

Score 0.00 of 1

1. \_\_\_\_\_ is the first step in solving the problem



Gather data and identify required results

**Feedback:**

Understanding and defining the problem is the first step. Subsequent steps to arrive at the best solution will follow later.



Analyse the problem



Understand and define the problem

Reach an appropriate solution using problem solving techniques

Score 0.00 of 1

2. Matrix multiplication can be achieved using which of the following algorithms ?



Dynamic programming

**Feedback:**

- All the above algorithms can be used to achieve the Matrix multiplication

Recursion



Brute Force



All of the Above

Score 0.00 of 1

3. When a problem is solved by combining optimal solutions to non-overlapping sub-problems, the strategy is called



Dynamic programming

**Feedback:**

In the divide and conquer technique the given problem is divided into smaller sub-problems that do not overlap



Greedy Algorithm



Divide and Conquer

Brute Force

Score 1.00 of 1

4. Which is True of a dynamic programming problem?

Substructure is optimal

Overlapping sub-Problems

Disjoint sub-problems

Overlapping sub-Problems and Optimal substructure



**Feedback:**

Dynamic programming technique is used to solve problems with overlapping sub problems and optimal substructure

Score 1.00 of 1

5. An Algorithm must always have a finite number of steps.



TRUE

**Feedback:**

Every algorithm must have a finite number of steps so that it can complete execution in a defined manner

FALSE



Score 1.00 of 1

6. Which of the following is not a type of instruction

Iterative

Score 1.00 of 1

6. Which of the following is not a type of instruction

	Iterative
	Heuristic
	<b>Feedback:</b> The three types of instructions are sequential, conditional and iterative.
	Conditional
	Sequential

Score 1.00 of 1

7. Match the following criteria that comes into play for Problem solving and Algorithms (a)
- Completeness (i) How long it takes to find a solution  
(b) Time complexity (ii) Memory needed to perform the search  
(c) Space complexity (iii) Whether the solution works for all given inputs



a-iii, b-i, c-ii

**Feedback:**

According to Definition: Completeness: An algorithm is said to be complete if it gives the correct solution for all the given inputs. Time Complexity: Is the time taken by an algorithm to find the solution. Space Complexity: Is the memory space occupied by an algorithm while searching an element.

a-i, b-iii, c-ii

a-ii, b-i, c-iii

None of the Above

Score 1.00 of 1

8. True or False : When solving a problem, the Process is an Optional step

TRUE



FALSE

**Feedback:**

The Process is a critical part of arriving at the solution



Score 0.00 of 1

9. \_\_\_\_\_ is the first step in solving the problem



Gather data and identify required results

**Feedback:**

Understanding and defining the problem is the first step. Subsequent steps to arrive at the best solution will follow later.



Analyse the problem

Understand and define the problem

Reach an appropriate solution using problem solving techniques

**Score 1.00 of 1**

10. When computing the bill amount for a dinner at a restaurant, what are the inputs to the process?

List of Items ordered

Quantity of Items ordered

Price of each Item

All of the Above



**Feedback:**

To compute the bill, we need the list of items, the quantity of items ordered as well as the price of each item

Score 0.00 of 1

11. Matrix multiplication can be achieved using which of the following algorithms ?



Dynamic programming

**Feedback:**

All the above algorithms can be used to achieve the Matrix multiplication



Recursion

Brute Force



All of the Above

# Quiz



Score 0.00 of 1

12. When a problem is solved by combining optimal solutions to non-overlapping sub-problems, the strategy is called



Dynamic programming

**Feedback:**

In the divide and conquer technique the given problem is divided into smaller sub-problems that do not overlap



Greedy Algorithm



Divide and Conquer

Brute Force

Score 1.00 of 1

13. Which is True of a dynamic programming problem?

Substructure is optimal

Overlapping sub-Problems

Disjoint sub-problems

Overlapping sub-Problems and Optimal substructure



**Feedback:**

Dynamic programming technique is used to solve problems with overlapping sub problems and optimal substructure

Score 1.00 of 1

14. An Algorithm must always have a finite number of steps.



TRUE

Feedback:

Every algorithm must have a finite number of steps so that it can complete execution in a defined manner

FALSE



Score 1.00 of 1

15. Which of the following is not a type of instruction

Iterative

Heuristic



**Feedback:**

The three types of instructions are sequential, conditional and iterative.

Conditional

Sequential

16. Match the following criteria that comes into play for Problem solving and Algorithms

- (a) Completeness (i) How long it takes to find a solution
- (b) Time complexity (ii) Memory needed to perform the search
- (c) Space complexity (iii) Whether the solution works for all given inputs

 a-iii, b-i, c-ii



**Feedback:**

According to Definition:

Completeness: An algorithm is said to be complete if it gives the correct solution for all the given inputs.

Time Complexity: Is the time taken by an algorithm to find the solution. Space Complexity: Is the memory space occupied by an algorithm while searching an element.

a-i, b-iii, c-ii

**Score 1.00 of 1**

17. True or False : When solving a problem, the Process is an Optional step

TRUE

FALSE



**Feedback:**

The Process is a critical part of arriving at the solution



**Score 1.00 of 1**

18. When computing the bill amount for a dinner at a restaurant, what are the inputs to the process ?

List of Items ordered

Quantity of Items ordered



Price of each Item

All of the Above



**Feedback:**

To compute the bill, we need the list of items, the quantity of items ordered as well as the price of each item

Score 0.00 of 1

19. In an iterative algorithm the steps branch into one or more of the provided options depending on a condition



TRUE

Feedback:

In an iterative algorithm the set of instructions are repeated in a loop.



FALSE



FALSE

Score 0.00 of 1

20. In an iterative algorithm the steps branch into one or more of the provided options depending on a condition



TRUE

**Feedback:**

In an iterative algorithm the set of instructions are repeated in a loop.



FALSE