1) For the network given above, give global distance vector tables. The table will consist of a 6 by 6 matrix where each entry in that matrix will consist of two values (i) Distance to reach the node corresponding to that column and (ii) Next hop; for the node corresponding to that particular row. You will give the tables for the following cases:

   a) Each node knows only the distance to its immediate neighbors. (20 points)
   b) Each node has reported the information it had in the preceding step to its immediate neighbors. (20 points)
   c) Step (b) happens a second time. (20 points)

2) For the same network above, show how the link-state algorithm builds the routing table for node D. (30 points)

3) When several routes of equal cost to a destination exist, the OSPF protocol requires that traffic be distributed equally among these routes.

   Point out ONE major advantage and ONE major disadvantage of this implementation decision. (10 points)

(For ease of grading, please turn in a typed solution of the homework)