

## Questions for Student NO 1 and Exam NO 1

### Question

Which of the following is a non-linear data structure?

- a) Stack
- b) Queue
- c) Linked list
- d) Tree

Which data structure is used in depth-first search of a graph?

- a) Queue
- b) Stack
- c) Linked list
- d) Binary search tree

Which of the following operations can be performed on a stack?

- a) push
- b) pop
- c) peek
- d) All of the above

Which of the following data structures allows for constant-time insertion, deletion, and search operations?

- a) Array
- b) Linked list
- c) Hash table
- d) Binary tree

Which of the following data structures is used for efficient searching, insertion, and deletion operations in a sorted list?

- a) Array
- b) Linked list
- c) Binary search tree
- d) Heap

Which of the following data structures is used to implement a graph?

- a) Array
- b) Linked list
- c) Adjacency matrix
- d) All of the above

**Student answer**

d

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b

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b

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a

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b

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a

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### Question

Which of the following data structures is used to implement a priority queue?

- a) Stack
- b) Queue
- c) Heap
- d) Linked list

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A queue follows the Last-In-First-Out (LIFO) principle.

A) True B) False?

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A hash table is a data structure that uses a hash function to map keys to values.

A) True B) False?

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Depth-first search is a graph traversal algorithm that visits all vertices of a graph in breadth-first order.

A) True B) False?

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**Student answer**

b

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d

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c

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c

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