بِسۡمِ ٱللَّهِ ٱلرَّحۡمَٰنِ ٱلرَّحِيمِ

کیا آپ نے آج درود شریف پڑھا

نہیں تو ابھی پڑھ لیجئے

صلی اللہ علیہ وسلم

لوح قرآنی

الٓمٓ	حٰمٓ عٓسٓقٓ	نٓ
المٓصٓ	حٰمٓ	یٰسٓ
کٓهٰیٰعٓصٓ	قٓ	اٰمٓینَ

اس کے دیکھنے والوں کی سب مشکلیں آسان ہو جائیں گی صبح اس کو دیکھ کر جو کام شروع کیا جائیگا' پورا ہوگا' اور غیبی طریقوں سے رزق آنے لگے گا!

Fb Page:
https://www.facebook.com/groups/2067192416161 37/?ref=share_group_link

WhatsApp: 03066295623

Email: waqasahmeduog@gmail.com

WhatsApp Group:
https://chat.whatsapp.com/IDhmrfSfZ3B64jiWVOBQ3P

Question # 1 of 10 (Start time: 11:27:32 AM, 24 August 2022)

The ancestor and descendent relation can be nicely inferred by the _____ lemma.

Select the correct option

- node
- parenthesis
- division
- addition

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Question # 1 of 10 (Start time: 05:38:54 PM, 08 September 2022)

An edge (u, v) _____ E - A is safe if A _____{(u, v)} is viable.

Select the correct option

- ○ Π,U
- ○ ϵ,Π
- ○ ϵ,U
- ◉ U,ϵ

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Clic

Question # 2 of 10 (Start time: 05:39:55 PM, 08 September 2022)

_____is commonly the running time of Dijkstra's Algorithm using the binary heap method.

Select the correct option

- ○ Θ(log E)
- ○ Θ(Blog V)
- ◉ Θ(E log V)
- ○ Θ(Vlog)

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Clic

Question # 3 of 10 (Start time: 05:40:26 PM, 08 September 2022)

_____ components are not affected by reversal of all edges in terms of vertices reachability.

Select the correct option

- (●) Strongly connected
- ( ) Weakly connected
- ( ) Last two
- ( ) First two

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Clic

Question # 4 of 10 (Start time: 05:41:17 PM, 08 September 2022)

In Dijkstra's algorithm the estimated value of source vertex d[s] is:

Select the correct option

- ○ Equal to 1
- ○ Greater than 0
- ◉ Equal to 0
- ○ Greater than 1

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Clic

Question # 5 of 10 (Start time: 05:42:10 PM, 08 September 2022)

In Kruskal's algorithm, the next edge is added to viable set A, if its adding does not induce a/an _____ .

Select the correct option

- ○ Vertex
- ◉ Cycle
- ○ Edge
- ○ Tree

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Clic

Question # 6 of 10 (Start time: 05:42:39 PM, 08 September 2022)

Which of the following statement is false about Dijkstra's Algorithm?

Select the correct option

- Its implementation in data structure is possible through the priority queue
- It works on a weighted directed graph
- It can be applied on graphs having a negative weight function
- It is used to solve Single-source shortest path

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Clic

Question # 7 of 10 (Start time: 05:43:18 PM, 08 September 2022)

_____ Algorithm allows negative weights edges and no negative cost cycles.

Select the correct option

- (●) Bellman-Ford
- ( ) Dijkstra's
- ( ) Brute-force technique
- ( ) Prim's

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Clic

Question # 8 of 10 (Start time: 05:43:44 PM, 08 September 2022)

A strongly connected component only apply to:

Select the correct option

- ○ Breadth First Search
- ◉ Directed Graph
- ○ Minimum Spanning Tree
- ○ Undirected Graph

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Clic

Question # 9 of 10 (Start time: 05:44:40 PM, 08 September 2022)

There exist a unique path between any _____ vertices of a free tree.

