

**SYNERGY INSTITUTE OF ENGINEERING AND TECHNOLOGY, DHENKANAL**

Near NH-55, Banamali Prasad – 759001

**Quiz-VIII**

**Full Marks-05**

**Duration-05 Min**

**Subject with Code:** DAA\_LAB (CSPC2206)

**Year & Semester:** 2nd & 4th

**Course & Branch**: B. Tech. & CSE

**Name: Registration No-**

**Roll No-**

Answer All Questions

**Tick the Correct Answer/Answers**

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| **Course Outcome** | **Total Marks** | **Marks Secured** | **Signature of Evaluator** |
| **CO4** | **05** |  |  |

**1.Floyd-Warshall algorithm is used for: [0.5 Mark][CO4][L3]**  
a) Finding minimum spanning tree  
b) Finding shortest paths between all pairs of vertices  
c) Finding the longest path  
d) Topological sorting

**2.Time complexity of Floyd-Warshall algorithm is: [0.5 Mark][CO4][L3]**  
a) O(V²)  
b) O(V + E)  
c) O(V³)  
d) O(E log V)

**3.Which algorithmic technique does Floyd-Warshall use? [0.5 Mark][CO4][L3]**  
a) Greedy  
b) Divide and Conquer  
c) Dynamic Programming  
d) Backtracking

**4.Floyd-Warshall algorithm works for graphs with: [0.5 Mark][CO4][L3]**  
a) Positive weights only  
b) Negative weights but no negative cycles  
c) Only undirected graphs  
d) No weights

**5.The Floyd-Warshall algorithm uses a table of size: [0.5 Mark][CO4][L3]**  
a) V  
b) V×E  
c) V×V  
d) E×E

**6.Travelling Salesman Problem (TSP) asks for: [0.5 Mark][CO4][L3]**  
a) The longest path through a graph  
b) A path covering all edges  
c) The shortest possible route visiting all cities and returning to the origin  
d) Minimum spanning tree

**7.TSP is an example of a: [0.5 Mark][CO4][L3]**  
a) Greedy problem  
b) NP-Hard problem  
c) Divide and conquer problem  
d) Backtracking problem

**8.Time complexity of TSP using dynamic programming is: [0.5 Mark][CO4][L3]**  
a) O(n²)  
b) O(n!)  
c) O(n × 2ⁿ)  
d) O(2ⁿ)

**9.The base case in the dynamic programming solution of TSP is when: [0.5 Mark][CO4][L3]**  
a) All cities are visited  
b) Starting city is reached  
c) Only one city is left  
d) No city is visited

**10.What is the main difference between naive recursive and dynamic programming approach for TSP? [0.5 Mark][CO4][L3]**  
a) Dynamic programming avoids re-computation  
b) Dynamic programming is slower  
c) Naive is always better for large input  
d) They both have the same time complexity