



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**  
**SCHOOL OF SCIENCE AND TECHNOLOGY**  
**MARCH/APRIL 2014 EXAMINATION**

**COURSE CODE: CIT 742**

**COURSE TITLE: MULTIMEDIA TECHNOLOGY**

**TIME ALLOWED: 3HOURS**

**INSTRUCTION: ANSWER ANY FIVE (5) QUESTIONS. EACH QUESTION CARRIES 14 MARKS**

- 1a. Using examples explain the term multimedia applications (5 Marks)
- 1b. Using examples describe five (5) components of a multimedia system (5 Marks)
- 1c. State four (4) challenges of a multimedia system (4 Marks)
- 2a. Briefly describe colour (4 Marks)
- 2b. How does the human eye sense colour? What characteristics of the human visual system can be exploited for the compression of colour images and video? (10 Marks)
- 3a. What is multimedia compression? (5 Marks)
- 3b. List five (5) key issues that affect storage media (5 Marks)
- 3c. List four factors that influence I/O performance (4 Marks)
- 4a. Define Pixel (5 Marks)
- 4b. Define multimedia compression (5 Marks)
- 4c. What factors determine the resolution of a monitor? (2 Marks)
- 4d. What does GIF stand for? (2 Marks)
- 5a. Define Noise (5 Marks)
- 5b. Define the following terms
  - Hypertext
  - Hypermedia
- 5c. Define Authoring System
- 6a. State and explain the theory of Digitization (5 Marks)
- 6b. Explain lossless Compression (5 Marks)
- 6c. List Four (4) typical lossless compression file format (4 Marks)

7. Explain and describe using mathematical expressions discrete cosine transform (14 Marks)