Select the correct option

- ○ Four
- ○ Three
- ○ One
- ◉ Two

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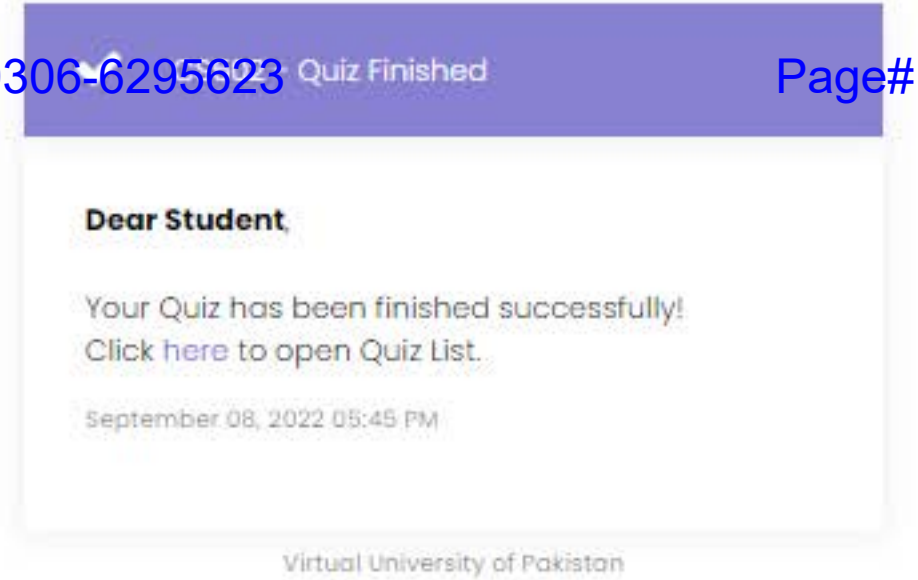
Clic



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Question # 1 of 10 (Start time: 05:48:37 PM, 08 September 2022)

Dijkstra's algorithm :

Select the correct option

- ○ Has both greedy and Dynamic approach to find all shortest paths
- ○ Has both greedy and dynamic approach to find all shortest paths to all other vertices.
- ○ Has greedy approach to find all shortest paths
- ● Has greedy approach to compute single source shortest paths to all other vertices

Clic

Question # 2 of 10 (Start time: 05:49:30 PM, 08 September 2022)

In Prim's algorithm, we will make use of_____.

Select the correct option

- ○ List
- ○ Array
- ○ Stack
- ◉ Priority Queue

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Clic

Question # 3 of 10 (Start time: 05:50:28 PM, 08 September 2022)

In Kruskal's algorithm, the next edge is added to viable set A, if its adding does not induce a/an _____ .

Select the correct option

- ○ Tree
- ○ Edge
- ◉ Cycle
- ○ Vertex

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Clic

Question # 4 of 10 (Start time: 05:51:56 PM, 08 September 2022)

Dijkstra's algorithm works on a weighted directed graph G =(V, E) in which all_____weights are non-negative.

Select the correct option

- ○ nodes
- ○ vertices
- ◉ edges
- ○ links

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Clic

Question # 5 of 10 (Start time: 05:52:46 PM, 08 September 2022)

In Prim's algorithm, If there is no edge from u to a vertex in S, we set the key value to_____.

Select the correct option

- -1
- 0
- ∞
- 1

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Clic

Question # 6 of 10 (Start time: 05:53:45 PM, 08 September 2022)

In Bellman-Ford Algorithm, relaxation applies to every edge of the graph and repeat this _____ time.

Select the correct option

- ○ E + 1
- ○ V + 1
- ◉ V – 1
- ○ E – 1

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Clic

Question # 7 of 10 (Start time: 05:54:40 PM, 08 September 2022)

In Prim's algorithm, we start with the _____ vertex r; it can be any vertex.

Select the correct option

- ○ Pivot
- ○ Leaf
- ○ negative
- ◉ Root

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Clic

Question # 7 of 10 (Start time: 05:54:40 PM, 08 September 2022)

In Prim's algorithm, we start with the _____ vertex r; it can be any vertex.

Select the correct option

- Pivot
- Leaf
- negative
- Root

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Clic

Question # 8 of 10 (Start time: 05:55:25 PM, 08 September 2022)

In Kruskal's algorithm, the next _____ is not added to viable set A, if its adding induce a/an cycle.

Select the correct option

- Cycle
- Tree
- Edge
- Vertex

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Clic

Question # 9 of 10 (Start time: 05:56:12 PM, 08 September 2022)

Which activity creates a unique cycle in a free tree:

Select the correct option

- ○ adding root
- ◉ adding any edge
- ○ adding any sub tree
- ○ adding any vertex

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Clic

Question # 10 of 10 (Start time: 05:56:34 PM, 08 September 2022)

The time complexity to compute Graph transpose G^T is (V+E), if you have _____ for G.

Select the correct option

- ○ stack
- ◉ an adjacency list
- ○ complete list
- ○ Array list

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Clic

Question # 1 of 10 (Start time: 05:58:57 PM, 08 September 2022)

In Bellman-Ford Algorithm, relaxation applies to _____ of the graph.

