



Welcome!
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My Assessment

← SRMIST KTR - PO 2025 CPS 03 - Day 5 AN

Quiz · 15 mins

1. A graph having an edge from each vertex to every other vertex is called a

- ☒ Tightly Connected
- ☐ Strongly Connected
- ☐ Weakly Connected
- ☐ Loosely Connected

2. What is the number of unlabeled simple directed graph that can be made with 1 or 2 vertices?

- ☐ 2
- ☒ 4
- ☐ 5
- ☐ 7

3. Floyd Warshall Algorithm used to solve the shortest path problem has a time complexity of _____

- ☐ $O(V \cdot V)$

- ☐ $O(E*V)$
- ☐ $O(E*E)$

4. All Graphs have unique representation on paper.

- ☐ True
- ☒ False

5. Assuming value of every weight to be greater than 10, in which of the following cases the shortest path of a directed weighted graph from 2 vertices u and v will never change?

- ☐ add all values by 10
- ☐ subtract 10 from all the values
- ☒ multiply all values by 10
- ☐ in both the cases of multiplying and adding by 10

6. What is the maximum possible number of edges in a directed graph with no self loops having 8 vertices?

- ☐ 28
- ☐ 64
- ☐ 256
- ☒ 56

7. What is the maximum number of edges present in a simple directed graph with 7 vertices if there exists no cycles in the graph?

- ☒ 21

☐ 6

☐ 49

8. The number of possible undirected graphs which may have self loops but no multiple edges and have n vertices is _____

☐ $2^{((n*(n-1))/2)}$

☐ $2^{((n*(n+1))/2)}$

☐ $2^{((n-1)*(n-1))/2)}$

☒ $2^{((n*n)/2)}$

9. Given a plane graph, G having 2 connected component, having 6 vertices, 7 edges and 4 regions. What will be the number of connected components?

☐ 1

☒ 2

☐ 3

☐ 4

10. Number of vertices with odd degrees in a graph having a eulerian walk is _____

☐ 0

☐ Can't be predicted

☒ 2

11. How many of the following statements are correct?

- i) All cyclic graphs are complete graphs.
- ii) All complete graphs are cyclic graphs.
- iii) All paths are bipartite.
- iv) All cyclic graphs are bipartite.
- v) There are cyclic graphs which are complete.

- ☐ 1
- ☒ 2
- ☐ 3
- ☐ 4

12. What is the number of vertices of degree 2 in a path graph having n vertices,here $n > 2$

- ☒ $n-2$
- ☐ n
- ☐ 2
- ☐ 0

13. What would the time complexity to check if an undirected graph with V vertices and E edges is Bipartite or not given its adjacency matrix?

- ☐ $O(E \cdot E)$
- ☒ $O(V \cdot V)$
- ☐ $O(E)$
- ☐ $O(V)$

- ☐ $n(n-1)/2$
- ☐ $2n$
- ☐ $n!$
- ☒ $2n(n-1)/2$

15. Consider an undirected random graph of eight vertices. The probability that there is an edge between a pair of vertices is $1/2$. What is the expected number of unordered cycles of length three?

- ☐ $1/8$
- ☐ 1
- ☒ 7
- ☐ 8

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