THE TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION TECHNOLOGY
(DIT 2K 11M/DIT 11M)

EIT 2207: MULTIMEDIA SYSTEMS & TECHNOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: FEBRUARY 2013
TIME: 2 HOURS

Answer question **ONE (COMPULSORY)** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages
Question One (Compulsory)

a) Define a Multimedia System. **(2 marks)**

b) List the core components of a multimedia system. **(4 marks)**

c) Explain how a codec functions. **(3 marks)**

d) State the roles played by each of the following professionals in multimedia production team.
(8 marks)

    (i) Multimedia designer
    (ii) Scriptwriter
    (iii) Webmaster
    (iv) Graphic Designer

e) Explain the meaning of the following terms as used in multimedia technologies. **(3 marks)**

Question Two

a) Explain the stages in a multimedia production. **(10 marks)**

b) List the Advantages and Disadvantages of Musical Instrument Digital Interface (MIDI)
(10 marks)

Question Three

a) Characterize HDTV, SDTV and ITV. **(9 marks)**

b) Explain any **FOUR** prerequisites that should be present if a multimedia based application is to capture the full attention of the market. **(8 marks)**

c) State **THREE** advantages of multimedia technologies. **(3 marks)**

Question Four

a) Explain **THREE** issues in networked multimedia. **(6 marks)**

b) Explain how data rate affects audio and video in relation to compressed and uncompressed data.
(8 marks)

c) Explain the following propagation techniques:
    (i) Multicast
    (ii) Unicast
    (iii) Broadcast **(6 marks)**

Question Five

a) Explain the following properties of Text **(8 marks)**
    (i) Leaching
    (ii) Kerning
    (iii) Dithering
    (iv) Tracking

b) (i) Differentiate between Lossy and Lossless compression. **(4 marks)**

(ii) Explain any **TWO** techniques for audio compression for each of the above two compression methods. **(8 marks)**