



Kasarani Campus
Off Thika Road
P. O. Box 49274, 00101
NAIROBI
Westlands Campus
Pamstech House
Woodvale Grove
Tel. 4442212
Fax: 4444175

**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATIONS, 2018/2019 ACADEMIC YEAR
THIRD YEAR, FIRST SEMESTER EXAMINATIONS
FOR THE DEGREE OF BACHELOR OF SCIENCE
(COMPUTER SCIENCE)**

KCS 302 - MULTIMEDIA SYSTEMS

Date: 12th April, 2019
Time: 8.30am – 10.30am

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

- a) Explain the variations between analog and digital signals. (6 Marks)
- b) Distinguish between the additive and subtractive color models with the help of an illustration. (6 Marks)
- c) Explain how a color palette works in the operational context of image storage. (6 Marks)
- d) Describe six properties of sound with the aid of a relevant diagram. (6 Marks)
- e) Explain with relevant examples the technical design issues faced during the development of multimedia projects and offer suggestions on how to overcome them. (6 Marks)

QUESTION TWO (20 MARKS)

- a) Distinguish between the following terminology;
 - i) Media and Digital Convergence. (2 Marks)
 - ii) Hue and saturation. (2 Marks)
- b) Explain the digitization process using an appropriate diagram (6 Marks)
- c) Some students on internship have been given a task on creation of short films highlighting the plight of people living in shanty towns. Discuss the inherent qualities of the movies that you would emphasize during your evaluation. (10 Marks)

QUESTION THREE (20 MARKS)

- a) Explain how the Shannon-Fano algorithm and illustrate how it works. (10 Marks)
- b) You have been hired as a consultant in a McDowell Graphics and Animation Company. Your first project is to design an animated advertisement for a reputable telecommunication company. Explain the process you will take in order to complete the project. (10 Marks)

QUESTION FOUR (20 MARKS)

- a) Distinguish between vector images and bitmap images. (2 Marks)
- b) An investor is seeking to channel funds for an entrepreneur and needs your advise on the specialties of people with technical skills that they would need for an Advertisement Agency. (8 Marks)
- c) Multimedia systems vary in terms of authoring and presentation. Explain the various categories you need for classifications of these kinds of systems. (10 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain human vision with respect to spectral sensitivity of the eye and use an appropriate diagram. (10 Marks)
- b) There are a variety of tools at the disposal of any multimedia application developer. Citing relevant examples, discuss the broad categories in which to classify these tools. (10 Marks)