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FACULTY OF SCIENCE
DEPARTMENT OF MATHEMATICAL SCIENCES

NAME OF EXAMINATION: HARMATTAN SEMESTER, 2016/2017 SESSION
COURSE: FILE PROCESSING
COURSE CODE: CMP 204
INSTRUCTION: ANSWER ANY THREE QUESTIONS
TIME ALLOWED: $1^{1/2}$ HOURS

1a. Differentiate between the following pairs:

    i.   Primary and Secondary data
    ii.   Batch Processing and Real time processing
    iii.   Master and Transaction file
    iv.   Physical and Logical file
    v.   Binary and Sequential search

b. Describe the Data Processing errors and proffer solution to each.

2a. State the rules guiding developing a binary tree from an array. Given an array with the following elements. Consider the list of numbers below and build them into a heap: 44, 30, 50, 22, 60, 55, 77, 55

b. Describe the stages involved in electronic data processing.

c. Enumerate the criteria for selecting sorting methods.

3a. List and describe three (3) ways in which file can be organized.

b. There are several ways or methods of organizing computer based data files. The choice of methods depends on the objectives of the system designer and involves trade off in terms of cost, processing, speeds and accessibility of information. Highlight these objectives.

c. Design an Algorithm for Quick Sort and solve this problem: 3,11,6.4,9,5,7,8,10,2,1

4a. Design an algorithm to search for an item in an array using Binary Search.

b. Using an example to illustrate the binary search algorithm: Find the location of ITEM 38 in the array 16, 19,23,30,37, 38, 44, 56 .

c. Describe any three (3) file processing activities