



CS502
QUIZ# 4
FINAL TERM
FALL 2024
BY
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FOR LMS HANDLING
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9:35

Vo LTEB  70



vulms.vu.edu.pk/



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CS502 - Fundamentals of Algorithms (Quiz No. 4)

Question # 10 of 10 (Start time: 09:34:30 AM, 08 January 2025)

Each time we traverse graph by Breadth-first search algorithm, we count the distance from _ _

Select the correct option



neighbors of the starting node



right most node



starting node



left most node

Question # 8 of 10 (start time: 09:32:15 AM, 08 January 2025)

For traversing the graphs, _____ can be visualized as a wave front propagating inward towards root node.

Select the correct option

- | | |
|----------------------------------|----------------------|
| <input checked="" type="radio"/> | Breadth-first search |
| <input type="radio"/> | Depth-first Search |
| <input type="radio"/> | Linear search |
| <input type="radio"/> | Binary search |

Question # 9 of 10 (**Start time: 09:33:23 AM, 08 January 2025**)

There are _____ ways of representing graphs.

Select the correct option



3



1



4



2



Question # 6 of 10 (Start time: 09:30:20 AM, 08 January 2025)

Total Mar

A topological sort of a DAG is a _____ ordering of the vertices of the DAG such that for each edge (u, v) , u appears before v in the ordering.

Select the correct option

<input type="radio"/>	Sequence
<input type="radio"/>	Parallel
<input type="radio"/>	Non-Linear
<input checked="" type="radio"/>	Linear

Click to Save Answer & Move to Next Question

Question # 7 of 10 (**Start time: 09:31:18 AM, 08 January 2025**)

Once you enter a strong component, every vertex in the component is _____.

Select the correct option

<input type="radio"/>	not reachable
<input type="radio"/>	reachable some times
<input checked="" type="radio"/>	reachable
<input type="radio"/>	removed

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Question # 5 of 10 (**start time: 09:28:39 AM, 08 January 2025**)

In undirected graph, by convention all the edges are called _____ edges.

Select the correct option

<input type="radio"/>	Forward
<input type="radio"/>	Cross
<input checked="" type="radio"/>	Back
<input type="radio"/>	Both forward and back

Question # 2 of 10 (Start time: 09:26:49 AM, 08 January 2025)

In computing the strongly connected components of a digraph, vertices of the digraph are _____ into subsets.

Select the correct option

- | | |
|----------------------------------|-------------|
| <input type="radio"/> | Deleted |
| <input checked="" type="radio"/> | Partitioned |
| <input type="radio"/> | Joined |
| <input type="radio"/> | Created |

Click to Save Answer

CS502 - Fundamentals of Algorithms (Quiz No. 4)

Question # 4 of 10 (**Start time: 09:28:05 AM, 08 January 2025**)

In Timestamped DFS, No back edges means _____.

Select the correct option

<input type="radio"/>	1 cycle
<input checked="" type="radio"/>	no cycles
<input type="radio"/>	DFS
<input type="radio"/>	BFS

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Question # 3 of 10 (**start time: 09:27:29 AM, 08 January 2025**)

A graph is _____ if every vertex can reach every other vertex.

Select the correct option



Connected



Acyclic



Loop



Cycle

Question # 1 of 10 (Start time: 09:26:09 AM, 08 January 2025)

If the graph is represented using an adjacency list, then Breadth-first search takes _____ time.

Select the correct option

- | | |
|----------------------------------|------------|
| <input type="radio"/> | $O(V)$ |
| <input type="radio"/> | $O(V^2)$ |
| <input checked="" type="radio"/> | $O(V + E)$ |
| <input type="radio"/> | $O(E + 1)$ |

Click to Save A

Question # 4 of 10 (Start time: 06:24:07 PM, 08 January 2025)

For _____ graphs, there is no distinction between forward and back edges.

Select the correct option

small

directed

large

undirected



In computing the _____ components of a digraph, vertices of the digraph are partitioned into subsets.

▶ Select the correct option

best

strongly connected



worst

weakly connected


Click to Save Answer & Move to Next Question

Question # 6 of 10 (Start time: 06:27:10 PM, 08 January 2025)

A graph is said to be acyclic if it contains _____

Select the correct option


<input type="radio"/>	always more than one cycle
<input type="radio"/>	exactly one cycle
<input type="radio"/>	no cycles
<input type="radio"/>	at least one cycle



Question # 8 of 10 (**start time: 06:28:53 PM, 08 January 2025**)

Graphs can be represented by an _____ and _____.

Select the correct option

<input type="radio"/>	adjacency list, adjacency Matrix	
<input type="radio"/>	Queue, Stack	
<input type="radio"/>	adjacency Right, adjacency Left	
<input type="radio"/>	Binary, Linear	

Question # 9 of 10 (Start time: 06:30:11 PM, 08 January 2025)

Brute-force is a simple strategy for computing -----

Select the correct option

Longest path

Easiest path

shortest path



Complete path

Click to Save Answer & Move to Next



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