



NATIONAL OPEN UNIVERSITY OF NIGERIA

PLOT 91, CADASTRAL ZONE, NNAMDI ASIKIWE EXPRESSWAY, JABI – ABUJA

FACULTY OF SCIENCES

2023_2 EXAMINATIONS

COURSE CODE: CIT742

COURSE TITLE: MULTIMEDIA TECHNOLOGY

CREDIT: 2.5 Units

TIME ALLOWED: 3 Hours

INSTRUCTION: Answer Question ONE (1) and any four (4) others

Question One

- 1a. i. Define the term *Graphics*. [2 marks]
- 1a. ii. Write briefly the concept *Light and Spectra*. [2 marks]
- 1a. iii. It has been established that images may have *noise* depending on the sources of the images and the medium of their transfer. List TWO *standard noise form*. [1 mark]
- 1b. i. Write short notes on the Human Retina. [2 marks]
- 1b. ii. Outline and explain TWO properties of Two-Dimensional Fourier Transform. [6 marks]
- 1c. i. Define *Chromatics*. [1 mark]
- 1c. ii. Give a brief overview of *image analysis*. [3 marks]
- 1d. i. With the aid of a well-labeled graph, illustrate the spectral-response functions Cones and Luminous-efficiency Function of the Human eye. [3 mark]
- 1d. ii. Explain Postscript/Encapsulated Postscript [2marks]

Question Two

- 2a. i. Describe without using graphical illustrations Cones and Perception [3 marks].
- 2a. ii. What is a pixel? [1 mark]
- 2a. iii. Describe briefly 24-bit Colour Images [2 marks]
- 2b. i. Discuss the JPEG [3 marks]
- 2b. ii. List THREE System Dependent Formats. [3 marks]

Question Three

3a. i. Enumerate **THREE** examples of Multimedia Scripting Language
[3 marks]

3a. ii. Describe exclusively the *Histogram of an Image*. [5 marks]

3b. i. Enumerate TWO sound sources [2 marks]

3b. iii. Graphics files may adhere to certain graphics standard. Name two of these standard. [2 mark]

Question Four

4a. i. Define the term Multimedia. [4 marks]

4a. ii. Describe in details the techniques for reducing or eliminating Noise in Image Processing. [3 marks]

4b. i. Explain, in clear terms, Hypertext. [1mark]

4b. ii. Which is the *best example* of hypermedia application? [1 mark]

4b. iii. Describe the *process of* Image Analysis and give ONE common application of the Histogram [3 marks]

Question Five

5a. i. Describe in details *pixels*. [5 marks]

5a. ii. Using graphical illustration, present the Continuous Analog Waveforms. [1 mark]

5b. i. Storage of data is affected by certain storage parameters. State six (6) of such parameters. [3 marks]

5b. ii. State the characteristics/sample of Monochrome/Bitmap Images
[3 mark]

Question Six

6a. i. Using a diagram only, illustrate the Human visual System. [4 marks]

6a. ii. Explain GIF in details. [2 marks]

6b. i. Enumerate FOUR System Independent Formats. [4 marks]

6b. ii. Define Monitor Resolution [2 marks]