Select the correct option

- ○ Every Vertices
- ○ Only First edge
- ◉ Every edge
- ○ Only First Vertices

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Clic

Question # 2 of 10 (Start time: 05:59:56 PM, 08 September 2022)

In Bellman-Ford Algorithm, path consists of at most _____ edges.

Select the correct option

- ○ E – 1
- ○ E + 1
- ○ V + 1
- ◉ V – 1

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Clic

Question # 3 of 10 (Start time: 06:00:20 PM, 08 September 2022)

In strong components algorithm, the form of graph is used in which all the _____ of original graph G have been reversed in direction.

Select the correct option

- ○ Both edges & vertices
- ◉ Edges
- ○ Vertices
- ○ Trees

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Clic

Question # 4 of 10 (Start time: 06:00:47 PM, 08 September 2022)

In Generic approach determining of Greedy MST, we maintain a subset A of _____ .

Select the correct option

- (●) Edges
- ( ) Paths
- ( ) Cycles
- ( ) Vertices

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Clic

Question # 5 of 10 (Start time: 06:01:10 PM, 08 September 2022)

The time complexity to compute Graph transpose G^T is (V+E), if you have _____ for G.

Select the correct option

- ○ complete list
- ○ stack
- ◉ an adjacency list
- ○ Array list

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Clic

Question # 6 of 10 (Start time: 06:01:38 PM, 08 September 2022)

In strong components algorithm, first of all DFS is run for getting _____ times of vertices.

Select the correct option

- ○ Finish
- ○ Both start & finish
- ◉ Start
- ○ Middle

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Clic

Question # 7 of 10 (Start time: 06:02:27 PM, 08 September 2022)

In Kruskal's algorithm, the next edge is added to viable set A, if its adding does not induce a/an _____ .

Select the correct option

- ○ Edge
- ○ Vertex
- ◉ Cycle
- ○ Tree

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Clic

Question # 8 of 10 (Start time: 06:02:46 PM, 08 September 2022)

The breadth-first-search algorithm is a shortest-path algorithm that works on_____graphs.

Select the correct option

- ○ Weighted
- ○ Directed
- ◉ Un-weighted
- ○ Un-directed

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Clic

Question # 9 of 10 (Start time: 06:03:12 PM, 08 September 2022)

_____is commonly the running time of Dijkstra's Algorithm using the binary heap method.

Select the correct option

- (●) Θ(E log V)
- ( ) Θ(log E)
- ( ) Θ(Blog V)
- ( ) Θ(Vlog)

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Clic

Question # 10 of 10 (Start time: 06:03:31 PM, 08 September 2022)

Adding any edge to a free tree creates a unique _____ .

Select the correct option

- ○ Edge
- ○ Strong component
- ◉ Cycle
- ○ Vertex

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Clic

Question # 1 of 10 (Start time: 06:11:24 PM, 08 September 2022)

What is the time complexity to extract a vertex from the priority queue in Prim's algorithm?

Select the correct option

- ○ O(V)
- ○ O(log E)
- ○ O(V+E)
- ◉ O(log V)

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Clic

Question # 2 of 10 (Start time: 06:12:12 PM, 08 September 2022)

In Generic approach determining of Greedy MST, we maintain a subset A of _____ .

Select the correct option

- (●) Edges
- ( ) Cycles
- ( ) Vertices
- ( ) Paths

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Clic

Question # 3 of 10 (Start time: 06:12:37 PM, 08 September 2022)

Floyd-Warshall Algorithm is based on _____.

Select the correct option

- ○ Complexity theory
- ○ Divide and Conquer
- ◉ Dynamic Programming
- ○ Greedy Approach

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Clic

Question # 4 of 10 (Start time: 06:13:16 PM, 08 September 2022)

In Prim's algorithm, If there is no edge from u to a vertex in S, we set the key value to_____.

Select the correct option

- (●) ∞
- ( ) 0
- ( ) 1
- ( ) -1

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Clic

Question # 5 of 10 (Start time: 06:13:37 PM, 08 September 2022)

Finding the faster result of the shortest path from u to v for every pair of vertices u and v we use_____.

Select the correct option

- (●) All-pairs shortest-paths problem
- ( ) Two-pairs shortest-paths problem
- ( ) both I and II
- ( ) Single-pairs shortest-paths problem

Clic

Question # 6 of 10 (Start time: 06:14:06 PM, 08 September 2022)

In Prim's algorithm, we start with the _____ vertex r; it can be any vertex.

