ΠΑΜΙΒΙΑ UΠIVERSITY
OF SCIEΠCE AΠD TECHΠOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS, JOURNALISM AND MEDIA TECHNOLOGY

QUALIFICATION: Bachelor of Informatics : Bachelor of Entrepreneurship	
QUALIFICATION CODE: 07BAIF : 07BENT	COURSE LEVEL: NQF LEVEL 7
COURSE: Multimedia Applications	COURSE CODE: MMA710S
DATE: June 2022	SESSION: 1
DURATION: 2 Hours	MARKS: 70

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

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

Instructions for the students
1. Write all your answers in the answer booklet provided.
2. Answer ALL questions.
3. Marks/scores per question are given in [ ].
4. Do not use or bring into the examination venue books, mobile devices and other material that may provide you with unfair advantage. Should you be in possession of one right now, draw the attention of the examination officer or invigilator.
5. The use of calculators in this course is allowed.
6. NUST examination rules and regulations apply.

QUESTION 1: [10 Marks]

a) Differentiate between interactive multimedia and hypermedia. (4)

b) Which character set accommodate up to 65 000 characters to include the characters from all known languages and alphabets in the world? (1)

c) Give four (4) examples where you encountered the use of multimedia at the Namibia University of Science and Technology. (2)

d) State any three (3) multimedia elements discussed in this course. (3)

QUESTION 2: [20 Marks]

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

   i) Differentiate between HSL and CMYK colour models. (6)

   ii) Why do you think that knowledge on the different colour models are important to you as a Multimedia Developer? (4)

b) Some images are displayed progressively.

   i) Explain this concept and what it means to the end user. (2)

   ii) Classify the different types of image file format covered in this course into two categories lossy and lossless compression. (2)

   iii) Why is the different image file formats important to you as Multimedia Developer? (3)

c) How does Run Length Encoding compression work? (2)

d) Compress the following string of letters using the Run Length Encoding method: (1)
   AAAAFFFFFFCCCBBBB

QUESTION 3 [15 Marks]

a) You are participating in a team designing a multimedia website project. Answer the following questions.

   i) Briefly discuss the four basic stages in a multimedia project. (8)

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

   iii) Which three types of Intellectual Property (IP) will you consider in this project? (3)

b) A lecturer has posted his class notes on a webpage available to the public. He wants to scan an article from a copyrighted journal and add it to his webpage.

i) Discuss the scenario in b) and state whether it is fair use or not. Justify your argument. (3)
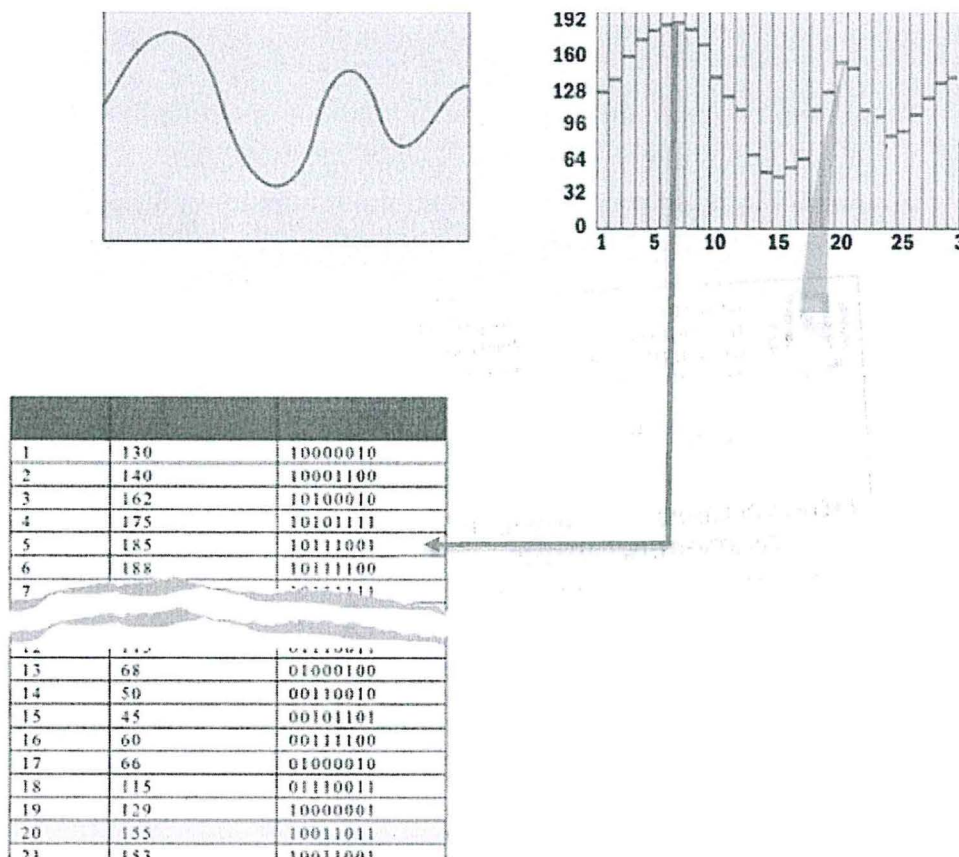
Question 4 [25 Marks]

a) Answer the following questions relating to sound in multimedia content development.

i) Assume you are working on an audio file and you want to remove blank spaces as well noise that creeps into a recording. Which two editing techniques will you use to perform these? (2)

ii) Analyse the diagram below and explain what being illustrated with regard to sound. (8)

1	130	10000010
2	140	10001100
3	162	10100010
4	175	10101111
5	185	10111001
6	188	10111100
7		...111

13	68	01000100
14	50	00110010
15	45	00101101
16	60	00111100
17	66	01000010
18	115	01110011
19	129	10000001
20	155	10011011
21	153	10011001

iii) Explain how a sound is generated. (2)

iii) What are the four (elements) that a sound file size is based on? (3)

b) Differentiate between animation and video. (2)

c) Explain the concept of keyframing in Animation (4)

d) How are images or real motion produced in video. (3)

e) State one advantage of using video in Multimedia (1)

THE END

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