**DAAL PRACTICE CHITS**

|  |  |
| --- | --- |
| 1 | **PART A:** Implement Quicksort using divide and conquer strategy and display time for sorting for 500 values.  **PART B:** Use same data for Mergesort and compare the time required with Quicksort. |
| 2 | **PART A:** Implement Quick Sort using divide and conquer strategy.  **PART B:** Compare its time required wrt Merge sort **OR** Randomized Quick Sort. |
| 3 | **PART A:** Implement Quick Sort using divide and conquer strategy. Give more than 500 inputs for best and for worst case scenario, and compare the time taken.  **PART B:** Write a function to demonstrate Mutation of a chromosome representing solution of Traveling Salesperson Problem (TSP)  Samples for TSP : |
| 5 | Implement solution to 0/1 Knapsack using Dynamic Programming algorithm.  Sample: |
| 6 | Implement N queen’s problem using Backtracking. Compare the time required for 4,5,6,7, and 8 Queens. |
| 7 | Implement solution to Travelling Salesman problem (TSP)   1. Using branch and bound technique (preferably using LCBB)   **OR**   1. Using a Natural Algorithm (like Genetic Algorithm)   Samples: |
| 11 | Implement solution to the concurrent Dining Philosopher Problem. Discuss your solution with respect to fairness, starvation, deadlock and scalability. |
| 12 | Implement multithreaded matrix multiplication. And compare the time taken with sequential matrix multiplication. |