

**Question 1.** (2 marks)

Describe the shape of the default OpenGL *view volume*.

**Question 2.** (6 marks)

Describe the components in the *pipeline* architecture of OpenGL, including a diagram that relates these components in the pipeline.

**Question 3.** (2 marks)

Give two common applications of vertex shaders in OpenGL.

**Question 4.** (6 marks)

(a) (3 marks) Explain clearly what the following functions do in OpenGL:

i) `glutInitDisplayMode (GLUT_SINGLE) ;`

ii) `glutMainLoop () ;`

(b) (3 marks) Briefly describe how the z-buffer algorithm works.

**Question 5.** (4 marks)

What is a *callback* function in the context of interactive programs? Give two examples of callbacks in OpenGL, and explain the purpose of each.

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**END OF PAPER**

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