Ics 2311-computer graphics-TAKE AWAY CAT ONE

Mathematics and computer science (Taita Taveta University)

ICS 2311: Computer Graphics

Instructions: Answer All the Questions in This Paper

a) Explain what is meant by a transformation matrix and describe the three sets of matrices provided by openGL for performing various transformation operations; <4 marks>

b) Using relevant illustrations explain what is 'matrix stack' in openGL and describe the purpose of the matrix operations; <4 marks>
(i) ***glLoadIdentity()*** (ii) ***glMultMatrix*(M)*** (iii) ***glPushMatrix ()***

c) Explain the effect of the following openGL commands for performing various transformations. Describe the meaning of the arguments. <4 marks>
(i) glTranslatef (0, 0, -3) (ii) glscalef(20, 0, 0, 1)

d) Explain the difference between; ***clipping area*** and ***viewport;*** <2 marks>

e) Describe the following terms as used in computer graphics; <3 marks>
(i) Fluorescence (ii) screen resolution (iii) color resolution

f) Using relevant diagrams, distinguish between vector displays and raster displays, <4 marks>

g) State and explain three ways in which an electron can be filtered in a CRT; <6 marks>

h) Explain why phosphor is preferred in a CRT screen; <3 marks>