SCHOOL OF PROFESSIONAL STUDIES

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

UNIT CODE: DCT 173, UNIT NAME: MULTIMEDIA APPLICATION PROGRAMMING

September – December 2018/2019 End Semester Exam - Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION 1 COMPULSORY (30 marks)

a) Define the following terms **(4 marks)**

i) Multimedia

ii) Human computer interaction

iii) Digital convergence

iv) Video capture card

b) Describe four features of multimedia that can be used to differentiate it from other technologies. **(4 marks)**

c) Discuss five key factors contributing towards the development of multimedia technology in the world. **(5 marks)**

d) Describe four techniques that can be utilized by users to test the success of multimedia software identifying a merit and demerit for each. **(8 marks)**

e) (i) Why is file or data compression necessary for Multimedia activities? **(2 marks)**

(ii) Briefly explain, clearly identifying the differences between them, how entropy coding and transform coding techniques work for data compression. **(4 marks)**

f) Define RAID technology and highlight two advantages that it offers as a medium for the storage and delivery of large data. **(3 marks)**

QUESTION 2

a) Describe any six characteristics of a successful user interface. **(6 marks)**

b) Discuss six ways that multimedia technology can support the education system in Kenya. **(6 marks)**

c) Identify three elements of multimedia technology. **(3 marks)**

QUESTION 3

a) Highlight five future delivery platforms for multimedia technology and how they will be transforming the use of multimedia. **(5 marks)**

b) Differentiate between formative and summative evaluation of multimedia designs. **(4 marks)**

c) Discuss the six major challenges faced by the current multimedia technology. **(6 marks)**

QUESTION 4

"Walker Jeans", a famous jeans company would like to add an animated advertisement banner on the Web for a jeans show. The Vice President (VP) of the company is concerned about the quality of the graphics and animation design. As the project manager, you are required to:

a) Differentiate between bitmap and vector-drawn images from the creation of the images, the file size, downloading time and applications **(6 marks)**

b) Provide a suggestion of the type and image file format which is suitable for the graphics design and justify your answer **(5 marks)**

c) Briefly discuss the following types of the animation techniques that could be used in creating the animation **(4 marks)**

   i) Cel animation
   ii) Tweening
   iii) Kinematics
   iv) Morphing

QUESTION 5

a) Describe any five application areas where multimedia technology can be utilized in the society. **(10 marks)**

b) Describe five factors to be taken into account when considering the storage requirements for a multimedia system? **(5 marks)**