EXAM ONE

TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTER SCIENCE AND INFORMATICS

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN MATHEMATICS AND COMPUTER SCIENCE (BSMC)

BACHELOR OF SCIENCE IN STATISTCS AND COMPUTER SCIENCE (BSSC)

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY(BSIT)

BACHELOR OF TECHNOLOGY INFORMATION TEHNOLOGY(BTIT)

EIT4214/ICS 2311: COMPUTER GRAPHICS

END OF SEMESTER EXAMINATION

SERIES:**2016/2017**

TIME:**TWO HOURS**

DATE:**Pick DateAPRIL2016**

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of FIVE questions. Attempt Question ONE (Compulsory) and OTHER TWO from the rest.

Do not write on the question paper.

QUESTION ONE

a) Explain the advantages and disadvantages of the following types of graphic processing

(i) Bitmap processing (2marks)

(ii) Vector processing (2 marks)

b) Convert the representation of the cartesian point (3,1.5) into vector form (2 marks)

(c) Explain any three methods of creating an computer animation (6 marks)

d) Describe any four tools you would expect in each of the following graphic processing Application software

(i) vector graphic (4 marks)

(ii) Rater graphic (4 marks)

e) Explain the difference between the following graphic modeling methods in terms technique primitive

(i) polygonal modeling (2 marks)

(ii) curve modeling (2 marks)

(iii)digital sculpting (6 marks)

QUESTION TWO

a) Explain the steps in graphic modeling process (8 marks)

b) Explain the meaning and application of the following concepts in computer graphic

(i) color model (4 marks)

(ii) illumination model (4 marks)

(iii) texture mapping (4 marks)

QUESTION THREE

a) Explain the meaning and types of rendering (6 marks)

b) Explain the service provided by OpenGL Application programming interface (4 marks)

b) Explain the OpenGL rendering process (10 marks)

QUESTION FOUR

Explain the following graphic applications in any two areas
a) Drawing (5 marks)
b) Rendering (5 marks)
c) Animation (5marks)
d) Imaging (5 marks)

QUESTION FIVE

a) Differentiate between interactive and non interactive graphics and respective uses (10 marks)

b) Explain the types of specification required for computer graphic processing hardware (5 marks)

c) Explain the types of specification required for computer graphic Display hardware system. (5marks)