GURUDAS COLLEGE
INTERNAL EXAMINATION,2020
COMPUTER SCIENCE (HONOURS)
SEMESTER IV
PAPER CC9
THEORY

F.M : 25

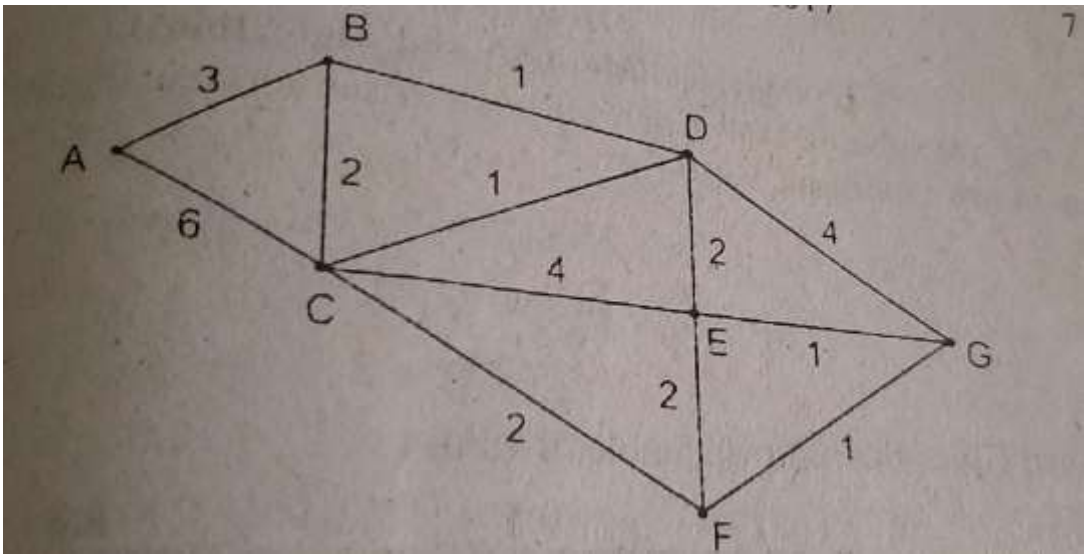
GROUP A

Answer any 5(five) questions

1. Define : a. Feasible solution b. Optimal solution 2.5 X 2
2. Consider the following instance of the knapsack problem : n = 3, m=20, (p1,p2,p3)= (25,24,15) and (w1,w2,w3) = (18,15,10). What are the feasible solutions? 5
3. If Binary search algorithm has n elements then find the successful search and unsuccessful search complexity of the algorithm. 5
4. Write the recursive MaxMin () algorithm. 5
5. What is Minimal Spanning Tree? Explain Prim's Algorithm with non-trivial Illustration. 5
6. What is the purpose of Floyd's Algorithm? Explain its working principle. Derive the worst case time complexity of this algorithm. 1+2+3
7. Write an algorithm for Breadth First Search traversal of a Graph. 5

GROUP B
INTERNAL ASSESSMENT
F.M:10

1. Use Dijkstra's algorithm to find shortest path from A to each of the other six vertices in the graph given below. Show all the intermediate steps. 10



Send the Scanned answer scripts to the following mail id:
csexam.cmsa3@gmail.com