

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

# **UNIVERSITY EXAMINATIONS 2014/2015**

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION TECHNOLOGY (BBIT)**

**ICS 2327 : COMPUTER GRAPHICS**

**DATE: AUGUST 2014 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE [COMPULSORY] AND ANY OTHER TWO QUESTIONS**

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**QUESTION ONE**

1. Differentiate between texture mapping rendering from light transportation and associated types of graphic image it is applied. [4 marks]
2. Explain the meaning of pixellation and its difference in effect between vector and raster types of graphics. [6 marks]
3. Explain the following types of graphic model transformation
4. Rotation [2 marks]
5. Translation [2 marks]
6. Scaling [2 marks]
7. Explain the following terms applied in graphic modeling
8. Point [2 marks]
9. Vertex [2 marks]
10. Edge [2 marks]
11. Pixel [2 marks]
12. Vector [2 marks]
13. Show how any 3D point can be represented by a vector [4 marks]

**QUESTION TWO**

1. Explain the stages of graphic modeling [10 marks]
2. Explain the meaning of rendering and give an outline of the openGL rendering pipeline. [10 marks]

**QUESTION THREE**

1. (i) Explain the meaning of animation in computer graphic [1 mark]

(ii) Explain any three methods of creating animation in computer graphics. [9 marks]

1. Explain the following graphic compression formats

GIT [ 2 marks]

DNG [2 marks]

TIFF [2 marks]

JPEG [2 marks]

FLC [2 marks]

**QUESTION FOUR**

1. (i) Describe the features and respective functions of a graphic processing card. [8 marks]
2. Describe the features of display screen technology suitable for high quality graphic display. [4 marks]
3. (i) Explain the difference in tools and functions provided between vector graphic application software e.g adobe illustrator rasta image application such as photo shop. [4 marks]

(ii) Explain with illustration diagram, how open GL software functions as application programming interface (API) for graphics applications. [4 marks]

**QUESTION FIVE**

1. Explain the difference in suitability for application between photoshop and illustrator software. [10 marks]
2. Explain four areas of application of computer graphics and for each area describe the appropriate method and techniques of modeling. [10 marks]