

CS602-COMPUTER GRAPHICS MID TERM MCQS

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1. ----- is a point which make the code simpler and all other point is taken from this point.

1. Angle
2. Line
3. **Pivot**
4. Pixel

2. Computer graphic application can be found in almost all is areas except

1. Medicine in virtual surgery
2. Games
3. **Multi-threading**
4. Simulation

3. Twice the radius of circle is called as-----.

1. Area
2. **Diameter**
3. 2π Radian
4. Circumference

4. -----are the fundamental geometric entities within a given data structure.

1. Pixels
2. Points
3. Vectors
4. **Primitives**

5. Plasma panel display use a gas mixture and phosphorus coating for showing display

1. **True**
2. False

6. In ----- Polygon filling technique the filling is done from interior point towards boundary

1. Scan- line

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2. Boundary

3. Edge
4. Simple

7. In right hand rule z----- is beyond the region and----- behind it

1. Positive, positive
2. Negative, positive
3. Positive, negative
4. Negative, negative

8. matrix addition can be done if two matrices have the same number of -----and-----
--

1. Column, Transpose
2. Vectors, Rows
3. Dimension, vectors
4. Rows, column

9.----- of a matrix are the new matrix whose rows are the column of the original

1. Inverse
2. Zero
3. Vector
4. Transpose

10. In perspective ,projection, for correct for correct view..... Should pass through the middle of the screen

1. X-axis
2. Y-axis
3. Z-axis
4. X-axis-axis

11. In translation every point the object is translated by the

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1. Same amount
 2. 90 degree
 3. Right angle
 4. Force
12. -----Algorithm make calculation for an octant of a circle area and draw the whole circle
1. Cartesian Coordinates
 2. Slopecircle
 3. ASCII values
 4. Polar coordinates
13. This projection technique has the direction of projection perpendicular to the viewing direction is perpendicular to one of the principle faces
1. Axonometric parallel projection
 2. Oblique parallel projection
 3. Orthographic parallel projection
 4. Oblique projection
14. The mirror image for a 2D reflection is generated by rotating the object ----- about the reflection axis
1. 360 degree
 2. 180 deg
 3. 190 deg
 4. 120 deg
15. The ordering of vertices goes ----- in a triangle
1. Top bottom
 2. Bottom to top
 3. Clockwise

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4. Counter-clockwise
16. In mode 3, each pixel occupies -----bit/bits in VDU memory
1. 3 Bytes
 2. 4 Bytes
 3. 2 Bytes
 4. 6 Bytes
17. Translation move objects without -----
1. Scaling
 2. Rotation
 3. Deformation
 4. Scaling and Rotation
18. Drawing a ----- triangle , we add only two parts to the flat triangle routine
1. Flat
 2. Texture
 3. Gouraud
 4. Environments
19. ----- was first person who studied the ellipse
1. Menaechmus
 2. Apollonius
 3. Einstein
 4. Archimedes
20. ----- is the set of points that are equidistant from its origin.
1. Line
 2. Parabola
 3. Circle
 4. Ellipse

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21. Three or more points that lie on the same line are called-----

1. Singular
2. **Collinear**
3. Line slope
4. Line slope and singular

22. Monochrome adapter can display-----

1. Only Games
2. Text Graphics
3. Only Graphics
4. **Only Text**

23. In Sutherland and Hodgman's polygon clipping algorithm what will be saved for wholly inside visible

Region

1. Intersection
2. **Endpoint**
3. Intersection and endpoint
4. Nothing will be saved

24. In Raster – scan system electron beam draws a line from left to right and then back to left end to draw next line this effect is known as-----

1. Vertical Retrace
2. **Horizontal Retrace**
3. Interlaced
4. Non-interlaced

25. In ----- Projection the direction of projection makes equal angles with all three principal axes

1. **Isometric**

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- 2. Diametric
- 3. Trimetric
- 4. Tetrametric

26. Monochrome Adapter (MA) is a single color adapter——

- **True** **PG # 38**
- False

27. We can explain relationship between X, Y and Z coordinates using the left hand rule.

- **False**
- True

28. The last column of an affine transform matrix does not affect vectors.

- **True**
- False

29. Plasma-panel Displays use a gas mixture and phosphorus coating for showing display.

- **False**
- True

30. $(x^2 / a^2) - (y^2 / b^2) = 1$ is an equation of_____.

- Circle
- Parabola
- **Hyperbola**
- Ellipse

PG # 70

31. There are_____ basic types of polygon.

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- 2
- **3** PG # 81
- 4
- 10 0304-1659294

32. _____ Polygons are basically concave polygons that may have self-intersecting edges.

