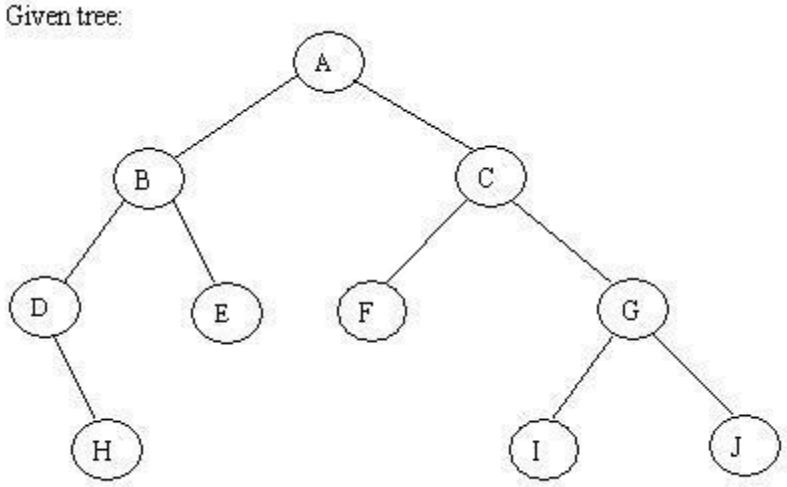
Department of Computer Science & Engineering
Numerical Question Bank
DATA STRUCTURE (CS-303) Semester: 3RD
INTRUCTIONS.
1. All questions with their solution are submitted till 27 October 2014.

PROBLEMS

1. Traverse the given tree using Inorder, Preorder and Postorder traversals.

Given tree:

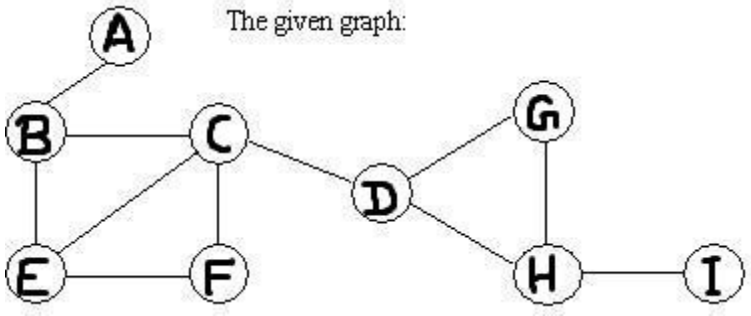


2. Sort the given values using Quick Sort?

65	70	75	80	85	60	55	50	45

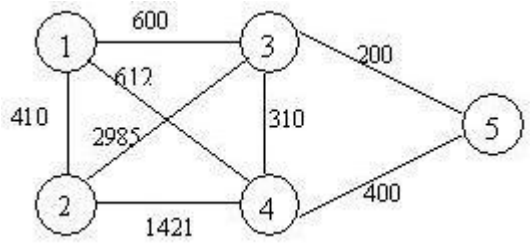
3. For the given graph, draw the DFS and BFS?

The given graph:



4.Convert the expression ((A + B) * C - (D - E) ^ (F + G)) to equivalent Prefix and Postfix notations.

5. What is a spanning Tree? Convert the given graph with weighted edges to minimal spanning tree USING PRIMS AND KRUSKAL ALG.



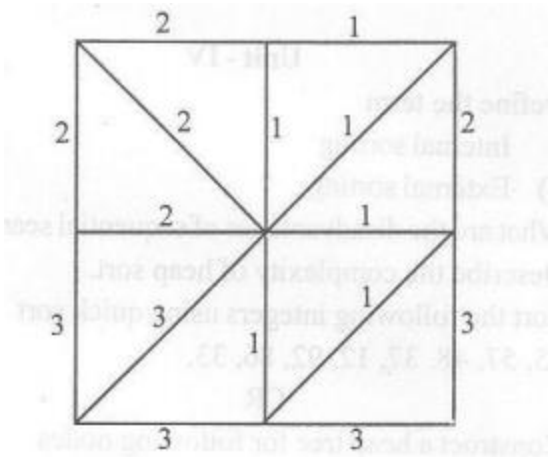
6. Draw a binary Tree for the expression : A * B - (C + D) * (P / Q)

7.For the following COBOL code, draw the Binary tree?