Select the correct option

- ○ Leaf
- ○ Pivot
- ◉ Root
- ○ negative

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Clic

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الٓمٓ	حٰمٓ عٓسٓقٓ	نٓ
المٓصٓ	حٰمٓ	یٰسٓ
کٓهٰیٰعٓصٓ	قٓ	اٰمٓینَ

اس کے دیکھنے والوں کی سب مشکلیں آسان ہو جائیں گی صبح اس کو دیکھ کر جو کام شروع کیا جائیگا' پورا ہوگا' اور غیبی طریقوں سے رزق آنے لگے گا!

Question # 8 of 10 (Start time: 06:14:32 PM, 08 September 2022)

The key[u] is the weight of the _____ going from u to any vertex in S.

Select the correct option

- (●) lighter edge
- ( ) edge
- ( ) lightest edge
- ( ) heavier edge

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Clic

Question # 9 of 10 (Start time: 06:15:04 PM, 08 September 2022)

In Dijkstra's algorithm, initially the estimated value from source vertex to any vertex v is:

Select the correct option

- One (1)
- Infinity (∞)
- Minus one (-1)
- Zero (0)

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Clic

Question # 10 of 10 (Start time: 06:15:26 PM, 08 September 2022)

A strongly connected component only apply to:

Select the correct option

- (●) Directed Graph
- ( ) Undirected Graph
- ( ) Breadth First Search
- ( ) Minimum Spanning Tree

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Clic

Question # 1 of 10 (Start time: 09:22:18 PM, 08 September 2022)

Bellman-Ford Algorithm does not allow G(graph) to have _____.

Select the correct option

- (●) negative cost cycles
- ( ) positive cost cycles
- ( ) negative weights edges
- ( ) positive weights edges

Question # 2 of 10 (Start time: 09:23:05 PM, 08 September 2022)

From given algorithms which one considered as best for finding the shortest-path:

Select the correct option

- ○ Bellman-Ford algorithm
- ○ DFS
- ○ BFS
- ◉ Dijkstra's algorithm

Question # 3 of 10 (Start time: 09:23:51 PM, 08 September 2022)

As the Kruskal's algorithm runs, the edges in viable set A induce a _____ on the vertices.

Select the correct option

- Set
- Tree
- Forest
- Graph

Question # 4 of 10 (Start time: 09:24:30 PM, 08 September 2022)

_____is commonly the running time of Dijkstra's Algorithm using the binary heap method.

Select the correct option

- ⊖(E log V)
- ⊖(Vlog)
- ⊖(log E)
- ⊖(Blog V)

Question # 5 of 10 (Start time: 09:24:43 PM, 08 September 2022)

Which activity creates a unique cycle in a free tree:

Select the correct option

- ○ adding root
- ○ adding any sub tree
- ○ adding any vertex
- ◉ adding any edge

Question # 6 of 10 (Start time: 09:25:11 PM, 08 September 2022)

Which technique is used in the implementation of Kruskal solution for the MST?

Select the correct option

- (●) Greedy Technique
- ( ) Divide-and-Conquer Technique
- ( ) Dynamic Programming Technique
- ( ) The algorithm combines more than one of the above techniques i.e. Divide-and-Conquer and Dynamic Programming

Question # 7 of 10 (Start time: 09:25:46 PM, 08 September 2022)

You have an adjacency list for G, what is the time complexity to compute Graph transpose G^T ?

Select the correct option

- ○ V.E
- ● (V+E)
- ○ V
- ○ E

Question # 8 of 10 (Start time: 09:26:49 PM, 08 September 2022)

In Kruskal's algorithm, the vertices will be stored in _____.

Select the correct option

- ○ nodes
- ○ loops
- ○ links
- ◉ sets

Question # 9 of 10 (Start time: 09:27:06 PM, 08 September 2022)

Bellman-Ford algorithm is slower than_____.

Select the correct option

- ○ Graph Algorithm
- ○ Brute-force technique
- ○ Prim's
- ◉ Dijkstra's

Question # 10 of 10 (Start time: 09:27:17 PM, 08 September 2022)

The time complexity to compute Graph transpose G^T is (V+E), if you have _____ for G.

Select the correct option

- (●) an adjacency list
- ( ) Array list
- ( ) complete list
- ( ) stack

Question # 1 of 10 (Start time: 09:28:35 PM, 08 September 2022)

In Bellman-Ford Algorithm, path consists of at most _____ edges.

