ПAMIBIA UПIVERSITY
OF SCIEПCE AПD TECHПOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS

QUALIFICATIONS: Bachelor of Informatics; Bachelor of Entrepreneurship	
QUALIFICATION CODE: 07BENT/07BAIF	**LEVEL:** 7
COURSE CODE: MMA710S	**COURSE:** Multimedia Applications
DATE: June 2023	**SESSION:** 1
DURATION: 2 Hours	**MARKS:** 70

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINERS:	Mr Johnson Billawer
MODERATOR(S):	Dr Victoria Hasheela-Mufeti

THIS EXAMINATION PAPER CONSISTS OF 3 PAGES
(INCLUDING THIS FRONT PAGE)

INSTRUCTIONS FOR THE CANDIDATE

1. Answer ALL QUESTIONS.
2. When writing, take into account: The style should inform than impress, it should be formal, in third person, paragraphs set out according to ideas or issues, and the paragraphs flowing in a logical order.
3. Information should be brief and accurate.
4. Please ensure that your writing is legible, neat and presentable

QUESTION 1: [15 Marks]

a) Discuss multimedia under the following sections:

    i) What is multimedia? (2)

    ii) Where it is used? (4)

    iii) What are its benefits? (4)

    iv) What are its limitations? (4)

b) Identify at least any two components that a multimedia computer/device should have. (1)

QUESTION 2: [18 Marks]

a) There are several established colour models used in computer graphics. Answer the following questions.

    i) Briefly discuss the colour model used for printing. (6)

    ii) Explain bit depth/colour depth in relation to images. (3)

b) Why is it important to consider the different image file formats in a multimedia product development project? (2)

c) Differentiate the two types of image compression methods and provide one example of an image file format for each. (5)

d) Compress the following string of numbers using the Run Length Encoding method: (2)
    55777799988888999

QUESTION 3 [19 Marks]

a) The Namibia Broadcasting Corporation (NBC) recommended you to lead a project team that will revamp its website to a more multimedia interactive website. Answer the following questions:

    i) Briefly explain your role as a Project Manager in this project. (5)

    ii) Why do you think the client is an important stakeholder in a multimedia development project? (1)

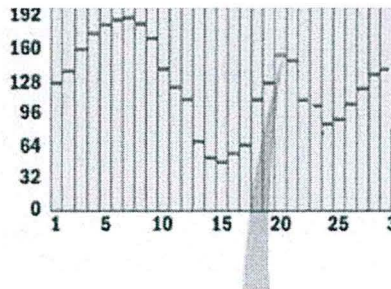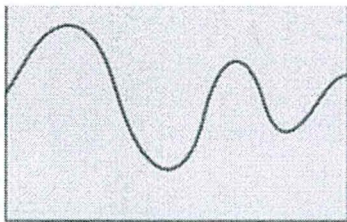   iii) Why do you think testing and evaluation should be an ongoing process for this project? (3)

b) A lecturer has copied three home pages from different copyrighted websites for students to evaluate and comment on in class.

i) State whether it is fair use or not. Justify your argument. (2)

c) How does Information Privacy concern you as Multimedia Developer? (2)

d) How would you like the institution such as NUST to handle students' information privacy? (2)

e) Discuss any two types of fair use of copyrighted materials. (4)

Question 4 **[18 Marks]**

a) Differentiate between analog sound wave and digital sound wave. Support your answer with an illustration. (8)

b) How is the process of converting an analog audio signal into a digital signal called? (1)

c) Show the formula used to calculate a sound file size. (4)

d) Explain how streaming and the internet works in delivering multimedia content. (2)

e) How are images or real motion produced in video? (3)

THE END