- **Complex** PG # 81
- None of the given
- Hybrid
- Convex

33. The actual filling process in boundary filling algorithm begins when a point _____ of the figure is selected.

- Outside the boundary
- **Inside the boundary** PG # 102
- At boundary
- None of the give

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34. In Trivial acceptance/reject test there are four bits of nine regions, Bit 1 represents condition_.

- Outside half plane of left edge, to the left of left edge $X < X_{min}$
- Outside half plane of right edge, to the right of right edge $X > X_{max}$
- Outside half plane of bottom edge, below bottom edge $Y < Y_{min}$
- **Outside half plane of top edge, above top edge $Y > Y_{max}$**
PG # 143

35. 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 $X < X_{min}$
- Outside half plane of right edge, to the right of right edge $X > X_{max}$
- **Outside half plane of bottom edge, below bottom edge $Y < Y_{min}$**
PG # 143
- Outside half plane of top edge, above top edge $Y > Y_{max}$

36. In Trivial acceptance/reject test there are four bits of nine regions, Bit 3 represents condition __.

- Outside half plane of left edge, to the left of left edge $X < X_{min}$
- **Outside half plane of right edge, to the right of right edge $X > X_{max}$**
PG # 143

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- Outside half plane of bottom edge, below bottom edge $Y < Y_{min}$
- Outside half plane of top edge, above top edge $Y > Y_{max}$

37. 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 $X < X_{min}$**

PG # 143

- Outside half plane of right edge, to the right of right edge $X > X_{max}$
- Outside half plane of bottom edge, below bottom edge $Y < Y_{min}$
- Outside half plane of top edge, above top edge $Y > Y_{max}$

38. Polygons consisting of _____ can cause problems when rendering.

- **Non-co-planar vertices**
- Co-planar vertices
- On any vertex
- None of the given

PG # 169

39. The homogeneous coordinates for 3D translation can be expressed as ____.

- None of the given 0304-1659294
- $P' = T(tx, tx, tx) + P$

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o $P' = T(0, 0, 0) + P$

o $P' = T(tx, ty, tz) \cdot P$

PG # 179

40. _____ is the tendency of the text to flash as it moves up or down.

o **Flickering**

PG # 38

o Snow

o Distortion

o None of the given

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41. _____ is the flurry of bright dots that can appear anywhere on the screen.

o Flickering

o **Snow effect**

PG # 38

o Distortion

o None of the given

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

o **2 bytes**

PG # 43

o 4 bytes

o 8 bytes

o 16 bytes

43. In _____ algorithm, old color must be read before it is invoked.

o Scan line filling

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○ **Flood fill**

PG # 104

- Both scan line and flood fill
- None of the given

44. In _____ transformation one coordinate is held fixed and the other coordinate or coordinates are shifted.

- Rotation
- Reflection

○ **Shear**

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- None of the given

45. The dot product of two vectors A and B is ____, if the angle between them is less than 90 or greater than 270 degrees.

○ **Greater than zero (0)**

PG # 177

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

46. In _____ projection, all lines perpendicular to the projection plane are projected with no change in length.

- Cavalier and Cabinet
- Cabinet

○ **Cavalier**

PG # 199

- None of the given

47. First step of triangle rasterization is to be able to __ a solid filled

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triangle.

- Rotate
- **Render**
- Redraw
- None of the given

PG # 216

48.If the value of scaling factors S_x and S_y is greater than 1, then size of objects will be

—.

- Reduced
- **Enlarged**
- Remain same
- None of the given

PG # 121

49.Interlacing the horizontal refresh_____.

- Is no longer used in any system
- Is necessary because of the shape of the rods in the human eye
- Is distracting and can cause eye fatigue
- **Fools the human eye into thinking the horizontal refresh rate is faster**

50.It is safe to assume that all raster-type monitors can accept the same input

- **False**
- True

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51.Both Boundary Filling and Flood filling algorithms are non-recursive techniques.

- **False** PG # 102
- True 0304-1659294

52.When defining a mesh of triangles that define the boundary of a solid, you set it up so that all of the triangles along the skin are ordered _____when viewed from the outside.

- Perpendicular
- Parallel
- **Clockwise** PG # 208
- Anticlockwise

53.We can not explain relationship between X, Y and Z coordinates using the left hand rule.

- False
- **True**

54.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** PG # 73

55.Rotating a point requires that you know the coordinates for the point, and also know the rotation angles.

