Answer all questions

Question 1:

a. For the following term, give the output tree of the unification if it unify or else explain why unification would fail:
    Unify ((parents X (father X) (mother sami)), (parents sami (father sami) Y))

b. Given the following
    i)   if it is cloudy and it is cold, then Aly is sad.
    ii) it is cloudy if it is raining.
    iii) it is raining.
    iv) it is cold.
    v)   is Aly sad?
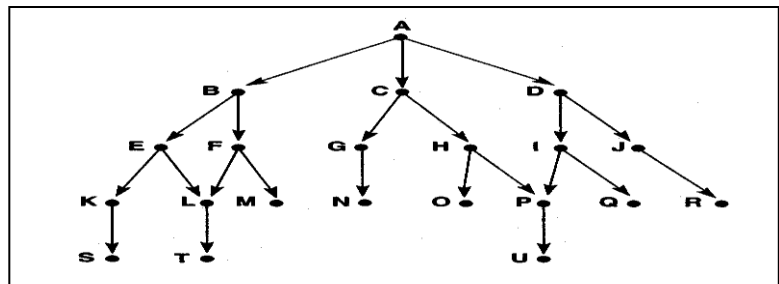   Use resolution to show Aly is sad

Question 2:
    Build a finite state acceptor and transition matrix that recognizes the following:
    i)   All strings of characters from the alphabet {a,b,c,d} that contain the exact sequence "abc".
    ii) All strings of binary digits{0,1} that contain the exact sequence "111".

Question 3:

Write and trace the algorithms of Depth-first and Breadth-First search by using this graph.

Good Luck