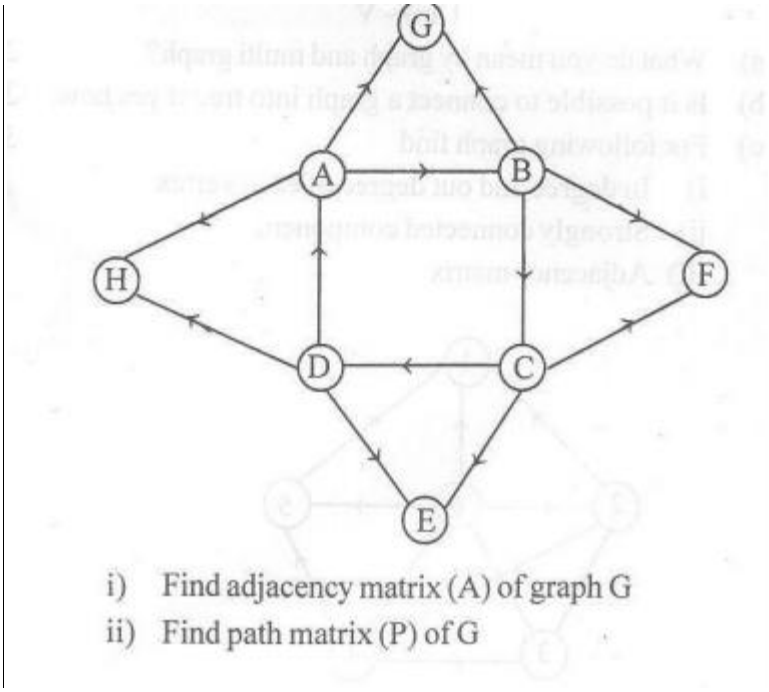
01 STUDENT_REC.
02 NAME.
03 FIRST_NAME
03 LAST_NAME

02 YEAR_OF_STUDY.
03 FIRST_SEM
03 SECOND_SEM

8.Find minimum spanning tree of this graph using prim's and kruskal algorithm.



9.



i) Find adjacency matrix (A) of graph G

ii) Find path matrix (P) of G

10.Convert following infix notation in to prefix and postfix.

$$-b+\sqrt{b^2-4ac}/2a$$

11.Sort the following integers using **bubble sort, insertion sort, merge sort.**

25,57,48,37,12,92,86,33

12.Constuct a **heap tree** for following nodes.

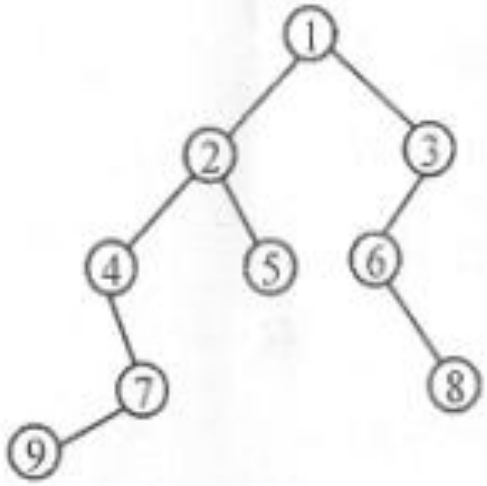
5,16,22,45,2,10,18,30,50,12,1

13.What is **min heap**? Create the min heap for given data set.

6,15,50,3,33,45,40,80,80,10

14.

What is threaded binary tree? Explain, and create the threaded binary tree for the given tree.



.15.evaluatethe expression.

GA^B+CD+E*F/-

Where A=3, B=4,C=2,D=5,E=20,F=5

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