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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY EXAMINATION, 2023/2024 ACADEMIC YEAR
THIRD YEAR, FIRST SEMESTER EXAMINATION
FOR THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE
KCS 302 – MULTIMEDIA SYSTEMS

Date: 14TH December 2023
Time: 8:30AM – 10:30AM

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS

QUESTION ONE (30 MARKS)

A distributed multimedia system (DMS) is an integrated communication, computing, and information system that enables the processing, management, delivery, and presentation of synchronized multimedia information with quality-of-service guarantees. Multimedia information may include discrete media data, such as text, data, and images, and continuous media data, such as video and audio. Such a system enhances human communications by exploiting both visual and aural senses and provides the ultimate flexibility in work and entertainment, allowing one to collaborate with remote participants, view movies on demand, access on-line digital libraries from the desktop, and so forth. In this paper, we present a technical survey of a DMS. We give an overview of distributed multimedia systems, examine the fundamental concept of digital media, identify the applications, and survey the important enabling technologies.

- a) In detailed explain what image editing tools such as Photoshop can do (6 Marks)
- b) Discuss four types of virtual realities (6 Marks)
- c) Explain the difference between 'JPEG and MPEG' standards. (6 Marks)
- d) Describe different uses of animation (6 Marks)
- e) Discuss how Operating System support multimedia systems, (6 Marks)

QUESTION TWO (20 MARKS)

- a) Explain applications of multimedia in the following areas
 - i) Video teleconferencing
 - ii) Digital library (4 Marks)
- b) explain five editing operations in a sound for it to work effectively (8 Marks)
- c) Discuss software's that are used for editing and creating a font (8 Marks)

QUESTION THREE (20 MARKS)

- a) Differentiate between input devices and output devices as used in multimedia. (4 Marks)
- b) Describe how video is represented and discuss best software's used to get a quality video (8 Marks)
- c) Discuss the power of sound as used in multimedia. (8 Marks)

QUESTION FOUR (20 MARKS)

- a) Explain four features which are used to measure text (4 Marks)
- b) Explain the two major visual effects associated with animations (8 Marks)
- c) Using graphical illustrations, explain the digitization process of multimedia systems.. (8 Marks)

QUESTION FIVE (20 MARKS)

- a) Explain the difference between rich text format and plain text (6 Marks)
- b) Multimedia related hardware includes video and audio equipment required at multimedia production and presentation. Discuss how equipment has been c divided. (8 Marks)
- c) Explain the difference between hypertext and hypermedia (6 Marks)