

<b>Started on</b>	Thursday, 8 August 2024, 1:14 PM
<b>State</b>	Finished
<b>Completed on</b>	Thursday, 8 August 2024, 1:14 PM
<b>Time taken</b>	8 secs
<b>Marks</b>	0.00/8.00
<b>Grade</b>	<b>0.00</b> out of 100.00

## Question 1

Not answered

Marked out of 1.00

True or False: Circuit Satisfiability is not a representation for a NP-hard problem as it can be solved in  $O(n^2)$  time.

Select one:

- ☐ True
- ☐ False

The correct answer is 'False'.

## Question 2

Not answered

Marked out of 1.00

The Class of P problems are (select the best answer):

Select one:

- ☐ a. Problems that can all be solved quickly in  $O(n)$  time.
- ☐ b. Are not included in the set of NP problems.
- ☐ c. The set of problems that can be solved in polynomial time.
- ☐ d. All of these responses.

Your answer is incorrect.

The correct answer is: The set of problems that can be solved in polynomial time.

### Question 3

Not answered

Marked out of 1.00

True or False: NP-complete problems are a subset that is the intersection between NP problems and NP-Hard problems.

Select one:

- ☐ True
- ☐ False

The correct answer is 'True'.

### Question 4

Not answered

Marked out of 1.00

True or False: The Cook-Levin Theorem states that Circuit satisfiability is NP-complete.

Select one:

- ☐ True
- ☐ False

The correct answer is 'True'.

### Question 5

Not answered

Marked out of 1.00

Which of the following is NOT an NP-Complete, Hard problem?

Select one:

- ☐ a. Traveling Salesman Problem
- ☐ b. Knapsack
- ☐ c. Integer Linear Programming
- ☐ d. Minimum Spanning Tree

Your answer is incorrect.

The correct answer is: Minimum Spanning Tree

## Question 6

Not answered

Marked out of 1.00

Which of the following is NOT a P (polynomial), easy problem?

Select one:

- ☐ a. Shortest Path
- ☐ b. Linear Programming
- ☐ c. Longest Path
- ☐ d. Euler Path

Your answer is incorrect.

The correct answer is: Longest Path

## Question 7

Not answered

Marked out of 1.00

True or False: All P problems are included in the set of problems that are considered to be NP (nondeterministic polynomial).

Select one:

- ☐ True
- ☐ False

The correct answer is 'True'.

## Question 8

Not answered

Marked out of 1.00

The Knapsack, Minimum Spanning Tree, Shortest Path, and Traveling Salesperson are all what kind of problem from an algorithms perspective?

Select one:

- ☐ a. Search
- ☐ b. Sort
- ☐ c. Matrix Multiplication
- ☐ d. Fast Fournier Transform

Your answer is incorrect.

The correct answer is: Search