Select the correct option

- ○ E – 1
- ○ V + 1
- ○ E + 1
- ◉ V – 1

Question # 2 of 10 (Start time: 09:28:47 PM, 08 September 2022)

An un-weighted graph can be considered as a graph in which every edge has weight_____unit.

Select the correct option

- 3
- 7
- 1
- 5

Question # 3 of 10 (Start time: 09:28:58 PM, 08 September 2022)

Dijkstra's algorithm :

Select the correct option

- ○ Has both greedy and dynamic approach to compute single source shortest paths to all other vertices.
- ○ Has both greedy and Dynamic approach to find all shortest paths
- ◉ Has greedy approach to compute single source shortest paths to all other vertices
- ○ Has greedy approach to find all shortest paths

Question # 4 of 10 (Start time: 09:29:11 PM, 08 September 2022)

From given algorithms which one considered as best for finding the shortest-path:

Select the correct option

- (●) Dijkstra's algorithm
- ( ) Bellman-Ford algorithm
- ( ) DFS
- ( ) BFS

Question # 5 of 10 (Start time: 09:29:29 PM, 08 September 2022)

A fully connected undirected graph of 5 nodes will have _____ edges.

Select the correct option

- (●) 10
- ( ) 4
- ( ) 15
- ( ) 5

Question # 6 of 10 (Start time: 09:29:47 PM, 08 September 2022)

An edge (u, v) _____ E - A is safe if A _____{(u, v)} is viable.

Select the correct option

- ○ Π,U
- ○ ϵ,Π
- ◉ U,ϵ
- ○ ϵ,U

Question # 7 of 10 (Start time: 09:29:53 PM, 08 September 2022)

In Kruskal's algorithm, the next _____ is not added to viable set A, if its adding induce a/an cycle.

Select the correct option

- ○ Cycle
- ○ Vertex
- ○ Tree
- ◉ Edge

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Question # 8 of 10 (Start time: 09:30:06 PM, 08 September 2022)

In Generic approach determining of Greedy MST, we maintain a subset A of _____ .

Select the correct option

- ○ Paths
- ○ Vertices
- ○ Cycles
- ◉ Edges

Question # 9 of 10 (Start time: 09:30:23 PM, 08 September 2022)

The running time of Bellman-Ford Algorithm is _____.

Select the correct option

- ⊖(V + V)
- ⊖(VE)
- ⊖(V + E)
- ⊖(E + E)

Question # 10 of 10 (Start time: 09:30:34 PM, 08 September 2022)

Kruskal's algorithm works by adding _____ in increasing order of weight (lightest edge first).

Select the correct option

- (●) Edges
- ( ) Weights
- ( ) Vertices
- ( ) Trees

Question # 1 of 10 (Start time: 09:33:33 PM, 08 September 2022)

Overall Running time of Prim's algorithm is _____.

Select the correct option

- ⊛((V+E)logE)
- ⊛(ElogE)
- ⊛(ElogV)
- ⊛((V+E)logV)

Question # 2 of 10 (Start time: 09:34:07 PM, 08 September 2022)

Which activity creates a unique cycle in a free tree:

Select the correct option

- ○ adding any sub tree
- ○ adding root
- ○ adding any vertex
- ◉ adding any edge

Question # 4 of 10 (Start time: 09:34:55 PM, 08 September 2022)

In strong components algorithm, vertices are sorted in_____ order of finish times.

Select the correct option

- ○ strong
- ○ Increasing
- ◉ Decreasing
- ○ Any

Question # 5 of 10 (Start time: 09:35:28 PM, 08 September 2022)

Timestamp structure of _____ is used in determining the strong components of a digraph.

Select the correct option

- ○ MST
- ○ Both DFS & BFS
- ◉ DFS
- ○ BFS

Question # 6 of 10 (Start time: 09:36:09 PM, 08 September 2022)

The key[u] is the weight of the _____ going from u to any vertex in S.

Select the correct option

- ○ lighter edge
- ● lightest edge
- ○ edge
- ○ heavier edge

Question # 7 of 10 (Start time: 09:36:27 PM, 08 September 2022)

From given algorithms which one considered as best for finding the shortest-path:

Select the correct option

- (●) Dijkstra's algorithm
- ( ) BFS
- ( ) DFS
- ( ) Bellman-Ford algorithm

لوح قرآنی

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المٓصٓ	حٰمٓ	یٰسٓ
کٓهٰیٰعٓصٓ	قٓ	اٰمٓینَ

اس کے دیکھنے والوں کی سب مشکلیں آسان ہو جائیں گی صبح اس کو دیکھ کر جو کام شروع کیا جائیگا' پورا ہوگا' اور غیبی طریقوں سے رزق آنے لگے گا!

