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(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATIONS
YEAR THREE SEMESTER TWO
EXAMINATIONS**

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

**COURSE CODE : BIT 325
COURSE TITLE : MULTIMEDIA
TECHNOLOGIES**

DATE: 28/07/2017

TIME: 11.00A.M. – 1.00P.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSARY) [30 MARKS]

- a. Define the concept of Multimedia Authoring System. [2 marks]
- b. What would be the file size of a sound file that is recorded at 100 kHz at a 16-bit depth in stereo and is 15 seconds in duration? [2 marks]
- c. Briefly describe the following file formats
 - i. JPEG [3 marks]
 - ii. PNG [3 marks]
- d. Describe the legal and ethical issues that should be considered in developing a multimedia presentation aimed at teenagers for the World Wide Web. [4 marks]
- e. Scan resolution, screen resolution, and print resolution are terminologies used in multimedia. Briefly explain how they relate. [6 marks]
- f. Compare PNG and GIF as web image formats. [4 marks]
- g. Describe the differences between video streaming using hypertext transfer protocol (HTTP) and real time streaming protocol (RTSP). [6 marks]

QUESTION TWO [20 MARKS]

- a. A multimedia company has been contracted to create an interactive computer application to help train learner drivers.
 - i. Suggest suitable font formatting options that can be used to highlight headings in the application. [2 marks]
 - ii. How does colour bit-depth affect the quality of graphics used in a multimedia application? [2 marks]
- b. Briefly discuss four multimedia authoring metaphors. [8 marks]
- c. Discuss which developments make a large-scale application of multimedia information systems possible. [8 marks]

QUESTION THREE [20 MARKS]

- a. Briefly explain four key properties of a multimedia system. [8 marks]
- b. Briefly explain four benefits of using multimedia in software [8 marks]
- c. Suggest and explain three possible problems with multimedia project [6 marks]

QUESTION FOUR [20 MARKS]

- d. Compare downloading and streaming video. [4 marks]
- e. Compare and contrast additive and subtractive colour models. [8 marks]
- f. Suggest ways in which multimedia can be used in learning/teaching process. [8 marks]

QUESTION FIVE [20 MARKS]

- a. Briefly outline six capabilities authoring tools should possess [6 marks]
- b. Compare and contrast lossy and lossless graphic compression. Give examples of file formats for each of the compression techniques [8 marks]
- c. Discuss the suitability of using vector and bitmapped images in a multimedia presentation. [8 marks]