ΠΑΜΙΒΙΑ UΠIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF COMPUTING AND INFORMATICS

DEPARTMENT OF INFORMATICS

QUALIFICATION: Bachelor of Informatics : Bachelor of Entrepreneurship	
QUALIFICATION CODE: 07BAIF : 07BENT	COURSE LEVEL: NQF LEVEL 7
COURSE: Multimedia Applications	COURSE CODE: MMA710S
DATE: June 2019	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) Assume you and a friend are playing games using a PlayStation. What type of multimedia project is this? Justify your answer.   (3)

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 six examples where you encountered the use of multimedia.   (3)

d) Explain what is meant by multimedia authoring tools? Give one example of a multimedia authoring tool you used 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 RGB 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) Analyse the two images and answer the following questions.
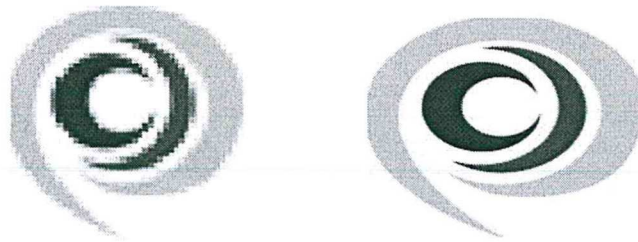
    i) Classify the two types of images illustrated above.   (2)

    ii) Compare and contrast these two types of images.   (8)

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) Illustrate with a diagram the properties of a sound wave.   (4)

     iii) Assume you have a speaker generating a sound at a frequency of 4 Hertz. How clear will this sound be to human beings? Justify your answer.   (3)

     iv) Calculate the size of a 30 seconds stereo song. The sample rate is for CD quality using a bit depth of 8 bits. Show your calculations and convert your answer to Megabytes.   (3)
     v) How does sampling rate impact sound file size?   (2)

b) Answer the following questions in relation to video and animation.
     i) Why is animation important in multimedia?   (1)

     ii) Briefly explain the three animation spaces.   (6)

     iii) Explain how images or real motion are produced in video.   (2)

     iv) Differentiate between Inter-frame compression and Intra-frame compression   (2)

THE END