St.JOSEPH'S COLLEGE OF ENGINEERING

St.JOSEPH'S INSTITUTE OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING & INFORMATION TECHNOLOGY

CS6301 PROGRAMMING & DATA STRUCTURES II

ASSIGNMENT - V

PART - A

1) Define Graph
2) Define Out degree and In degree of a graph
3) When is a graph said to be weakly connected?
4) What is a minimum spanning tree?
5) Differentiate BFS and DFS.
6) What is topological sort?
7) What is the purpose of Dijkstra's algorithm?
8) Define Path and cycle

PART – B

1) A) Write and explain the prim's algorithm with an example
   B) Explain Kruskal's algorithm with an example
2) A) Explain topological sort with suitable algorithm and example
   B) Describe the various representations of graphs
3) What is single source shortest path problem? Discuss Dijkstra's single source shortest path algorithm with an example
4) A) Explain Bellman Ford Algorithm with an example
   B) Explain the breadth first search algorithm