

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**JUNE/JULY EXAMINATION**

**COURSE CODE: CIT371**

**COURSE TITLE: INTRODUCTION TO COMPUTER GRAPHICS AND ANIMATION**

**TIME ALLOWED: Answer Any Five Questions**

**INSTRUCTION: 3 Hours**

1a. Explain what is meant by vector. 5marks

b. List two differences between a point and a vector. 6marks

c. Enumerate three uses of Vectors in computer graphics. 3 marks

2a.Explain the bump mapping concept. 4 marks

b. List two methods used to perform bump mapping. 6 marks

c.State he primary limitation of bump mapping. 4 marks

3a. What is computer animation? 5 marks

b. Explain in details computer animation technique. 5marks

### c. Give one open challenge in computer animation 4 marks

4a**.** Explain what is meant by computer simulation. 5 marks

b. State two merits and two demerits of physically-based animation.4 marks

c. List five application areas of simulation in various fields. 5 marks

5. Explain the following colour models

i. RGB colour model

ii. YIQ colour space

iii. CYMK colour Model

iv. HSV and HSL colour models 14 marks

6a**.** Explain the human perception of colour. 4 marks

b. Give the two sources of HDR imagery. 4 marks

c. List the three main types of optical illusion with concrete examples. 6 marks

7a. Explainraytracing. 3 marks

b. Why is ray tracing so named? 3 marks

b. What makes raytracing different from other scanline rendering methods? 4 marks

### c. State four advantages of Monte-Carlo raytracing. 4 marks