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- False

○ **True**

PG # 180

56. The boundary-fill method requires the coordinates of__.

- Starting point
- Filling colour
- Boundary colour
- **All of the given**

PG # 102

57. Both Boundary Filling and Flood filling algorithms are__than scan line filling algorithm.

- None of the given
- **Better**
- Worse
- Almost same

58. Discard a line with both endpoints outside clipping boundaries is called as ____.

- **Trivial Reject**
- Trivial Accept
- None of the given
- Total outside

PG # 142

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59. Because clipping against one edge is independent of all others, so it is impossible to arrange the clipping stages in a pipeline.

☐ True

☐ **False**

PG # 150

60. If the polygons are filled, line-clipping techniques are sufficient to clip it.

☐ True AL-JUNAID INSTITUTE OF GROUP

☐ **False**

PG # 248

61. According to the architecture of raster graphics system, display processor memory will act as _____.

☐ Video controller

☐ **System memory**

PG # 36

☐ Frame buffer

☐ None of the given

62. Various curve functions are useful in _____.

☐ Object modeling

☐ Graphics applications

☐ **All of the given**

PG # 69

☐ Animation path specifications

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

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- Translation
- Reflection
- **Shear**
- Rotation

PG # 129

65. In _____ projection, lines which are perpendicular to the projection

plane are projected at _____.

- **Cabinet , 1/2 length**
- Cavalier , 1/2 length
- Cabinet , No change in length
- Cavalier , No change in length

PG # 199

66. 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.

- Axonometric Parallel Projection
- Oblique Parallel Projection
- **Orthographic Parallel Projection**
- None of the given

PG # 194

67. Computer Graphics are used in _____.

- Game development
- Movies development
- Simulations

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- **All of the given**

PG # 6

68. $(x^2 / a^2) + (y^2 / b^2) = 1$ is an equation of__.

- Parabola
- Hyperbola
- **Ellipse**
- Circle

PG # 70

69. A straight line can be moved to another location by applying to each of the line endpoints and redrawing the line between the new coordinates.

- Rotation
- **Translation**
- Reflection
- Scaling factor

PG # 118

70. Boundary Filling Algorithm cannot work for_____polygons.

- Convex
- Concave
- Complex
- **All of the given**

71. To move a _____ from one location to another, we translate the center

point and redraw the same using new center point.

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- Arc
- Parabola
- All of the given

○ **Circle** PG # 119

72. For modifying object shapes, _____ transformations can be used.

- Rotation
- Translation

○ **Shearing** PG # 192

- both translation and shearing

73. The boundary-fill method requires _____.

- Coordinates of starting point
- Filling colour 0304-1659294
- Boundary colour

○ **All of the given** PG # 102

74. In 2D transformations, two successive rotations applied to a point P can be denoted as _____.

○ **$P' = R(\Theta_1 + \Theta_2) \cdot P$** PG # 124

○ $P' = (R(\Theta_1) - R(\Theta_2)) \cdot P$

○ $P' = R(\Theta_1 \times \Theta_2) \cdot P$

○ $P' = R(\Theta_1) \cdot P$

76. We can draw 8 points corresponding to each (x, y) point in

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drawing_____algorithm.

- Triangle
- Parabola
- **Circle**
- Hyperbola

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77.If a line connecting any two points within a polygon does not intersect any

edge, then it will be a
_____polygon.

- **Convex**
- Concave
- Complex
- Hybrid

PG # 79

78. A column matrix is also known as_____. (Choose best suitable answer)

- **Column vector**
- Row vector
- Vector
- Unit vector

PG # 107

79.Because clipping against one edge is independent of all others, so it is_____to arrange the clipping stages in a pipeline.

- **Possible**

PG # 150

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- Impossible
- sometimes impossible
- sometimes possible

80. We can explain relationship between X, Y and Z coordinates using ____.

- Left hand rule
- Pump rule
- Jaw rule
- **Right hand rule**

81. The homogeneous coordinates for 3D translation can be expressed as

○ $P' = T(0, 0, 0) - P$

○ $P' = T(tx, tx, tx) + P$

○ $P' = T(0, 0, 0) + P$

○ **$P' = T(tx, ty, tz) \cdot P$**

PG # 179

82. A ____ system (or frame) is an affine, euclidean vector space.

- Number
- **Coordinate**
- Unit
- Vector

83. A three-dimensional reflection can be performed relative to a selected reflection _____.

- Point

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- Plane
- **Axis**
- Both Axis and plane

PG # 191

