•• 1. (MCQ)

Which of the following best describes *data*?
A. Instructions used by the CPU
B. Quantities or symbols that computers perform operations on
C. Logical expressions used in coding
D. Files saved in the operating system

•• 2. (True/False)

Data is always stored only inside the internal memory and cannot be transmitted as electrical signals.

•• 3. (MCQ)

In the example `C = A + B`, which parts represent the *data*?
A. The operator `+`
B. The variable `C`
C. The variables `A` and `B`
D. The entire equation

•• 4. (True/False)

Data becomes information when it is disorganized and has no clear meaning.

•• 5. (MCQ)

When does data become *information*?
A. When it’s arranged in a meaningful way
B. When it’s stored on a disk
C. When it’s displayed on the screen
D. When it’s converted to binary

•• 6. (MCQ)

A *data item* refers to:
A. A collection of datasets
B. A single unit of value
C. A numeric type variable
D. A memory block

•• 7. (True/False)

A data item that cannot be divided further is called a *group item*.

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•• 8. (MCQ)

An employee’s name divided into first, middle, and last parts is an example of:
A. Elementary item
B. Group item
C. Structured file
D. Linked element

•• 9. (True/False)

Data values can only be numeric, not text-based.

•• 10. (MCQ)

What is the main purpose of a *data structure*?
A. To store files in folders
B. To organize data for efficient use
C. To encrypt user information
D. To create new data formats

•• 11. (True/False)

Data structures can only be used to store text-based information.

•• 12. (MCQ)

Which of the following is an example of a data structure?
A. Function
B. Array
C. Compiler
D. Variable

•• 13. (MCQ)

An *Abstract Data Type (ADT)* refers to:
A. A primitive data element
B. A mathematical model for defining data and operations
C. A machine instruction
D. A logical operator

•• 14. (True/False)

Selecting the correct data structure for a problem is one of the key challenges in programming.

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•• 15. (MCQ)

A data structure that stores only one type of data is called:
A. Primitive
B. Non-Primitive
C. Logical
D. Dynamic

•• 16. (MCQ)

Which of the following belongs to *non-primitive* data structures?
A. Integer
B. Float
C. Stack
D. Char

•• 17. (True/False)

An array is considered a logical data structure, not a physical one.

•• 18. (MCQ)

Data structures that are implemented directly in memory are called:
A. Logical structures
B. Physical structures
C. Dynamic structures
D. Primitive structures

•• 19. (True/False)

Stacks and queues are examples of physical data structures.

•• 20. (MCQ)

The key difference between static and dynamic data structures is that:
A. Static structures have a fixed size
B. Dynamic structures cannot change in memory
C. Static structures can grow or shrink
D. Dynamic structures are stored on disk only

•• 21. (MCQ)

Which one is a *static* data structure?
A. Linked list
B. Array
C. Tree
D. Graph

•• 22. (True/False)

Dynamic data structures can change their size during execution.

•• 23. (MCQ)

In linear data structures:
A. Elements are connected sequentially
B. Each element can have multiple branches
C. Traversal is complex
D. Data is stored randomly

•• 24. (MCQ)

Which of the following is *not* a linear data structure?
A. Stack
B. Queue
C. Linked list
D. Tree

•• 25. (True/False)

Linear data structures are harder to implement than non-linear ones.

•• 26. (MCQ)

In non-linear data structures:
A. Elements are arranged in hierarchy levels
B. All elements can be accessed in one pass
C. Implementation is very simple
D. Only one level exists

•• 27. (True/False)

Non-linear structures like trees and graphs use memory more efficiently than linear ones.

•• 28. (MCQ)

Which of the following is *not* a data structure operation?
A. Traversal
B. Sorting
C. Searching
D. Debugging

•• 29. (MCQ)

What does the *Traversal* operation do?
A. Adds a new element
B. Accesses each element once
C. Deletes an element
D. Combines two lists

•• 30. (True/False)

The *Search* operation locates a specific element based on a key value.

•• 31. (MCQ)

What does the *Insertion* operation perform?
A. Adds a new record into the structure
B. Removes a record
C. Finds an element
D. Rearranges elements

•• 32. (MCQ)

The *Merge* operation:
A. Deletes duplicate data
B. Combines two sorted lists into one
C. Splits a single list into parts
D. Sorts data alphabetically

•• 33. (MCQ)

When choosing a data structure, which factor should be considered?
A. Type of operations performed
B. Color of data
C. File format
D. CPU brand

•• 34. (True/False)

A linked list is ideal for frequent insertions and deletions.

•• 35. (MCQ)

If you need to perform indexing operations frequently, which data structure is most suitable?
A. Stack
B. Array
C. Linked List
D. Graph

•• 36. (MCQ)

If your goal is frequent searching, you should use:
A. Binary Search Tree
B. Array
C. Stack
D. Linked list

•• 37. (True/False)

To store a large amount of data, an array is usually preferred due to its fixed structure.

•• 38. (MCQ)

If you want to use memory efficiently while handling variable-sized data, which structure is best?
A. Array
B. Linked list
C. Queue
D. Stack

1. B
2. False
3. C
4. False
5. A
6. B
7. False
8. B
9. False
10. B
11. False
12. B
13. B
14. True
15. A
16. C
17. False
18. B
19. False
20. A
21. B
22. True
23. A
24. D
25. False
26. A
27. True
28. D
29. B
30. True
31. A
32. B
33. A
34. True
35. B
36. A
37. True
38. B