Sample question paper of DATA STRUCTURE

Q1. What would be the solution to the given prefix notation?

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A. 2

B. 5

C. 10

D. 7

Q2. The time complexity of converting a prefix notation to infix notation is ___?

A. O(n) where n is the length of the equation

B. O(n) where n is number of operands

C. O(1)

D. O(log_n) where n is length of the equation

Q3. What is an AVL Tree?

A. a tree which is unbalanced and is a height balanced tree

B. a tree with three children

C. a tree which is balanced and is a height balanced tree

D. a tree with atmost 3 children

Q4. The number of edges from the root to the node is called _____ of the tree.

A. Height

B. Depth

C. Length

D. Width

Q5. What is a full binary tree?

A. Each node has exactly two children

B. All the leaves are at the same level

C. Each node has exactly one or two children

D. Each node has exactly zero or two children

Q6. Dijkstra's Algorithm is used to solve _____ problems.

A. All pair shortest path

B. Single source shortest path

C. Network flow

D. Sorting

Q7. The hashing technique which allocate fixed number of buckets is classified as

A. Dynamic hashing

B. Static hashing

C. External hashing

D. Internal hashing

Q8. A .... is a data structure that organizes data similar to a line in the supermarket, where the first one in line is the first one out.
A. Queue linked list
B. Stacks linked list
C. Both of them
D. Neither of them

Q9. Depth First Search is equivalent to which of the traversal in the Binary Trees?
A. Pre-orderTraversal
B. Post-orderTraversal
C. Level-orderTraversal
D. In-orderTraversal

Q10. A binary search tree contains the numbers 1, 2, 3, 4, 5, 6, 7, 8. When the tree is traversed in pre-order and the values in each node printed out, the sequence of values obtained is 5, 3, 1, 2, 4, 6, 8, 7. If the tree is traversed in post-order, the sequence obtained would be:
A. 8, 7, 6, 5, 4, 3, 2, 1
B. 1, 2, 3, 4, 8, 7, 6, 5
C. 2, 1, 4, 3, 6, 7, 8, 5
D. 2, 1, 4, 3, 7, 8, 6, 5