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**UNIVERSITY EXAMINATIONS
2023/2024 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: 04/12/2023 TIME: 09:00 HRS – 11:00 HRS

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [30 MARKS]

- a. Illustrate your understanding of the advancements brought about by Multimedia to the traditional media [4 Marks]
- b. i. Differentiate between Hypertext and Hypermedia [4 Marks]
ii. Give four characteristics of Multimedia that make it distinct from other media [4 Marks]
- c. Show your understanding of the following multimedia terms:
i. Synchronization devices [2 Marks]
ii. Multimedia platform [2 Marks]
iii. Authoring Software [2 Marks]
iv. Professional Multimedia Development Tools [2 Marks]
- d. Interpret to your colleague the role played by interaction devices in multimedia [4 Marks]
- e. i. What is Beta testing? [2 Marks]
ii. What are the advantages of using the above testing method over any other? [4 Marks]

QUESTION TWO [20 MARKS]

- a. Elaborate on five (5) advantages of using multimedia. [10 Marks]
- b. i. What are analog media devices? [1 Mark]
ii. With relevant examples, describe three categories of analog media devices [9 Marks]

QUESTION THREE [20 MARKS]

- a. Compile various roles that authoring software play in the development of e-learning materials and content. [5 Marks]
- b. i. Describe two types of text [4 Marks]
ii. Differentiate between font and typeface [4 Marks]
iii. Show your understanding of the following font terminologies
Kerning [1 Mark]
Baseline [1 Mark]
x-height [1 Mark]
Leading [1 Mark]
Ascenders [1 Mark]
Serif [1 Mark]
Tracking [1 Mark]

QUESTION FOUR [20 MARKS]

- a. Illustrate the distinction that exists image resolution, display resolution and color resolution [6 Marks]
- b. Describe six categories of image processing techniques [12 Marks]
- c. What are sound waves? How does the human mind receive sound? [2 Marks]

QUESTION FIVE [20 MARKS]

a. Discuss three reasons for sound not being left out in the creation of multimedia content.

[6 Marks]

b. Describe three types of analog video signal

[6 Marks]

c. Calculate the video file size of a documentary with the following:

Duration=10 mins

Frame rate=25 fps

Frame size=160 by 120

Colour resolution=8-bit

Give answer in MB

[4 Marks]

d. Describe four user interface tips you will give to your friend who wants to become a graphics designer

[4 Marks]