Question # 8 of 10 (Start time: 09:36:37 PM, 08 September 2022)

Bellman-Ford algorithm is used to solve _____ problems.

Select the correct option

- ○ All pair shortest path
- ○ Flow of networking
- ◉ Single source shortest path
- ○ Double source shortest path

Question # 9 of 10 (Start time: 09:36:53 PM, 08 September 2022)

For each vertex $u \in (V - S)$,we associate a key _____.

Select the correct option

- ○ key[v]
- ◉ key[u]
- ○ key[s]
- ○ key[v-s]

Question # 10 of 10 (Start time: 09:37:26 PM, 08 September 2022)

Adding any edge to a free tree creates a unique _____ .

Select the correct option

- ○ Vertex
- ○ Strong component
- ◉ Cycle
- ○ Edge

Question # 2 of 10 (Start time: 11:27:43 AM, 24 August 2022)

Traversing a graph means visiting _____ in the graph.

Select the correct option

- (●) every node
- ( ) at least one
- ( ) no node
- ( ) more than one node

Question # 3 of 10 (Start time: 11:27:56 AM, 24 August 2022)

Cross edge is :

Select the correct option

- (u, v) where u and v are either ancestor or descendent of one another.
- (u, v) where u and v are not ancestor or descendent of one another
- (u, v) where u and v are not ancestor of one another
- (u, v) where u is ancesstor of v and v is not descendent of u.

Question # 3 of 10 (Start time: 11:27:56 AM, 24 August 2022)

Cross edge is :

Select the correct option

- (u, v) where u and v are either ancestor or descendent of one another.
- (u, v) where u and v are not ancestor or descendent of one another
- (u, v) where u and v are not ancestor of one another
- (u, v) where u is ancesstor of v and v is not descendent of u.

Question # 4 of 10 (Start time: 11:28:37 AM, 24 August 2022)

The running time of the traversal algorithm depends on _____and _____ which is used for the bag.

Select the correct option

- Root, Leaf
- Graph representation, Data structure
- Edges, Vertices
- Parent Node, Child Node

Question # 5 of 10 (Start time: 11:29:10 AM, 24 August 2022)

For graph traversal, Breadth-first search strategy _____

Select the correct option

- (●) Can be both recursive and non-recursive
- ( ) Cannot be recursive
- ( ) Cannot be non-recursive
- ( ) is always recursive

Question # 6 of 10 (Start time: 11:29:26 AM, 24 August 2022)

You have an adjacency list for G, what is the time complexity to compute Graph transpose G^T ?

Select the correct option

- V
- V.E
- (V+E)
- E

Question # 7 of 10 (Start time: 11:30:15 AM, 24 August 2022)

According to parenthesis lemma, vertex u is an ancestor of v vertex if and only if;

Select the correct option

○	$[d[u], f[u]] \subseteq [d[v], f[v]]$
○	Unrelated
●	$[d[u], f[u]] \supseteq [d[v], f[v]]$
○	Disjoint

An edge (u, v) _____ E – A is safe if A _____ {(u, v)} is viable.

Select the correct option

- ○ ϵ,Π
- ○ U,ϵ
- ◉ ϵ,U
- ○ Π,U

Question # 9 of 10 (Start time: 11:32:02 AM, 24 August 2022)

Which graph traversal algorithm uses a stack to keep track of vertices?

Select the correct option

- (●) Depth First Search
- ( ) Divide and Conquer
- ( ) Greedy Algorithm
- ( ) Breadth First Search

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There are _____ ways of representing graphs.

Select the correct option

- (●) 2
- ( ) 1
- ( ) 4
- ( ) 3

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Question # 1 of 10 (Start time: 11:37:37 AM, 24 August 2022)

There exist a unique path between any _____ vertices of a free tree.

Select the correct option

- ○ One
- ○ Three
- ◉ Two
- ○ Four

Question # 2 of 10 (Start time: 11:37:58 AM, 24 August 2022)

If a subset of edges A is viable for building MST, it can not contain a/an _____.

