15 Lecture - CS301

Important Mcqs

1.	What is	level-order	traversal of	a binary	tree?

- A. Visiting the root node first
- B. Visiting the nodes level by level
- C. Visiting the left child first
- D. Visiting the right child first

Answer: B

2. Which data structure can be used to implement level-order traversal?

- A. Stack
- B. Queue
- C. Linked list
- D. Binary search tree

Answer: B

3. What is the time complexity of level-order traversal?

- A. O(log n)
- B. O(n)
- C. O(n^2)
- D. O(2ⁿ)

Answer: B

4. In which order are the nodes visited in level-order traversal?

- A. Left to right, bottom to top
- B. Right to left, top to bottom
- C. Left to right, top to bottom
- D. Right to left, bottom to top

Answer: C

5. Which traversal technique can be used to print the nodes of a binary tree in level-order?

- A. In-order traversal
- B. Post-order traversal
- C. Pre-order traversal
- D. Level-order traversal

Answer: D

6. What is the space complexity of level-order traversal?

- A. O(1)
- B. O(n)
- C. O(n^2)
- D. O(2ⁿ)

Answer: B

7. Level-order traversal can be used to solve which type of problem?

A. Finding the maximum depth of a binary tree

- B. Finding the minimum depth of a binary tree
- C. Finding the sum of all nodes in a binary tree
- D. Finding the lowest common ancestor of two nodes in a binary tree

Answer: A

8. Which of the following is an advantage of level-order traversal?

- A. It is faster than other traversal techniques
- B. It uses less memory than other traversal techniques
- C. It can be used to find the shortest path between two nodes
- D. It can be used to sort the nodes in a binary tree

Answer: C

9. What is the main disadvantage of level-order traversal?

- A. It is difficult to implement
- B. It requires more memory than other traversal techniques
- C. It is slower than other traversal techniques
- D. It does not work for binary trees with an odd number of nodes

Answer: B

10. What is the first node visited in level-order traversal?

- A. The root node
- B. The left child of the root node
- C. The right child of the root node
- D. It depends on the binary tree

Answer: A