



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
DEPARTMENT OF COMPUTER SCIENCE & SOFTWARE ENGINEERING
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS
ADMINISTRATION
SEMESTER 2015/2016 ACADEMIC YEAR
RESIT

COURSE CODE: SCS 310

COURSE TITLE: MULTIMEDIA AND GRAPHICS

EXAM VENUE: LAB 1

STREAM: BED

DATE : 04/05/ 2016

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2.00 HOURS

INSTRUCTIONS

- 1. Answer Question 1 (Compulsory) and ANY other TWO questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

Question 1 [30 marks]

- a) Define the following terms
 - i) Animation (3 marks)
 - ii) Hypermedia (3 marks)
 - iii) Multimedia (3 marks)
 - iv) Hypertext (3 marks)
 - v) Multimedia application (3 marks)
 - vi) Multimedia systems (3 marks)
- b) Discuss any five types of multimedia formats (5 marks)
- c) Using examples differentiate between static and dynamic/continuous media (7 marks)

Question 2 [20 marks]

- a) Discuss five key issues/challenges that users of multimedia systems have to deal with (10 marks)
- b) Describe the characteristics of multimedia systems (4 marks)
- c) Identify any six types of multimedia applications (6 marks)

Question 3 [20 marks]

- a) What is meant by the terms static media and dynamic media? Give one example of each type of media. (5 marks)
- b) Briefly discuss any five types or categories of Multimedia Software Tools (5 marks)
- c) Given the challenges that facing multimedia systems you have identified above, suggest ten features that may be desirable for any Multimedia systems (10 marks)

Question 4 [20 marks]

- a) Define the following terms
 - i. Pitch (2 marks)
 - ii. Frequency (2 marks)
 - iii. Amplitude (2 marks)
 - iv. Signal to noise ratio (SNR) (2 marks)
 - v. Digitization (2 marks)
 - vi. Pixel (2 marks)

- b) Discuss five key components (both hardware and software based) that are needed for a multimedia systems **(5 marks)**
- c) What is the distinction between lossless and lossy compression? What broad types of multimedia data are each most suited to? **(4 marks)**

Question 5 [20 marks]

- a) The most commonly used digital sound format in Windows system is .wav files. Each .wav file has a header containing information of the file. Identify four components found on the .wav file **(4 marks)**
- b) Describe the basic 2D animation and 3D animation. **(4 marks)**
- c) Briefly discuss four ways in which content can be formatted and delivered in a Multimedia Authoring Systems **(8 marks)**
- d) According to Nyquist sampling theorem, in order to capture all audible frequency components of a sound, i.e., up to 20KHZ, we need to set the sampling to at least twice of this. This is why one of the most popular sampling rate for high quality sound is 4410HZ. Briefly discuss Nyquist sampling theorem and explain its implications **(4 marks).**