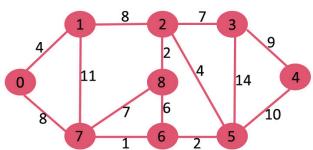
## **Design and Analysis of Algorithms**

## **Tutorial-6**

## Designed By – Deepak Uniyal (Assistant Professor CSE – GEU)

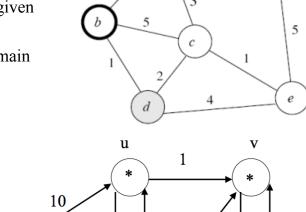
- 1. What do you mean by minimum spanning tree? What are the applications of MST?
- 2. Please analyse the time and space complexity of Prim, Kruskal, Dijkstra and Bellman ford algorithm.
- 3. Apply Kruskal and Prim's algorithm on graph given on right side to compute MST and its weight?
- 4. Given a directed weighted graph. You are also given the shortest path from a source vertex 's' to a destination vertex 't'. Does the shortest path remain same in the modified graph in following cases?
  - If weight of every edge is increased by 10 units.
  - If weight of every edge is multiplied by 10 units.
- 5. Apply Dijkstra and Bellman algorithm on graph given on right side to compute shortest path to all nodes from node S.
- 6. Apply all pair shortest path algorithm Floyd Warshall on below mentioned graph and also analyse the time and space complexity of algorithm.



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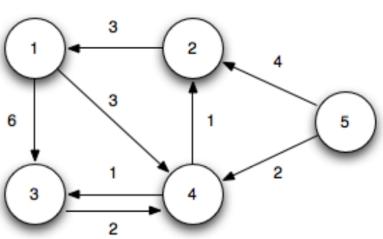


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