12 Lecture - CS301

Important Mcqs

- a) 0
- b) 1
- c) 2
- d) Undefined

Answer: a) 0

- 2. Which traversal method visits the nodes in the order left subtree, root, right subtree?
 - a) Pre-order traversal
 - b) In-order traversal
 - c) Post-order traversal
 - d) Level-order traversal

Answer: b) In-order traversal

- 3. Which traversal method visits the nodes in the order root, left subtree, right subtree?
 - a) Pre-order traversal
 - b) In-order traversal
 - c) Post-order traversal
 - d) Level-order traversal

Answer: a) Pre-order traversal

- 4. What is the time complexity of searching for a node in a Binary Tree?
 - a) O(1)
 - b) O(log n)
 - c) O(n)
 - d) It depends on the implementation

Answer: c) O(n)

- 5. What is the maximum number of nodes at level k in a Binary Tree?
 - a) 2^k
 - b) k^2
 - c) k+1
 - d) None of the above

Answer: a) 2^k

- 6. Which of the following is a way to delete a node in a Binary Tree?
 - a) Deleting the node and its children
 - b) Replacing the node with its left child

- c) Replacing the node with its right child
- d) All of the above

Answer: d) All of the above

- 7. What is the time complexity of finding the height of a Binary Tree?
 - a) O(1)
 - b) O(log n)
 - c) O(n)
 - d) It depends on the implementation

Answer: c) O(n)

- 8. What is the maximum number of nodes in a Binary Tree with height h?
 - a) 2^h
 - b) h^2
 - c) h+1
 - d) None of the above

Answer: a) 2^h - 1

- 9. Which of the following is a way to insert a node in a Binary Tree?
 - a) As the left child of a leaf node
 - b) As the right child of a leaf node
 - c) As the left child of a non-leaf node
 - d) All of the above

Answer: d) All of the above

- 10. Which of the following is an advantage of using a Binary Tree over a linked list?
 - a) Binary Tree can be searched faster than a linked list
 - b) Binary Tree can be sorted faster than a linked list
 - c) Binary Tree can store data in a hierarchical structure
 - d) All of the above

Answer: d) All of the above