Sanjay Ghodawat University, Kolhapur

2020-21

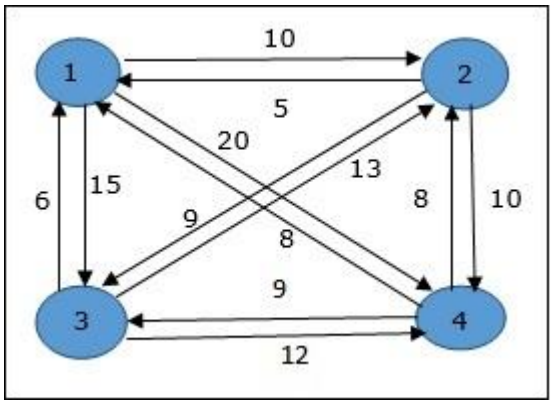
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EXM/P/09/00

Year and Program:	School of Technology	Department: CSE
Course Code: CST301	Course Title: Design and Analysis of Algorithm	Semester :V
Day and Date:	End Semester Examination	Time : 2 Hrs. Max Marks : 50

Instructions: 1) All Questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Answer/Solve the following (any Two)**			
a)	Define divide and conquer strategy with the help of real time example	8	L1	CO1
b)	Compare Minimum cost Spanning tree Prims and Kruskals algorithm	8	L2	CO1
c)	Explain Single Source Shortest Path algorithm with an example	8	L2	CO2, CO3
Q.2	**Answer/Solve the following (any two)**			
a)	Solve the following instance of reliability design problem with 3 stages. Cost of the system is 175. Cost of device in stage 1 is 40, stage 2 is 25 and stage is 35. Reliabilities for 3 stage are 0.75, 0.85 and 0.6 respectively. Number of devices available in stage 1 are 3, stage 2 are 3 and stage 3 are 2.	8	L3	CO2, CO3
b)	Illustrate Travelling Salesman problem for the following example	8	L4	CO2, CO3



c)	Apply dynamic programming to explain All pair shortest path problem	8	L3	CO2, CO3
Q.3	**Answer/Solve the following (any two)**			

a)	Explain N-Queen algorithm using backtracking strategy	9	L5	CO2, CO3
b)	Apply backtracking concept to demonstrate Hamilton cycle problem	9	L3	CO2, CO3
c)	Illustrate Sum of Subset problem X={5,10,12,13,15,18}, M=30, find the subset of X	9	L2	CO2, CO3

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