COURSE CODE: CIT 381
COURSE TITLE: FILE PROCESSING AND MANAGEMENT
CREDIT: 2 UNITS
TIME ALLOWED: 2 HOURS
INSTRUCTIONS: ANSWER QUESTION ONE (1) AND ANY THREE (3) OTHERS

QUESTION ONE (25MARKS) COMPULSORY

a.   Explain any three logical components of a file. *6marks*

b.   You have been asked to register a large mass of new users into an organization by capturing there basic information such as names, address, sex, phone numbers, DOB etc. The captured information will be required for further processing. As a student of file management, what type of file organization method will you recommend as most efficient for this task and why. *5marks*

c.   Distinguish between internal fragmentation and file fragmentation. *3marks*

d.   Write a suitable pseudo code to find a specific record in an indexed sequential file organization. *4marks*

e.   What is data dictionary? *3marks*

f.   What are the various causes of Data Corruption during transmission? *2marks*

g.   What is sorting algorithm? *2marks*

QUESTION TWO (15MARKS)

a.   Distinguish between the single-level directory and two-level directory system. *4marks*

b.   State the various criteria required in choosing a file organization. Illustrate this using a file to be processed either in batch mode or a file stored on a CD ROM. *4marks*

c.   Explain the four security measures that are required to protect the computer system/network. *4marks*

QUESTION THREE (15MARKS)

a.   In choosing a portion size, discuss the four items to be considered a tradeoff between efficiency from the point of view of a single file relative to overall system efficiency. *5marks*

b.   Explain the Contiguous Allocation method of memory management. *5marks*

c.   How do you solve the problem of external fragmentation as a result of contiguous allocation? *5marks*

QUESTION FOUR (15MARKS)

a. With regard to memory management and access time, discuss any two methods that can be used to improve system file performance. *6marks*

b. Mention two techniques to improve reliability in file processing management and vividly explain any one. *4marks*

c. What are some of the common causes of data loss in a security environment? *5marks*

QUESTION FIVE (15MARKS)

a. List any five preventive measures to protect once computer against virus attack. *5marks*

b. Explain the term "Denial of Service". *4marks*

c. Explain any 3 implementation techniques of file protection. *6marks*