

PHY-101 Quiz Online Test

Sr	Questions	Answers Choice
1	In case of deleting a node from AVL tree, rotation could be prolong to the root node.	A. yes B. no C. not sure
2	Suppose we are sorting an array of eight integers using quick sort, and we have just finished the first partitioning with the array looking like this: 2 5 1 7 9 12 11 10 Which statement is correct?	A. The pivot could be either the 7 or the 9 B. The pivot could be the 7, but it is not the 9. C. The pivot is not the 7, but it could be the 9. D. Neither the 7 nor the 9 is the pivot.
3	Which one of the following is TRUE about recursion ?	A. Recursion extensively use stack memory B. Threaded Binary Trees use the concept of recursion. C. Recursive function calls consume a lot of memory. D. Iteration is more efficient than iteration.
4	The definition of Transitivity property is	A. For all element x member of S, $x R x$ B. For all elements x and y, $x R y$ if and only if $y R x$ C. For all elements x, y and z, if $x R y$ and $y R z$ then $x R z$ D. For all elements w, x, y and z, if $x R y$ and $w R z$ then $x R z$
5	Suppose you implement a heap (with the largest element on top) in an array. Consider the different arrays below, determine the one that cannot possibly be a heap:	A. 7 6 5 4 3 2 1 B. 7 3 6 2 1 4 5 C. 7 6 4 3 5 2 1 D. 7 3 6 4 2 5 1
6	If there are 23 external nodes in a binary tree then what will be the no. of internal nodes in this binary tree?	A. 23 B. 24 C. 21 D. 22 (n-1)
7	Consider the following paragraph with blanks. A is a linear list where and take place at the same end . This end is called the What would be the correct filling the above blank positions?	A. (i) queue (ii) insertion (iii) removals (iv) top B. (i) stack (ii) insertion (iii) removals (iv) bottom C. (i) stack (ii) insertion (iii) removals (iv) top D. (i) tree (ii) insertion (iii) removals (iv) top
8	Suppose we are sorting an array of eight integers using quick sort ,and we have just finished the first partitioning with the array looking like this 2 5 1 7 9 12 11 10 Which statement is correct?	A. The pivot could be either the 7 or the 9. B. The pivot could be the 7, but it is not the 9. C. The pivot is not the 7, but it could be the 9 D. Neither the 7 nor the 9 is the pivot.
9	The _____ method of list will position the currentNode and lastCurrentNode at the start of the list.	A. Remove B. Next C. Start D. Back
10	In an array list the current element is	A. the first element B. the middle element C. the last element D. The element where the current pointer points to
11	Which of the following statement statement is true about dummy node of threaded binary type?	A. This dummy node never has a value B. This dummy node has always some dummy values C. This dummy node has either no

		value or some dummy value D. This dummy node has always some integer value
12	By using _____ we avoid the recursive method of traversing a Tree, which makes use of stacks and consumes a lot of memory and time.	A. Binary tree only B. Threaded binary tree C. Heap data structure D. Huffman encoding
13	Which of the following statement is correct property of binary trees?	A. A binary tree with internal nodes has $N+1$ internal links B. A binary tree with N external nodes has $2N$ internal nodes. C. A binary tree with N internal nodes has $N+1$ external node. D. None of above statement is a property of the binary tree.
14	A binary relation R over S is called an equivalence relation if it has following property(s)	A. Reflexivity B. Symmetry C. Transitivity D. All of the given options
15	Double link list is always has one NULL pointer	A. True B. False C. Not Sure
16	Which of the following statement is true about dummy node of threaded binary tree	A. The left pointer of dummy node points to the itself while the right pointer points to the root of tree. B. The left pointer of dummy node points to the root node of the tree while the right pointer points itself i.e. to dummy node C. The left pointer of dummy node points to the root node of the tree while the right pointer is always NULL D. The right pointer of dummy node points to the itself while the left pointer is always NULL
17	Which traversal gives a decreasing order of elements in a heap where the max element is stored at the top?	A. post-order B. level -order C. in order D. none of the above
18	Which of the following is a non linear data structure?	A. Linked List B. Stack C. Tree D. Queue
19	What requirement is placed on an array, so that binary search may be used to locate an entry?	A. The array elements must form a heap. B. The array must have at least 2 entries C. The array must be sorted. D. The array's size must be a power of two.
20	If a max heap is implemented using a partially filled array called data, and the array contains n elements ($n > 0$), where is the entry with the greatest value?	A. Data[0] B. data[1] C. data[n-1] D. data[n]