



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-ABUJA
FACULTY OF COMPUTING
DEPARTMENT OF COMPUTER SCIENCE
2025_1 EXAMINATION....

COURSE CODE: CIT742

COURSE TITLE: MULTIMEDIA TECHNOLOGY

COURSE CREDIT: 3 UNITS

TIME ALLOWED: 3 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS

Question 1:

- a. Describe exclusively the *Histogram of an Image*. (4 marks)
 - ii. Briefly describe any 3-image format. (3 marks)
 - iii. List the two types of image analysis. (2 marks)
- b. Describe in detail the techniques for reducing or eliminating Noise in Image Processing. (3 marks)
- c. Explain the two basic Lossy comprehension schemes: (4 marks)
- d. What is image restoration? (3 marks)
- e. Relate the basic concept of authoring system in the context of multimedia (6 marks)

Question 2:

- a. Describe in details JPEG Encoding (4 marks)
- b. Describe the concept called transform coding. (3marks)
- c. Differentiate between lossless and lossy video compression. (6marks)
- d. Describe the *process of Image Analysis* and give ONE common application of the Histogram (2 marks)

Question 3:

- a. Explain the factor that determines a monitor's resolution (2 marks)
- b. Describe exclusively, Multimedia Compression. (3 marks)
- c. Compare and contrast discrete and continuous media (6 marks)
- d. Enumerate FOUR System Independent Formats. (4 marks)

Question 4:

- a. Describe in details *pixels*. (5 marks)
- b. Mention two common sources of text and static data (2 marks)
- c. Define the terms Multimedia and Multimedia Application (4 marks)
- d. Mention four characteristics of multimedia systems (4 marks)

Question 5:

- a. Enumerate and explain the 3 guidelines for Colour Usage. (6 marks)
- b. What is Mathematical and Wavelet Transformation? (2 marks)
- c. Explain the concept of a raw video (2 marks)
- d. Describe exclusively, Multimedia Compression. (3 marks)
- e. Explain GIF in detail. (2 marks)

Question 6:

- a. Outline three benefits and three challenges of colour in multimedia applications. (6 marks)
- b. Discuss the methods that are related to Human Hearing and Voice. (4 marks)
- c. Enumerate FOUR System Independent Formats. (4 marks)
- d. When is Interactive Multimedia said to become Hypermedia? (1 mark)