Subject .....
Date ..... Time.....

(4)

(a) A graph will be tree if and only if satisfy ~~these~~ these conditions.

i) connection between vertices.

ii) (n-1) edge

iii) no cycle.

Therefore, if any graph fullfils these condition the we can call these graph a tree.

(b) first ill run a DFS algorithm from the source node. it means any node which is certain in the non-bipartite connection and then ill assign colour as it goes. The first time ill find a back edge connecting two vertices of the same colour. Then ill unwind the node stack between two vertices. Thus ill find the odd length of ~~the~~ cycle of the graph.