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(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2022/2023 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS YEAR FOUR SEMESTER ONE EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE COMPUTER SCIENCE

COURSE CODE : CSC 471E

**COURSE TITLE : MULTIMEDIA
TECHNOLOGIES**

DATE: 27/04/2023

TIME: 09:00 A.M – 11:00 A.M

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE

[COMPULSORY]

[30 MARKS]

a. Describe the process of compression that is used by lossless and lossy data compression techniques [2 marks]

b. Describe the following as used in digital recording editing

i. Fade in and fade out [2 Marks]

ii. Equalization [2 Marks]

iii. Time stretching [2 Marks]

iv. Reversing sound [2 Marks]

c. Explain to your best friend the reason for multimedia being different from any other media that exists [4 Marks]

d. With the aid of a diagram, show your understanding of the following:

Kerning [1 Mark]

Baseline [1 Mark]

x-height [1 Mark]

Leading [1 Mark]

Ascenders [1 Mark]

Serif [1 Mark]

Tracking [1 Mark]

e. i. Differentiate between font and typeface [4 Marks]

ii. Describe two types of text [4 Marks]

f. Give two advantages of using multimedia in a learning institution [1 Mark]

QUESTION TWO:

[20 MARKS]

a. Illustrate five different roles that authoring software play in the development of multimedia materials and content. [5 Marks]

b. Software in your multimedia toolkit and your ability to use it will determine both the quality and also a well compressed multimedia work. Briefly discuss any five sequencing software tools used for a high-quality multimedia application [5 Marks]

c. Differentiate between:

Plaintext and richtext [2 Marks]

Font and Typeface [2 Marks]

Bitmap and Vector fonts [2 Marks]

Image resolution and Display resolution [2 Marks]

Hypertext and Hypermedia [2 Mark]

QUESTION THREE:

[20 MARKS]

a. Describe three sub categories of digital media devices with current and relevant examples that are in use today. [6 Marks]

b. Illustrating your answer, explain two key features of MIDI that make it suitable for use in the MPEG-4 audio compression standard [4 Marks]

c. Multimedia authoring tools provide the framework for organizing and editing the elements of multimedia projects. Describe three categories of multimedia authoring tools. [6 marks]

d. What are the advantages of using beta testing method over any other? [4 Marks]

QUESTION FOUR

[20 MARKS]

- a. Highlight two limitations of bitmaps types of images [4 Marks]
- b. Using current and relevant examples outline three applications in which CMYK colour model is mostly used and [6 Marks]
- c. Explain three application areas of virtual reality multimedia projects [6 Marks]
- d. Describe four primary multimedia delivery methods [4 Marks]

QUESTION FIVE

[20 MARKS]

- a. Describe the process (step by step) that digital image compression follows to accomplish the tasks. [6 Marks]
- b. Highlight two limitations of bitmaps types of images [4 Marks]
- d. Discuss four current trends of multimedia in the internet age and give valid examples that can be seen today [8 Marks]
- e. Explain any two characteristics of the human visual systems that can be exploited for the compression of colour images and video [2 Marks]