NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SCHOOL OF SCIENCE AND TECHNOLOGY
MAY/JUNE 2012 EXAMINATION

CIT 371 INTRODUCTION TO COMPUTER GRAPHICS AND ANIMATION
Time Allowed: 3 Hours

Instruction: Answer Any Five Questions

1a. What is Computer Graphics?
4 marks
b. Outline any four application areas of computer graphics
8 marks
c. What do we work with in computer graphics? 4 marks
d. Briefly explain the basic graphics rendering pipeline 4 marks

2a. What are BSP trees? 4 marks

b. State the characteristics of a BSP tree 4 marks

c. Outline the procedure for constructing a BSP tree 8 marks

d. State an important use of BSP trees 4 marks

3a. What do you understand by color model? 6 marks
b. What are complementary colors? 4 marks
c. Distinguish between Greyscale frame buffer and pseudo-color frame buffer 10 marks

4a. Define kinematics 5 marks

b. What is kinematics technique used for?
5 marks

c. Outline the two algorithm types 10 marks

5a. Explain what do you understand by ray tracing?
6 marks

b State the basic ray casting algorithm
6 marks

c. What can a recursive ray tracer do?
5 marks

d. How do we know if an object is in shadow? 3 marks

6a. List three basic representation of shape 6 marks

b. State two advantages and two disadvantages of each of the two opposite shape representation
8 marks

c What is a spline curve? 3 marks

d How is the quality of a curve characterized? 3 marks

7a. What is a matrix? 4 marks

b. How are matrices added? 4 marks

c. Explain matrix Inverse and the Identity 4 marks

d. What do you understand by matrix transposition? 4 marks

e. Define the Cartesian Coordinate system and Cartesian Coordinate frame 4 marks