



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

2025_2 EXAMINATIONS

COURSE CODE: CIT 891

COURSE TITLE: ADVANCED MULTIMEDIA TECHNOLOGIES

CREDIT UNITS: 3 Units

TIME ALLOWED: 3 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

Question One

- Q1a) State the fundamental concept behind Subband Coding (SBC). **(3marks)**
- Q1b) The eye is a visual system that makes use of certain colour source properties, briefly describe these properties. **(5marks)**
- Q1c) Mention four(4) challenges currently confronting multimedia system. **(4marks)**
- Q1d) Give a comprehensive analysis of image processing? **(4marks)**
- Q1e) State four elements of multimedia. **(5marks)**
- Q1f) Using appropriate example, evaluate the Nyquist's theorem. **(4marks)**

Question Two

- Q2a) Write short note on the following:
- i. spatial redundancy
 - ii. Statistical redundancy reduction. **(4marks)**
- Q2b) Explain in details the Principles of Digitization. **(6marks)**
- Q2c) Differentiate between lossy and lossless compression? **(5marks)**

Question Three

- Q3a) Write short note of run length-encoding. **(4mark)**
- Q3b) Differential between Huffman coding and run length-encoding. **(3marks)**
- Q3c) State and briefly describe the task involved in image processing. **(8marks)**

Question Four

- Q4a) List and discuss the types of texts that are processed by multimedia. **(6marks)**
- Q4b) Using a well labelled diagram discuss the decoder design. **(9marks)**

Question Five

- Q5a) Explain how Vector Quantization works? **(5marks)**
- Q5b) Briefly discuss any five (5) Digital Video formats. **(10marks)**

Question Six

- Q6a) List and explain three main properties of a colour source that the eye makes properties of a colour source that the eye makes. **(6marks)**
- Q6b) State the three experiments statements results from histograms. **(3mark)**
- Q6c) Write short notes on any two
- i. RGB
 - ii. YIQ
 - iii. HSV **(6marks)**