



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDIASIKIWE EXPRESSWAY, JABI – ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
FACULTY OF SCIENCES

SEPTEMBER 2020_1 EXAMINATION

COURSE CODE: CIT 742

COURSE TITLE: MULTIMEDIA TECHNOLOGY

CREDIT: 3 UNITS

TIME ALLOWED: 2½ HOURS

INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER FOUR QUESTIONS

Question One

- 1a. i. How do Users *experience* Hypermedia? [1 mark]
- ii. Explain, in clear terms the concept of Hypertext [1 mark]
- iii. State TWO main purpose of the *Multimedia System* [1 mark]
- 1b. i. Enumerate the FOUR characteristics of a Multimedia System. [2 marks]
- ii. Outline some standard noise forms associated with Image Digital Signal Processing Systems. [1 mark]
- iii. What is the idea of Histogram Equalisation? [1 mark]
- 1c. i. Write a concise notes on the Histogram of an Image. [3 marks]
- ii. Explain vividly the history of multimedia. [3 marks]
- 1d. i. What do you understand by the term *Video in Multimedia Technology* [2 marks]
- ii. Briefly explain *Contrast Stretching*. [1 mark]
- 1e. i. What are the features that could be used to describe Image Restoration? [2 marks]
- ii. Give a brilliant discussion of the term Multimedia [4 marks]

Question Two

- 2a. i. Elucidate on the **Multimedia Application**. [2 marks]
- ii. How did the German Language Society, Gesellschaft fur Deutsche recognize the word's (Multimedia's) significance and ubiquitousness in 1990s? [2 marks]
- 2b. i. What are the key issues that Multimedia System need to deal with? [2 marks]
- ii. Write a brief notes on Hypermedia [6 marks]

Question Three

- 3a. i. When can someone be said to be *experiencing Multimedia*?[2 marks]
- 3a. ii. Give a concise description of Noise in image digital processing systems.
[3marks]
- 3b. i. **Critically describe the *process of* Image Analysis** and give ONE common application of the Histogram[3 marks]
- 3b. ii. Explain Two-dimensional Discrete Fourier Transform (DFT).[4 marks]

Question Four

- 4a. i. Enumerate TWENTY examples of Multimedia Applications[5 marks]
- 4a. ii. Explain the term, Interactive Multimedia.[2 marks]
- 4b. i. Discuss TWO examples of *streamed audio (and video)*[2 marks]
- 4b. ii. Describe the concepts of Mathematical and Wavelet Transformation.
[2 marks]

Question Five

- 5a. i. Give a brief explanation of FOUR LOSSY methods applied to audio compression.
[4 marks]
- 5a. ii. Describe FOUR Typical Lossless Compression “*Graphics*” File Formats.
[2 marks]
- 5b. i. Give a brilliant expression of the term *Transform Coding*. [2 marks]
- 5b. ii. Discuss the methods that are related to Human Hearing and Voice.
[4 marks]

Question Six

- 6a. i. When is Interactive Multimedia said to become Hypermedia?[1 mark]
- 6a. ii. Describe in details JPEG Encoding[4 marks]
- 6b. i. Explain the two basic Lossy compression schemes: [4 marks]
- 6b. ii. Describe exclusively, Multimedia Compression. [3 marks]