28 Lecture - CS301

Important Mcqs

1. **In threaded binary tree, a node that has no left child and whose left pointer points to the _____.**
   a) in-order predecessor
   b) in-order successor
   c) null
   d) none of the mentioned
   Answer: a

2. **What is a threaded binary tree?**
   a) A binary tree in which each node can have any number of children
   b) A binary tree in which all the left pointers point to inorder predecessors and right pointers point to inorder successors.
   c) A binary tree in which each node can have at most 2 children
   d) A binary tree in which all the leaf nodes have a level of 0.
   Answer: b

3. **What is the time complexity for finding the inorder successor in a threaded binary tree?**
   a) O(1)
   b) O(n)
   c) O(log n)
   d) O(n^2)
   Answer: a

4. **In which traversal, the nodes are visited in increasing order of their values?**
   a) Inorder Traversal
   b) Preorder Traversal
   c) Postorder Traversal
   d) Level order Traversal
   Answer: a

5. **In threaded binary trees, the right pointer of a node points to its _____.**
   a) Predecessor
   b) Successor
   c) Ancestor
   d) Descendant
   Answer: b

6. **Which of the following is not true for threaded binary trees?**
   a) In-order traversal can be performed in O(n) time complexity
   b) They save storage space
   c) They are more efficient than normal binary trees for finding in-order predecessors and successors.
   d) They allow for easy deletion of a node
   Answer: d

7. **Which of the following is a disadvantage of threaded binary trees?**
   a) They take up more space than normal binary trees
   b) They are less efficient than normal binary trees for finding in-order predecessors and successors.
   c) They make deletion of a node difficult.
   d) They require extra memory space to store the thread pointers.
   Answer: d

8. **What is the main advantage of using threaded binary trees?**
   a) They are easier to implement than normal binary trees
   b) They allow for efficient finding of in-order predecessors and successors
   c) They have a shorter height than normal binary trees
   d) They can store more data than normal binary trees
   Answer: b

9. **Which of the following is not a type of threaded binary tree?**
   a) Single threaded binary tree
   b) Double threaded binary tree
   c) Circular threaded binary tree
   d) Quadruple threaded binary tree
   Answer: d

10. **Which of the following is not true for threaded binary trees?**
    a) They are used for storing large amounts of data
    b) They allow for efficient traversal of the tree
    c) They can be used for faster searching of data
    d) They have a shorter height than normal binary trees.
    Answer: a