Select the correct option

- ○ Vertex
- ○ Graph
- ○ Edge
- ◉ Cycle

Question # 4 of 10 (Start time: 11:38:41 AM, 24 August 2022)

In strong components algorithm, the form of graph is used in which all the _____ of original graph G have been reversed in direc

Select the correct option

- (●) Edges
- ( ) Trees
- ( ) Vertices
- ( ) Both edges & vertices

Question # 5 of 10 (Start time: 11:39:45 AM, 24 August 2022)

A free tree with n _____ have exactly n-1 _____.

Select the correct option

- ○ nodes,vertices
- ○ edges,vertices
- ◉ vertices,edges
- ○ vertices,nodes

Question # 6 of 10 (Start time: 11:40:07 AM, 24 August 2022)

Equivalence relation partitions the vertices into _____ classes of mutually reachable vertices and these are the strong compone

Select the correct option

- ○ Variance
- ○ Non classes
- ○ Non equivalence
- ◉ Equivalence

Question # 7 of 10 (Start time: 11:40:36 AM, 24 August 2022)

A _____ w is adjacent to vertex v if there is an edge from v to w.

Select the correct option

- ○ loop
- ○ cycle
- ● vertex
- ○ acyclic

Question # 8 of 10 (Start time: 11:40:58 AM, 24 August 2022)

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

Select the correct option

- (●) O(V + E)
- ( ) O(V^2)
- ( ) O(E + 1)
- ( ) O(V)

Question # 10 of 10 (Start time: 11:42:50 AM, 24 August 2022)

Back edge is:

Select the correct option

- (u, v) where u is an ancestor of v in the tree.
- (u, v) where v is a predecessor of u in the tree.
- (u, v) where u is a mid of v in the tree.
- (u, v) where v is an ancestor of u in the tree.

Question # 1 of 10 (Start time: 11:43:44 AM, 24 August 2022)

Each vertex can reach every other vertex is called_____.

Select the correct option

- ( ) Unconnected graph
- ( ) Ordered graph
- (•) Connected graph
- ( ) Unordered graph

Question # 2 of 10 (Start time: 11:44:16 AM, 24 August 2022)

In Activity scheduling algorithm, the width of a rectangle _____

Select the correct option

- (●) Indicates the duration of an activity
- ( ) Is always ignored
- ( ) Directs towards recursion
- ( ) Should be maximized

لوح قرآنی

الٓمٓ	حٰمٓ عٓسٓقٓ	نٓ
المٓصٓ	حٰمٓ	یٰسٓ
کٓهٰیٰعٓصٓ	قٓ	اٰمٓینَ

اس کے دیکھنے والوں کی سب مشکلیں آسان ہو جائیں گی صبح اس کو دیکھ کر جو کام شروع کیا جائیگا' پورا ہوگا' اور غیبی طریقوں سے رزق آنے لگے گا!

Question # 3 of 10 (Start time: 11:44:48 AM, 24 August 2022)

Networks are _____ in the sense that it is possible from any location in the network to reach any other location in the digraph.

Select the correct option

- (●) Complete
- ( ) Transportation
- ( ) Incomplete
- ( ) Not graphs

Question # 4 of 10 (Start time: 11:45:14 AM, 24 August 2022)

In Fractional Knapsack problem, one is allowed to take fraction of an item for _____

Select the correct option

- for fraction of the value
- for fraction of the weight
- None of the given options
- Both, fraction of the weight and value

Question # 5 of 10 (Start time: 11:45:38 AM, 24 August 2022)

We say that two vertices u and v are mutually _____ if u can reach v and vice versa.

Select the correct option

- (●) Reachable
- ( ) Not Reachable
- ( ) Crossed
- ( ) Forward

Question # 7 of 10 (Start time: 11:47:06 AM, 24 August 2022)

Forward edge is:

Select the correct option

- (u, v) where v is a proper descendent of u in the tree.
- (u, v) where u is a proper ancesstor of v in the tree.
- (u, v) where v is a proper ancesstor of u in the tree.
- (u, v) where u is a proper descendent of v in the tree.

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Question # 8 of 10 (Start time: 11:47:29 AM, 24 August 2022)

According to parenthesis lemma, vertex u is a descendent of v vertex if and only if;

Select the correct option

◉	$[d[u], f[u]] \subseteq [d[v], f[v]]$
○	Unrelated
○	Disjoint
○	$[d[u], f[u]] \supseteq [d[v], f[v]]$

Question # 9 of 10 (Start time: 11:48:05 AM, 24 August 2022)

In Generic approach determining of Greedy MST, we maintain a subset A of _____ .

