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(2^n)
   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(2^n)
   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