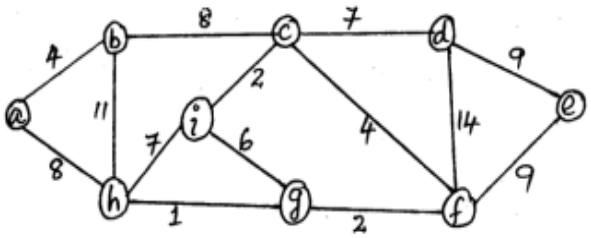
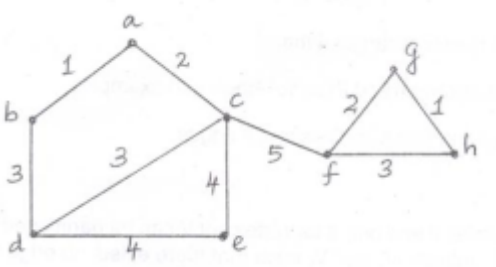
PREVIOUS YEAR UNIVERSITY QUESTIONS

MODULE 6

1. Name any two methods used to represent a graph in computers? What are its advantages/disadvantages?
2. Explain any two methods to store a graph in computer memory
3. Discuss different types of shortest path problems in graph
4. Explain the algorithm to find the shortest path from a specified vertex to another specified vertex in a graph G with an example
5. Explain the algorithm to find a spanning tree of an undirected self-loop free graph. Write an algorithm to yield a spanning tree in a connected graph. Also draw the flow chart of the algorithm
6. What are the steps involved in finding a spanning tree of any graph G(V,E).
7. Consider the following weighted graph



8. Find the minimal spanning tree of the graph using Kruskal's algorithm.
9. Write and explain Djkstra's Algorithm
10. Write an algorithm to find out the number of components in a given graph G(V,E)
11. Explain how spanning tree algorithm can be used in generating the fundamental circuits in a given graph
12. Explain Prim's Algorithm
13. Consider the following graph. Draw all MSTs starting from a using Prim's algorithm



14. Discuss about the different computer representation of graphs
15. Write an algorithm to find the connected components of a graph and analyse the complexity of the algorithm