

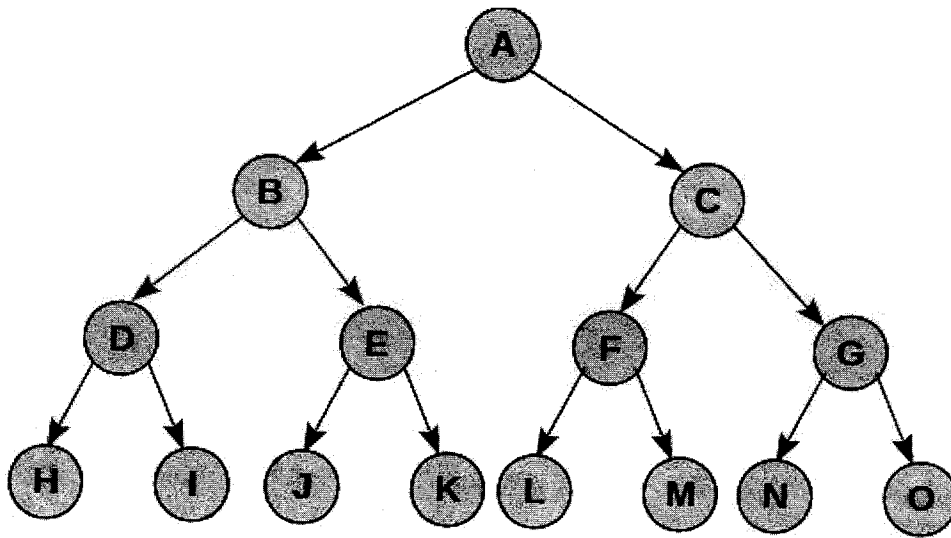
BIT 2203 – DATA STRUCTURES & ALGORITHMS – CAT

Instructions

- (i) Attempt ALL Questions
- (ii) Due Date : 20th November 2015.
- (iii) Mode of submission: Softcopy – through email - schoolbased.mku@gmail.com

Question 1 (10marks)

- (a) Explain the concept *tree traversal* and explain two applications in computing [4marks]
- (b) Consider the binary tree given below:



Perform the following types of traversal on the above tree:

[6marks]

Pre- order traversal

In – Order traversal

Post-Order traversal

Question 2 (20marks)

- (a) Explain the following concepts:

[3marks]

- i. Design of algorithms
- ii. Algorithms analysis
- iii. Algorithms performance

Question 4 (20marks)

Write an array program that reads 10 integer numbers to be stored in an array. Then perform the following operations on the array:

- i. Compute the sum and average of all the elements
- ii. Determine the maximum and minimum elements of the array.