



**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY  
(MMUST)  
MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS  
2021/2022 ACADEMIC YEAR**

**SECOND YEAR FIRST SEMESTER EXAMINATIONS**

**FOR THE DIPLOMA**

**IN**

**INFORMATION TECHNOLOGY**

**COURSE CODE: DIT 067**

**COURSE TITLE: MULTIMEDIA TECHNOLOGY**

**DATE: 28/04/2022 TIME: 8:00 - 10:00AM**

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**INSTRUCTIONS TO CANDIDATES**

Answer Questions **ONE** and **ANY OTHER TWO**.

**TIME: 1 Hour 30 Minutes**

**MMUST observes ZERO tolerance to examination cheating**

This Paper Consists of 2 Pages. Please Turn Over. ▲

### QUESTION ONE [24 MARKS] (COMPULSORY)

- a) What is multimedia system? [1 Mark]
- b) What are the differences between digital audio and MIDI audio? [2 Marks]
- c) What are the key characteristics of a Multimedia System? [4 Marks]
- d) i) Why is data compression necessary for multimedia activities? [2 Marks]  
ii) Distinguish between a lossy and lossless data compression. [4 Marks]  
iii) For each technique list at least 2 examples where it can be used. [4 Marks]
- e) What is an authoring system? [2 Marks]
- f) Briefly discuss three animation techniques. [3 Marks]
- g) Define the term “Virtual Reality”. [2 Marks]

### QUESTION TWO [18 MARKS]

- a) What are the key distinctions between multimedia data and more conventional types of media? [10 Marks]
- b) i) Why is integration of multimedia data a potential problem for multimedia systems? [4 Marks]  
ii) Briefly discuss how these problems can be addressed in such systems? [4 Marks]

### QUESTION THREE [18 MARKS]

- a) What are the advantages and disadvantages of using CDs and/or DVDs for multimedia content storage? [7 Marks]
- b) Give examples of file formats for each of the five elements of multimedia. [5 Marks]
- c) Briefly discuss the application of multimedia in education. [6 Marks]

### QUESTION FOUR [18 MARKS]

- a) The legal aspects are a key issue for one to bear in mind when producing and using a multimedia application. Describe the following in relation to legal aspects of multimedia.
  - i) Copyrights [2 Marks]
  - ii) Patents [2 Marks]
  - iii) Piracy [2 Marks]
  - iv) Trade marks [2 Marks]
- b) Discuss the various ways one can distribute multimedia products. [10 Marks]

### QUESTION FIVE [18 MARKS]

XYZ ltd. Is a company that specializes in the production of education materials. In the past the company has been producing education materials in paper-based format. Due to high competition and many changes in the delivery of education materials, the company wants to diversify in terms of the content delivery. One of the key areas the company is considering to venture into is multimedia. The management of the company has very little knowledge concerning this area and has approached for advice. Required:

- a) Describe the stages that are required to come up with a multimedia application advising the organization on what happens at each of the stages. [8 Marks]
- a) Describe the hardware and software tools that XYZ will require to meet this key objective. [10 Marks]