PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING

SUMMER TERM / MAKE UP END TERM EXAMINATION

Semester: Summer Term 2019   **Date:** 27 July 2019

Course Code: CSE 212   **Time:** 2 Hours

Course Name: Analysis of Algorithms   **Max Marks:** 40

Program & Sem: B.Tech & V Sem (2015 & 2016 Batch)   **Weightage:** 40%

Instructions:
(i)   *Read the question properly and answer accordingly.*
(ii)   *Question paper consists of 3 parts.*
(iii)   Scientific and Non-programmable calculators are permitted, show all steps in problems

Part A

Answer **all** the Questions. **Each** question carries **three** marks.   (4Qx3M=12M)

1. Define Minimum Spanning tree with an example
2. Write recursive algorithm for merge sort
3. Write Dynamic Programming algorithm for Bionomial Coefficient
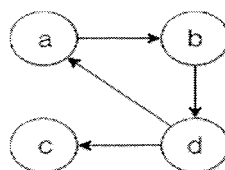4. Design an algorithm for Floyd's for all pair shortest path problem

Part B

Answer **both** the Questions. **Each** question carries **four** marks.   (2Qx4M=8M)

5. Find the shortest path for the below weighted graph using Dijkstra's Algorithm.
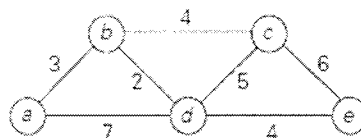
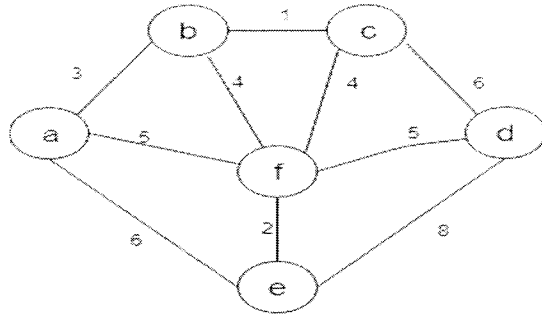6. Generate Transitive closure for the graph shown below

Part C

Answer **both** the Questions. **Each** question carries **ten** marks.   (2Qx10M=20M)

7. Find minimum cost spanning tree of the given graph using Kruskal's algorithm

8. Given a 0/1 Knapsack of capacity M=5, n=4, and

   w1=2, w2=1, w3=3, w4=2

   p1=12, p2=10, p3=20, p4=15 find the selections for maximum profit.