (Marks: 1) - Please choose one
Global coordinate systems can be defined with respect to local coordinate system
True
False (Page 163)

Question No: 1 of 10 (Marks: 1) - Please choose one

The given primitives are clipped to the boundaries of _____ and primitives lying outside are not drawn.

Clipping polygon
Clipping circle
Clipping rectangle (Page 247)
Clipping Line

Question No: 5 of 10 (Marks: 1) - Please choose one
In 2D transformation, _____ can be achieved by rotating the object about 180 degrees.

Translation
Scaling
Shear
Reflection (page 191)

Question No: 6 of 10 (Marks: 1) - Please choose one
Discard a line with both endpoints outside clipping boundaries is called as

Trivial reject (Page 142)
Trivial accept
Total outside
Total inside

Question No: 7 of 10 (Marks: 1) - Please choose one
In _____ transformation one coordinate is held fixed and the other coordinate or coordinates are shifted.

Rotation
Reflection
Shear click here for detail
Scaling

Question No: 8 of 10 (Marks: 1) - Please choose one
Locations can be translated or "transformed" from one coordinate system to the other. Select correct option:

True (Page 163)
False

Question No: 9 of 10 (Marks: 1) - Please choose one

Geometric patterns that is repeated at ever smaller scales to produce irregular shapes and surfaces are called _____

Geometric patterns
Fractals (page 352)
Animated components
Segments

Question No: 10 of 10 (Marks: 1) - Please choose one
Bezier curve is tangent to the lines connecting _____.
First two points
Last two points
Fist two points and last two point (Page 340)
None of the given

Question No: 1 of 10 (Marks: 1) - Please choose one
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 26)**
► electron

Question No: 2 of 10 (Marks: 1) - Please choose one
Using Cohen-Sutherland line clipping, it is impossible for a vertex to be labeled 1111.

► **true**
►false

Question No: 3 of 10 (Marks: 1) - Please choose one
Shadow mask methods can display a _____ range of colours.

► Small
► **Wide (Page 29)**
► Random
► crazy

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 4 of 10 (Marks: 1) - Please choose one
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 45)**

Question No: 5 of 10 (Marks: 1) - Please choose one
Each number that makes up a matrix is called an _____ of the matrix.
► **Element (page 106)**
► Variable
► Value
► component

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari