



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

CERTIFICATE IN INFORMATION TECHNOLOGY (CIT/SEP2011/S-FT)

EIT 1130: MULTIMEDIA TECHNOLOGY

END OF SEMESTER EXAMINATION

SERIES: APRIL 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions in **TWO** sections **A & B**

Answer question **ONE (COMPULSORY)** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

SECTION A (COMPULSORY)

Question One (20 Marks)

- a) Define the term multimedia (2 marks)
- b) What are the components of a multimedia system? (4 marks)
- c) What is multimedia system? (2 marks)
- d) What are the characteristics of sound? (4 marks)
- e) What is Hypertext and Hypermedia? (4 marks)
- f) Explain **FOUR** types of digital audio format (4 marks)

SECTION B (Answer Any Two Questions)

Question Two (20 marks)

- a) What is morphing ? (1 mark)
- b) What are the major characteristics of a multimedia system? (4 marks)
- c) What are the major factors that need to be considered when considering what storage requirements are necessary for Multimedia Systems? (5 marks)
- d) Distinguish computer graphics from image processing (2 marks)
- e) Briefly explain the **FOUR** types of 2D animation (8 marks)

Question Three (20 marks)

- a) Give a definition of a Multimedia Authoring System (2 marks)
- b) Distinguish between a typeface and a font (2 marks)
- c) Compare these **TWO** (2) colour representation systems
RGB (Red, Green, Blue): YUV (Luminance, Chrominance) (4 marks)
- d) What is Real-time system ? (2 marks)
- e) What are the factors that determine the size of a digital video? (8 marks)
- f) Why is file or data compression necessary for Multimedia activities? (2 marks)

Question Four (20 marks)

- a) With suitable examples, explain the following elements of multimedia (4 marks)
 - (i) Graphics
 - (ii) Images
- b) Distinguish between multimedia programming and multimedia authoring (2 marks)
- c) Describe MIDI file formatting technique (4 marks)
- d) Explain the difference between the following terms: (8 marks)
 - (i) “Lossy compression” and “Lossless compression”
 - (ii) “Analog video” and “Digital video”

Question Five (20 marks)

- a) What are the factors to be considered when using audio? (4 marks)
- b) What are the basic video components? (6 marks)

c) Briefly describe **FIVE** ways in which text can be used in a Multimedia application (10 marks)