CS-301 Final Term Exams Preparation Virtual University

Sr	Questions	Answers Choice
1	If there are N elements in an array then the number of maximum steps needed to find an element using Binary Search is _____	A. N B. N^2 C. $N\log_2 n$ D. $\log_2 N$
2	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
3	If a complete binary tree has n number of nodes then its height will be	A. $\log_2(n+1)-1$ B. 2^n C. 2^n-1
4	I have implemented the queue with a linked list, keeping track of a front pointer and a rear pointer. Which of these pointers will change during an insertion into an EMPTY queue?	A. Neither changes B. only front pointer charges C. Only rear pointer changes. D. Both change. Since it is an empty queue the front and rear are initialize to -1, so on insertion both the pointers will change and point to 0.
5	A queen is a data structure where elements are,	A. inserted at the front and removed from the back B. inserted and removed from the top. C. inserted at the back and removed from the front. D. inserted and removed from both ends.
6	Double link list is always has one NULL pointer	A. True B. False C. Not Sure
7	Which of the following statement is NOT correct?	A. In linked list the elements are necessarily to be contiguous B. In the linked list the elements may locate at far positions in the memory C. in the linked list each elements also has he address of the elements next to it D. In an array the elements are contiguous
8	In an array we can store data elements of different types	A. True B. False C. Not sure
9	Let heap stored in an array as H = [50, 40, 37, 32, 28, 22, 36, 13]. In other words, the root of the heap contains the maximum element. What is the result of deleting 40 from this heap	A. [50,32, 37,13, 28, 22, 36] according to max heap property B. [37, 28, 32, 22, 36, 13] C. [37, 36, 32, 28, 13, 22] D. [37, 32, 36, 13, 28, 22]
10	Suppose A is an array containing numbers in increasing order, but some numbers occur more than once when using a binary search for a value, the binary search always finds _____	A. the first occurance of value B. the second occurrence of a value C. may find first or second occurrence of a value. D. None of the given options