



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF MATHEMATICS & PHYSICS

**UNIVERSITY EXAMINATION FOR:**

**BACHELOR OF SCIENCE IN STATISTICS & COMPUTER SCIENCE**

**EIT 4315: MULTIMEDIA SYSTEMS**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: Pick Date Apr 2016**

## **Instructions to Candidates**

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of Choose No questions. Attempt Choose instruction.

**Do not write on the question paper.**

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## **Question ONE**

a) Explain the difference between the following terms:

i) Intra-object synchronization and Inter-object synchronization

ii) Hypertext and Hypermedia

iii) Virtual reality and virtual environment

(12 Marks)

b) State any four technological advancements that are driving multimedia revolution.

(4 Marks)

c) Explain the difference between the following terms:

i) "Lossy compression" and "Lossless compression" techniques

ii) "JPEG" and "MPEG" standards

(8 Marks)

d) Explain the following terms:

i) Multimedia

ii) Multimedia Information system

iii) Virtual Reality Modelling Language (VRML)

(6 Marks)

### Question TWO

- a) Describe the Term “Video Conferencing” (2 marks)
- b) Explain the term software and describe the different feature of the different classes of Software used in Multimedia systems (8 marks)
- c) What do you understand by Psychoacoustics (4 marks)
- d) Explain the desirable features of a Multimedia Systems (6 marks)

### Question THREE

- a) Give a concise definition of multimedia (2 marks)
- b) Explain the difference between the types of multimedia hardware systems you have studied (8 marks)
- c) Explain the benefits and challenges of using color in multimedia systems (4marks)
- d) List and explain at least 3 Functions of the Asynchronous Transfer Mode (ATM) (6 marks)

### Question FOUR

a) Explain the role of multimedia in the following areas:

- i) Entertainment and Fine Arts
- ii) Education
- iii) Industry
- iv) Medicine

(8 Marks)

b) Describe any four types of media used in a multimedia application, stating an example of a suitable application software in each case. (12 Marks)

### Question FIVE

- a) Describe the concept of Authoring System and Identify 4 main types of an Authoring tool (10 marks)
- b) Give a concise definition of Quality of Service (QoS) and explain the relevance of QoS in Multimedia Technology (10 marks)