

Quiz 5

Due May 10 at 11:59pm**Points** 8**Questions** 8**Available** May 1 at 11:59pm - May 10 at 11:59pm 9 days**Time Limit** 15 Minutes

This quiz was locked May 10 at 11:59pm.

Attempt History

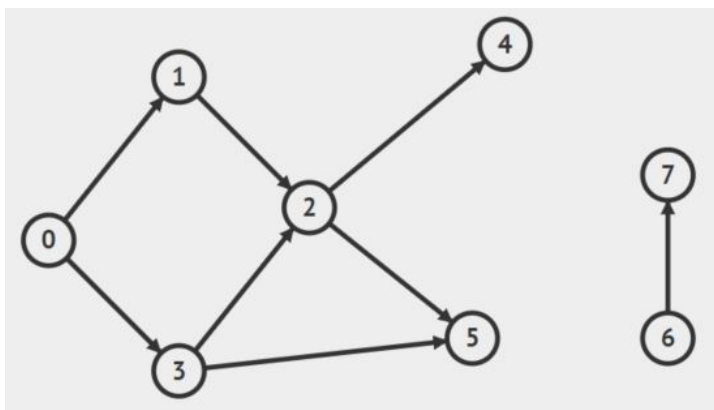
| | Attempt | Time | Score |
|--------|---------------------------|------------|------------|
| LATEST | Attempt 1 | 13 minutes | 7 out of 8 |

Score for this quiz: **7** out of 8

Submitted May 10 at 11:01pm

This attempt took 13 minutes.

Question 1

1 / 1 pts

Which of the following is a topological sort of the graph above.

☐ None of the above

☐ 0, 1, 2, 3, 4, 5, 6, 7

☒ 6, 7, 0, 1, 3, 2, 5, 4

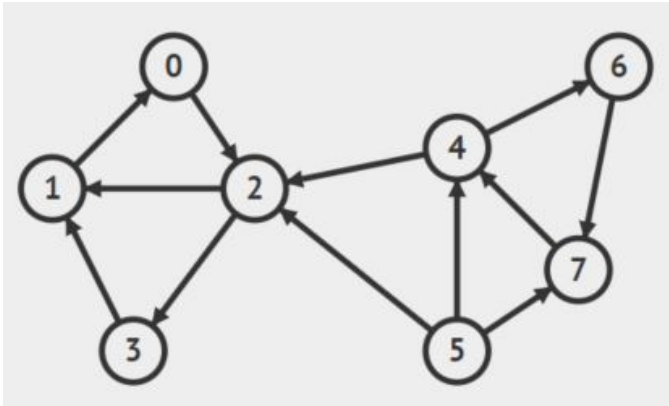
☐ 0, 3, 2, 5, 1, 4, 6, 7

Correct!

☐ 7, 6, 5, 2, 4, 3, 1, 0

Question 2

1 / 1 pts



How many strongly connected components are there in the graph above?

Correct!

☒ 3

☐ 1

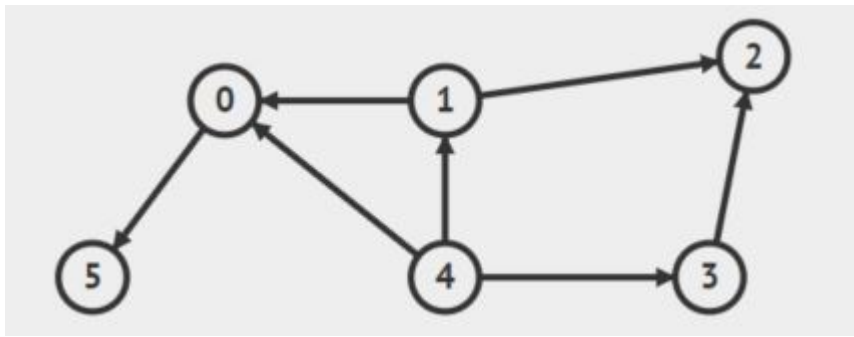
☐ 4

☐ 2

☐ 0

Question 3

1 / 1 pts



A Breadth First Search Algorithm has been implemented using a queue data structure. One possible order of visiting the vertices of the graph above is:

- ☐ 0, 5, 4, 1, 2
- ☒ 4, 0, 1, 3, 5, 2
- ☐ 1, 0, 5, 2, 4, 3
- ☐ 4, 1, 0, 5, 2, 3

Correct!

Question 4

1 / 1 pts

Given two vertices s and t in a connected graph G , which of the two traversals, BFS and DFS can be used to find if there is a path from s to t ?

- ☐ Only DFS
- ☒ Both BFS and DFS
- ☐ Neither BFS nor DFS
- ☐ Only BFS

Correct!

Question 5

1 / 1 pts

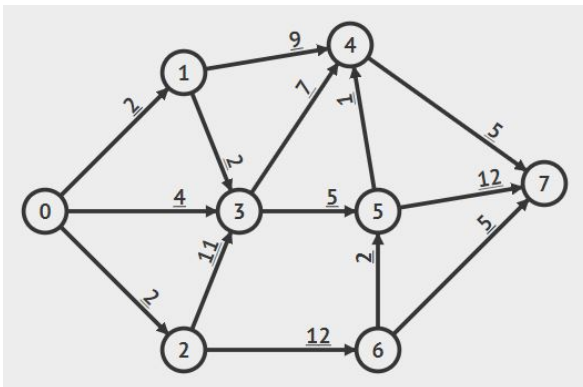
Let G be a graph with n vertices and m edges. Assume that the graph is represented by an adjacency matrix. What is the tightest upper bound on the running time of DFS performed on G ?

- ☐ $O(m)$
- ☐ $O(m+n)$
- ☒ $O(n^2)$
- ☐ $O(mn)$
- ☐ $O(n)$

Correct!

Question 6

0 / 1 pts



In the graph above, the shortest path from vertex 0 to vertex 7 has weight of

- ☐ 21
- ☐ 15
- ☐ 19

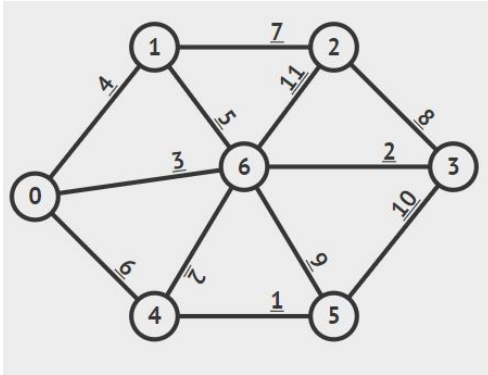
Correct Answer

You Answered

☒ 16

Question 7

1 / 1 pts



In the above graph, what is the weight of the MST?

☐ 21☐ 20☐ 17☐ 18☒ 19

Correct!

Question 8

1 / 1 pts

In an undirected weighted graph the heaviest edge is never in the MST.

☐ True☒ False

Correct!

Quiz Score: **7** out of 8