Select the correct option

- ○ Paths
- ○ Cycles
- ○ Vertices
- ◉ Edges

Question # 10 of 10 (Start time: 11:48:49 AM, 24 August 2022)

You have an adjacency list for G, what is the time complexity to compute Graph transpose G^T ?

Select the correct option

- (V+E)
- E
- V
- V.E

When we use cin stream to read some number from the keyboard and store it in the integer variable, then what will hap

Select the correct option

- Some error will occur and cin stream will detect this error.
- Its binary representation will be ignored and the character will be stored
- Its binary representation will be ignored and the character will be stored
- Its ASCII code will be stored inside the computer

Question # 7 of 10 (Start time: 11:14:46 AM, 24 August 2022)

Digraphs _____ in communication and transportation networks.

Select the correct option

- ○ final value is used
- ○ parts are used
- ● are used
- ○ are not used

Question # 8 of 10 (Start time: 11:15:31 AM, 24 August 2022)

There exist a unique path between any _____ vertices of a free tree.

Select the correct option

- ○ Four
- ○ One
- ○ Three
- ◉ Two

Question # 9 of 10 (Start time: 11:16:13 AM, 24 August 2022)

Fractional Knapsack is founded on _____ method.

Select the correct option

- ○ Recursive
- ◉ Greedy
- ○ Divide and Conquer
- ○ Dynamic Programming

Question # 10 of 10 (Start time: 11:16:41 AM, 24 August 2022)

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 th

Select the correct option

- ○ Sequence
- ○ Non-Linear
- ◉ Linear
- ○ Parallel

Question # 1 of 10 (Start time: 11:18:51 AM, 24 August 2022)

Time complexity of activity selection algorithm is _____.

Select the correct option

- (●) O(NlogN)
- ( ) O(logN)
- ( ) O(N)
- ( ) O(logN2)

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Question # 2 of 10 (Start time: 11:19:50 AM, 24 August 2022)

According to parenthesis lemma, vertex u is an ancestor of v vertex if and only if;

Select the correct option

- (●) $[d[u], f[u]] \supseteq [d[v], f[v]]$
- ( ) $[d[u], f[u]] \subseteq [d[v], f[v]]$
- ( ) Disjoint
- ( ) Unrelated

Click to Sav

Question # 3 of 10 (Start time: 11:20:42 AM, 24 August 2022)

In strong components algorithm, vertices are sorted in_____ order of finish times.

Select the correct option

- (●) Decreasing
- ( ) Any
- ( ) strong
- ( ) Increasing

Question # 4 of 10 (Start time: 11:21:25 AM, 24 August 2022)

Brute-force is a simple strategy for computing _____.

Select the correct option

- ○ Complete path
- ○ Longest path
- ○ Easiest path
- ◉ shortest path

Question # 5 of 10 (Start time: 11:22:05 AM, 24 August 2022)

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

Select the correct option

- ○ best
- ○ weakly connected
- ● strongly connected
- ○ worst

Question # 6 of 10 (Start time: 11:22:50 AM, 24 August 2022)

Computing the strongly connected components of a digraph is a/an _____ of the problem to determine whether a digraph is

Select the correct option

- (●) generalization
- ( ) optimization
- ( ) connection
- ( ) size

Question # 7 of 10 (Start time: 11:23:32 AM, 24 August 2022)

Timestamp structure of _____ is used in determining the strong components of a digraph.

Select the correct option

- (●) Both DFS & BFS
- ( ) BFS
- ( ) MST
- ( ) DFS

Question # 8 of 10 (Start time: 11:24:11 AM, 24 August 2022)

_____ is a good way to model some sort of "connection" or "relationship" or "interaction" between pairs of objects taken

Select the correct option

- (●) Graph
- ( ) Node
- ( ) Vertices
- ( ) Tree

Question # 9 of 10 (Start time: 11:24:48 AM, 24 August 2022)

In Fractional Knapsack problem, the goal is to _____

Select the correct option

- (●) maximize the value of items without exceeding the total weight limit of W
- ( ) minimize the value of items without exceeding the total weight limit of W
- ( ) minimize the value of items even if exceeding the total weight limit of W
- ( ) maximize the value of items even if exceeding the total weight limit of W

Question # 10 of 10 (Start time: 11:25:54 AM, 24 August 2022)

Which of the following algorithms provides an optimal solution for the activity selection problem?

Select the correct option

- ○ Recursive
- ○ Divide and Conquer
- ● Greedy
- ○ Brute Force