

TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

Select department

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

ICS 2303: MULTIMEDIA SYSTEMS

END OF SEMESTER EXAMINATION

SERIES:APRIL2016

TIME:2HOURS

DATE:1May2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attemptquestion ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- a) Explain the difference between the following terms:
 - i) "Lossy compression" and "Lossless compression" techniques
 - ii) "JPEG" and "MPEG" standards
 - iii) Intra-object synchronization and Inter-object synchronization
 - iv) Hypertext and Hypermedia
 - v) Virtual reality and virtual environment

(20 Marks)

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

(4 Marks)

- d) Explain the following terms:
 - i) Multimedia

iii) Virtual Reality modelling Language	(6 Marks)
Question TWO	
a) Explain the applications of multimedia in the following areas:	
i) Video Teleconferencing	
ii) Edutainment and Infotainment	
iii) Advertising and Purchasing	
iv) Digital Library	(8 Marks)
b) Describe any four types of multimedia building blocks, stating an example of a suitable in each case.	e application software (12 Marks)
Question THREE	
a) Explain any four reasons of compressing a file.	(8 Marks)
b) There are two major components of a three-dimensional virtual reality: movement and these two components.	stereoscopy. Explain (4 Marks)
c) Describe any four types of virtual realities.	(8 Marks)
Question FOUR	
a) Explain the following terms as used in digital video editing:	
i) Rendering	
ii) Lip synchronization	(4 Marks)
b) Explain any four types of hybrid data compression techniques	(8 Marks)
c) Explain any four Technological Aspects that are driving the multimedia advancements	(4 Marks)
d) State any four ways digital compression is achieved.	(4 Marks)
Question FIVE	

ii) Multimedia Information system

a) Describe the following virtual reality components:	:
i) Input devices	(2 Marks)
ii) Output devices	(2 Marks)
b) A multimedia information system (MIS) architect	ure consists of the eight sub-systems. Describe these sub-

systems

(16 Marks)