1. Kosaraju's algorithm is used to find:
   1. **Strongly Connected Components**
   2. Shortest Path
   3. Minimum Spanning Tree
   4. Maximum Flow
2. Kosaraju's algorithm is used on which type of graph?
   1. Directed Acyclic Graph (DAG)
   2. Undirected Graph
   3. **Directed Graph**
   4. Bipartite Graph
3. Which step is NOT part of Kosaraju's algorithm?
   1. Perform DFS on the graph
   2. Create a transpose graph
   3. **Calculate the in-degree of vertices**
   4. Perform DFS on the transpose graph
4. The time complexity of Kosaraju's algorithm is:
   1. O(V)
   2. **O(V + E)**
   3. O(V^2)
   4. O(E log V)
5. The transpose graph of a directed graph is obtained by:
   1. **Reversing the direction of all edges**
   2. Adding new edges between all pairs of vertices
   3. Deleting all edges
   4. Removing self-loops
6. Tarjan's algorithm is used to find:
   1. **Strongly Connected Components**
   2. Shortest Path
   3. Minimum Spanning Tree
   4. Maximum Flow
7. In Tarjan's algorithm, a vertex is considered part of an SCC when:
   1. It has the smallest index
   2. It has the largest index
   3. **It has the lowest low-link value**
   4. It has the highest low-link value
8. Bellman-Ford algorithm is used to find:
   1. Strongly Connected Components
   2. **Shortest Path in a weighted graph**
   3. Minimum Spanning Tree
   4. Maximum Flow
9. Which algorithm finds the shortest path in a weighted graph with negative weights?
   1. Dijkstra's algorithm
   2. Prim's algorithm
   3. **Bellman-Ford algorithm**
   4. Kruskal's algorithm
10. Which algorithm is used to find the longest path in a directed acyclic graph (DAG)?
    1. Dijkstra's algorithm
    2. **Longest Path algorithm**
    3. Floyd-Warshall algorithm
    4. Topological Sort
11. Floyd-Warshall algorithm is used to find:
    1. Strongly Connected Components
    2. **Shortest Path in a weighted graph**
    3. Minimum Spanning Tree
    4. Maximum Flow
12. Which algorithm can detect negative cycles in a graph?
    1. Kruskal's algorithm
    2. **Bellman-Ford algorithm**
    3. Dijkstra's algorithm
    4. Prim's algorithm
13. Prim's algorithm is used to find:
    1. Strongly Connected Components
    2. Shortest Path
    3. **Minimum Spanning Tree**
    4. Maximum Flow
14. Kruskal's algorithm is used to find:
    1. Strongly Connected Components
    2. Shortest Path
    3. **Minimum Spanning Tree**
    4. Maximum Flow
15. Which algorithm is used to find the maximum flow in a network flow problem?
    1. Kruskal's algorithm
    2. Bellman-Ford algorithm
    3. Dijkstra's algorithm
    4. **Ford-Fulkerson algorithm**
16. In a network flow graph, the capacity of an edge represents:
    1. The distance between two vertices
    2. The cost of using that edge
    3. **The maximum amount of flow that can pass through that edge**
    4. The weight of the edge
17. Which algorithm can be used to solve the bipartite matching problem?
    1. Kruskal's algorithm
    2. Bellman-Ford algorithm
    3. Dijkstra's algorithm
    4. **Hopcroft-Karp algorithm**
18. The Edmonds-Karp algorithm is a variation of which algorithm?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. **Ford-Fulkerson algorithm**
    4. Kruskal's algorithm
19. The algorithm used to find the shortest path in a graph with non-negative weights is:
    1. **Dijkstra's algorithm**
    2. Prim's algorithm
    3. Bellman-Ford algorithm
    4. Kruskal's algorithm
20. Which algorithm is used to find the transitive closure of a directed graph?
    1. Dijkstra's algorithm
    2. **Floyd-Warshall algorithm**
    3. Kruskal's algorithm
    4. Bellman-Ford algorithm
21. Which algorithm is used to find the maximum flow in a network flow problem with integer capacities?
    1. **Ford-Fulkerson algorithm**
    2. Dijkstra's algorithm
    3. Prim's algorithm
    4. Kruskal's algorithm
22. The algorithm used to find the articulation points in a graph is:
    1. **Tarjan's algorithm**
    2. Kosaraju's algorithm
    3. Bellman-Ford algorithm
    4. Kruskal's algorithm
23. Which algorithm is used to find the bridges in a graph?
    1. Prim's algorithm
    2. Dijkstra's algorithm
    3. Bellman-Ford algorithm
    4. **Tarjan's algorithm**
24. Which of the following is NOT a graph traversal algorithm?
    1. Breadth-First Search (BFS)
    2. Depth-First Search (DFS)
    3. **Dijkstra's algorithm**
    4. Depth-Limited Search (DLS)
25. In DFS, the data structure typically used for maintaining the vertices is:
    1. **Stack**
    2. Queue
    3. Linked List
    4. Array
26. Which algorithm can be used to determine if a graph is bipartite?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. **Depth-First Search (DFS)**
    4. Breadth-First Search (BFS)
27. In BFS, the data structure typically used for maintaining the vertices is:
    1. Stack
    2. **Queue**
    3. Linked List
    4. Array
28. Which algorithm can be used to perform topological sorting of a directed acyclic graph (DAG)?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. **Depth-First Search (DFS)**
    4. Breadth-First Search (BFS)
29. The algorithm used to find the shortest path in an unweighted graph is:
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. Bellman-Ford algorithm
    4. **Breadth-First Search (BFS)**
30. Which algorithm can be used to find the diameter of a tree or a connected graph?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. Bellman-Ford algorithm
    4. **Breadth-First Search (BFS)**
31. Which algorithm can be used to solve the traveling salesman problem (TSP)?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. Bellman-Ford algorithm
    4. **Held-Karp algorithm**
32. Which algorithm is used to find the shortest path between all pairs of vertices in a weighted graph?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. **Floyd-Warshall algorithm**
    4. Kruskal's algorithm
33. The algorithm used to find the maximum flow in a network flow problem with capacities that can change is:
    1. **Ford-Fulkerson algorithm**
    2. Dijkstra's algorithm
    3. Prim's algorithm
    4. Kruskal's algorithm
34. Which algorithm is used to find the strongly connected components of a directed graph?
    1. Dijkstra's algorithm
    2. Prim's algorithm
    3. **Kosaraju's algorithm**
    4. Kruskal's algorithm
35. Which algorithm can be used to find the shortest path in a weighted graph with negative cycles?
    1. Dijkstra's algorithm
    2. Bellman-Ford algorithm
    3. Floyd-Warshall algorithm
    4. **Kruskal's algorithm**