FACULTY : ENGINEERING AND TECHNOLOGY

DEPARTMENT : COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

COURSE CODE : EIT 1130

COURSE TITLE : MULTIMEDIA SYSTEMS

TIME : 2 HOURS

INSTRUCTIOS

- **Answer Question ONE and any Other TWO Questions**

**Question one 30 marks**

a) Define the term multimedia? [2marks]

b) Explain why a multimedia application requires a large amount of storage space?

[4marks]

c) What are the key characteristics of a Multimedia System? [4marks]

d) What is multimedia system [2marks]

e) What are the few technical challenges with multimedia information technology?

[2marks]

f) What is the meaning of multimedia application [2marks]

g) What is Hypertext and Hypermedia? [4marks]

h) Explain applications of multimedia in any four areas [4marks]

i) State and explain three technology incentives that support multimedia[6marks]

**Question two 20 marks**

a) What is meant by the terms static media and dynamic media? Give examples of each type of media. [4marks]

b) Why is file or data compression necessary for Multimedia activities? [2marks]

c) Give a definition of Virtual Reality. [1marks]

d) Briefly outline the four broad classes of approach that one may exploit to compress multimedia data. Do not detail any specific compression algorithms. [8marks]

**Question three 20 marks**

a) Give a definition of a Multimedia Authoring System. [2marks]

b) Briefly describe four ways in which content can be formatted and delivered in a Multimedia Authoring System. [8marks]

c) What issues of functionality need to be provided in order to effectively use a wide variety of media in Multimedia applications. Your answer should briefly address how such functionality can facilitate in general Multimedia applications. [5marks]

**Question four 20 marks**

a) With suitable examples, explain the following elements of multimedia:[4marks]
   i.    Audio
   ii.   Images
b) Explain the term "Digital multimedia [2marks]
c) Describe MIDI file formatting technique [3marks]
d) Explain the difference between the following terms: [6marks]

   i.    "Lossy compression" and "Lossless compression"
   ii.   "JPEG" and "MPEG

**Question five 20 marks**

a) Differentiate between Run-length Encoding and Huffman coding   [6marks]

b) Using  Run-length Encoding, compress the following sequence of symbol

   [1marks]

**'AAAACBBBBB'**

c) Write short notes on Real Audio and real video multimedia file compression and show their differences                                                [6marks]

d) ) Explain any two classifications of multimedia file systems        [2marks]