

**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi, Abuja  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF COMPUTER SCIENCE**  
**MULTIMEDIA TECHNOLOGY**  
**2024 1 EXAMINATION**

**PROGRAMME:** B.SC COMPUTER SCIENCE  
**COURSE TITLE:** MULTIMEDIA TECHNOLOGY  
**COURSE CODE:** CIT 742  
**CREDIT UNIT(S):** 3 UNITS  
**TIME ALLOWED:** 2.30 MINUTES  
**INSTRUCTION:** ANSWER QUESTIONS ONE (1) AND ANY OTHER THREE (3)

**QUESTION ONE (1)**

- a) Explain the process by which human ear hear voices 5 marks
- b) Explain the process of image histogram in multimedia technology 5 marks
- c) How can image be analyzed in multimedia system? 15 marks

**QUESTION TWO (2)**

- a) Explain the difference between contrast stretching and histogram equalization 10 marks
- b) What is image restoration? 5 marks

**QUESTION THREE (3)**

- a) How does noise affects the quality of image and how can it be reduced? 10 marks
- b) What are the applications of image histogram? 5 marks

**QUESTION FOUR (4)**

- a) What are five limitations of a histogram? 5 marks
- b) Explain what you understand by image analysis 5 marks
- c) What are the two types of image analysis? 2 marks
- d) What is difference between image processing and image analysis? 3 marks

**QUESTION FIVE (5)**

- a) Define the term image Enhancement 2 marks
- b) List five methods of image enhancement 3 marks
- c) Noise in image processing 3 marks
- d) How to reduce noise in image processing? 5 marks
- e) What is the difference between noise and artifact? 2 marks

**QUESTION SIX (6)**

- a) What do you understand by audio streaming? 5 marks
- b) What are the advantages of image histogram? 5 marks
- c) Why do we do image analysis? 5 marks