

COMPUTER GRAPHICS

Question Bank

Helping Others Have Special taste

Questions

1) Which programming languages does the GLUT library support?

- A) C, C++, Python, and Ruby.
- B) C, C++, FORTRAN, and Ada.**
- C) Java, C#, and JavaScript.
- D) Pascal, Lisp, and COBOL

2) What does the glutInitWindowSize() function do ?

- A) Sets the initial position of the window.
- B) Defines the size of the window.**
- C) Clears the window.
- D) Draws OpenGL content.

3) What is the purpose of the glutInitWindowPosition() function call?

- A) Clears the window.
- B) Draws OpenGL content.
- C) Defines the size of the window.
- D) Sets the initial position of the window.**

4) What does `glutCreateWindow()` do?

- A) Initializes the GLUT library.
- B) Creates the main OpenGL context.
- C) Creates a window with a specified title.
- D) Sets the display function for drawing.

5) What does the `glutDisplayFunc(display)` call specify?

- A) The size of the window.
- B) The position of the window.
- C) The function to be called when the window needs to be redrawn.
- D) The initialization of the OpenGL context.

6) What is the role of `glutMainLoop()` in the code snippet?

- A) Sets up the display function.
- B) Creates the window.
- C) Enters the GLUT event processing loop.
- D) Defines the size and position of the window.

7) Which function sets the display callback for the *current window* ?

- A) `glutInitWindowSize()`
- B) `glutInitWindowPosition()`
- C) `glutCreateWindow()`
- D) `glutDisplayFunc(display);`

8) What happens if you change `glutInitWindowSize(150, 150);` to `glutInitWindowSize(300, 300);`?

- A) The window title changes.
- B) The window position changes.
- C) The window size changes.
- D) The window is closed.

9) What would happen if the `glFlush()` call is removed from the `display()` function?

- A) The window won't appear.
- B) The window size changes.
- C) The window remains blank.
- D) The window will be drawn but won't update.

10) What happens if `glutInitDisplayMode()` is set to `GLUT_DOUBLE` instead of `GLUT_SINGLE`?

- A) The window is double-buffered.
- B) The window size changes.
- C) The window remains blank.
- D) The window won't appear.

11) What primitive type is used to display a single point in OpenGL?

- | | |
|---------------------------|------------------------------|
| A) <code>GL_LINES</code> | C) <code>GL_TRIANGLES</code> |
| B) <code>GL_POINTS</code> | D) <code>GL_QUADS</code> |

12) How is the size of points controlled in OpenGL?

- A) Using `glPointSize()`
- B) Using `glLineWidth()`
- C) Using `glPolygonMode()`
- D) Using `glTexParameter()`

13) In OpenGL, what function is used to specify a point?

- A) `glVertex*()`
- B) `glPoint*()`
- C) `glDrawPoint()`
- D) `glCreatePoint()`

14) What pair of functions must points be placed within in OpenGL?

- A) `glStart/glFinish`
- B) `glBegin/glEnd`
- C) `glInit/glTerminate`
- D) `glSetup/glTeardown`

15) What function is used to specify the color of a point in OpenGL?

- A) `glColor`
- B) `glPointColor`
- C) `glSetPointColor`
- D) `glClearColor`

16) What function is used to specify the position of a point in 3D space in OpenGL?

- A) `glVertex2i`
- B) `glVertex3i`
- C) `glVertex2f`
- D) `glVertex3f`

17) What primitive type is used to specify the beginning and end of a set of points in OpenGL?

- A) GL_POINTS
- B) GL_LINES
- C) GL_TRIANGLES
- D) GL_QUADS

18) Which OpenGL primitive type is used when vertices are paired off to produce line segments?

- A) GL_LINES
- B) GL_LINE_STRIP
- C) GL_LINE_LOOP
- D) GL_POINTS

19) How does GL_LINE_STRIP draw lines between vertices?

- A) It draws lines between all vertices.
- B) It draws lines between pairs of vertices.
- C) It draws lines from the first vertex to each subsequent vertex.
- D) It draws lines from the last vertex back to the first one.

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21) How is the width of a line changed in OpenGL?

- A) Using `glLineWidth(width)`
- B) Using `glPointSize(size)`
- C) Using `glLineStipple(multiplier, pattern)`
- D) Using `glEnable(GL_LINE_SMOOTH)`

22) What function is used to set the stipple pattern for a line in OpenGL?

- A) `glPointSize()`
- B) `glLineStipple()`
- C) `glLineWidth()`
- D) `glEnable()`

23) What function is used to enable antialiasing for lines in OpenGL?

- A) `glEnable(GL_LINE_SMOOTH)`
- B) `glLineWidth(width)`
- C) `glPointSize(size)`
- D) `glLineStipple(multiplier, pattern)`

24) How is the stipple pattern represented in `glLineStipple()`?

- A) As a binary number
- B) As a float value
- C) As a texture coordinate
- D) As an integer value

25) What is the technical definition of a convex polygon?

- A) Whenever two points lie in the polygon, the line segment between them also lies in the polygon.
- B) Whenever three points lie in the polygon, the area enclosed by them is convex.
- C) The polygon must have at least one indentation along its edge.
- D) The polygon can be self-intersecting.

26) How should vertices be specified in order to determine the front side of a polygon by default in OpenGL?

- A) Clockwise order
- B) Counterclockwise order**
- C) Random order
- D) Ascending order

27) What primitive type is typically used to draw polygons in OpenGL?

- A) GL_TRIANGLES B) GL_LINES
- C) GL_POINTS D) **GL_POLYGON**

28) Which primitive type in OpenGL groups vertices into sets of three to generate triangles?

- A) GL_TRIANGLES**
- B) GL_TRIANGLE_STRIP
- C) GL_TRIANGLE_FAN
- D) GL_POINTS

29) How does GL_TRIANGLES handle cases where the number of vertices is not a multiple of three?

- A) The additional vertices are discarded.**
- B) The additional vertices are used to form additional triangles.
- C) An error occurs.
- D) The rendering is aborted.

30) What is the purpose of GL_TRIANGLE_STRIP in OpenGL?

- A) To specify individual triangles.
- B) To draw triangles in a strip or band formation.
- C) To draw triangles with a fan-shaped pattern.
- D) To draw lines connecting each vertex.

31) How are triangles formed when using GL_TRIANGLE_STRIP?

- A) Each vertex specifies a triangle.
- B) The first three vertices specify a triangle, and each additional vertex adds another triangle with the previous two vertices.
- C) Vertices are grouped into sets of three to form triangles.
- D) Triangles are formed by connecting each vertex to the next two vertices.

32) What is the significance of the order of vertices when using GL_TRIANGLE_STRIP?

- A) It determines the color of the triangles.
- B) It determines the direction of triangle formation.
- C) It affects the size of the triangles.
- D) It has no significance.

33) Which order of vertices represents the front face of a triangle in OpenGL by default?

- A) Clockwise order
- B) counter-clockwise
- C) Random order
- D) Ascending order

34) How are triangles treated when using GL_TRIANGLES?

- A) Each triangle is treated as a separate polygon.
- B) Vertices are connected to form a continuous line.
- C) Triangles are grouped into strips.
- D) Triangles are drawn as a fan shape.

Answers

Lecture 4

Question	Answer
1	B
2	B
3	D
4	C
5	C
6	C
7	D
8	C
9	C
10	A
11	B
12	A
13	A
14	B
15	A
16	D
17	B
18	A
19	C
20	D
21	A
22	B
23	A
24	D
25	A
26	B
27	D
28	A

Lecture 4

29	A
30	B
31	B
32	B
33	B
34	A

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