Fr. Conceicao Rodrigues College of Engineering Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400050
Department of Computer Engineering
Academic Term II: 23-24

Class: B.E (Computer), Sem – VI Subject Name: Artificial Intelligence Student

Name: Sumit Sanjay Rai **Roll No: 9570**

Practical No:	**10**
Title:	Simple Prototype for expert system
Date of Performance:	**08/03/2024**
Date of Submission:	**08/04/2024**

Rubrics for Evaluation:

Sr. No	Performance Indicator	Excellent	Good	Below Average	Marks
1	On time Completion & Submission (01)	01 (On Time)	NA	00 (Not on Time)	
2	Logic/Algorithm Complexity analysis (03)	03(Correct)	02(Partial)	01 (Tried)	
3	Coding Standards (03): Comments/indention/Naming conventions Test Cases /Output	03(All used)	02 (Partial)	01 (rarely followed)	
4	Post Lab Assignment (03)	03(done well)	2 (Partially Correct)	1(submitted)	
Total					

Signature of the Teacher:

Post Lab Assignment:

1. How to overcome combinatorial explosion in TSP?
2. What is learning from the travelling salesperson problem?

Name: Sumit Sanjay Rai
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Class: TE COMPS A

PAGE NO.:
DATE: / /

PostLab: Experiment-10.

Q.1. How to overcome combinatorial explosion in TSP?

Ans. 1. Approximation algorithms: Provide near-optimal solutions quickly.
2. Heuristic methods: Use efficient rules of thumb to find good solutions.
3. Problem decomposition: Break TSP into smaller, manageable subproblems.
4. Branch and bounds: Systematically explore search space, pruning suboptimal branches.
5. Dynamic programming: Efficient compute optimal solutions for smaller instances.

Q.2. What is learning from the travelling salesperson problem?

Ans. 1. Algorithm development: TSP encourages creating efficient algorithms for combinatorial optimization problems.
2. Complexity insights: It provides insights into the complexity of optimization problems.
3. Heuristic exploration: Researchers develop heuristics for quick solutions, applicable to other problems.
4. Network routing: TSP solutions aid in finding optimal routes in networks.
5. Logistics optimizations: Help optimize delivery routes, reducing time and cost.
6. Resource allocation: TSP algorithms optimize resource allocation in various domains.
7. Decision support: Insights from TSP inform better decision-making processes.