

Faculty of Informatics

Osmania University

MCA Sem – III Question Bank

Algorithms Design Lab

1. Write a program to implement stack using array and linked list
2. Write a program to implement queue using array and linked list
3. Write a program to implement priority queue
4. Write a program to create graph
5. Write a program to perform Binary Search
6. Write a program to implement Merge Sort
7. Write a program to perform Quick Sort
8. Write a program to perform Selection Sort
9. Write a program to implement Strassen's matrix multiplication
10. Write a program to solve Knapsack Problem using greedy method
11. Write a program to create Job Sequencing with Deadlines
12. Write a program to find Minimum-Cost Spanning Trees
13. Write a program to compute Single Source Shortest Paths.
14. Write a program to generate All-Pairs Shortest Paths
15. Write a program to solve 0/1 Knapsack problem using dynamic programming
16. Write a program to implement Spanning tree
17. Write a program to solve The Traveling Salesperson Problem using dynamic programming
18. Write a program to perform Traversal Techniques for Binary Trees – Inorder
19. Write a program to perform Traversal Techniques for Binary Trees - preorder
20. Write a program to perform Traversal Techniques for Binary Trees – postorder
21. Write a program to create Techniques for Graphs - DFS
22. Write a program to create Techniques for Graphs - BFS
23. Write a program to implement Biconnected components
24. Write a program to solve 8-queen's problem using backtracking
25. Write a program to implement sum of subsets

26. Write a program to implement graph coloring
27. Write a program to implement Hamiltonian cycles
28. Write a program to solve Knapsack problem using backtracking
29. Write a program to solve 0/1 Knapsack problem using branch and bound
30. Write a program to solve The Traveling Salesperson Problem using branch and bound