



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR TWO SEMESTER ONE EXAMINATIONS**

**FOR THE DEGREE OF
BACHELOR OF SCIENCE
(INFORMATION TECHNOLOGY)**

**COURSE CODE : BIT 216
COURSE TITLE : MULTIMEDIA
TECHNOLOGIES**

DATE: 16/02/2021

TIME: 11.00 A.M.- 1.00 P.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSARY) [30 MARKS]

- a. State four broadcast and video standards [2 marks]
- b. In medical applications, which method of compression is suitable? Justify your choice [2 marks]
- c. Examine the major factors to be taken into account when considering what storage requirements are necessary for multimedia systems [4marks]
- d. Calculate the data size of uncompressed video in raw format of 704x576 frame size, with 30 frames per second, running for a 90 minute length, and has 24 bit per pixel color coding. [4 marks]
- e. Justify the importance of file or data compression in multimedia activities. [3 marks]
- f. Digital Compression methods can be classified into two broad categories. Briefly describe the two categories. [4 marks]
- g. With examples distinguish between static media and dynamic media. [3 marks]
- h. Briefly explain any TWO special effects that may be used in video production. [4marks]
- i. Differentiate between pull and push as used in media streams [4 marks]

QUESTION TWO [20 MARKS]

- a. State factors to consider when deciding whether to use Bitmap or vector graphic in multimedia product development. [3 marks]
- b. Video signals can be organized in three different ways: Component video, Composite video, and S - video. Briefly describe these three different ways. [9 marks]
- a. Discuss four major challenges that may be experienced in the usage of multimedia in teaching at Kibabii University. [8 marks]

QUESTION THREE [20 MARKS]

- a. Define sampling as used in sound production [1 mark]
- b. Calculate the size of a 30 seconds 16-bit, 44.1 kHz stereo music. [3 marks]
- c. Briefly explain three factors that affect the quality of the sound. [6 marks]
- d. Discuss any FIVE sound editing operations. [10 marks]

QUESTION FOUR [20 MARKS]

- a. Discuss the ethical issues that will need to be considered by multimedia developers when developing multimedia products. [6 marks]
- c. With explanations give three factors to consider when selecting graphics to be used in a multimedia project: [6 marks]
- d. When dealing with digital video, four factors need to be kept in mind: Briefly discuss these four factors. [8 marks]

QUESTION FIVE [20 MARKS]

- a. Briefly discuss the key features a multimedia authoring tool should provide [5 marks]
- b. Suggest they key issues multimedia systems need to deal with. [5 marks]
- c. Briefly discuss any five desirable features for a multimedia system. [10 marks]