OBJECTIVE TYPE QUESTIONS

Subject : Data Structures And File Handling (CA204) **Group:12MCA**

Q1. A binary tree of depth "d" is an almost complete binary tree if

(A) Each leaf in the tree is either at level "d" or at level "d–1"

(B) For any node "n" in the tree with a right descendent at level "d" all the left descendents of "n" that are leaves, are also at level "d"

(C) Both (A) & (B)

(D) None of the above

Q2. A linear collection of data elements where the linear node is given by means of pointer is called

(A) linked list (B) node list

(C) primitive list (D) None of these

Q3. Representation of data structure in memory is known as:

(A) recursive (B) abstract data type

(C) storage structure (D) file structure

Q4. If the address of A[1][1] and A[2][1] are 1000 and 1010 respectively and each element occupies 2 bytes then the array has been stored in _____ order.

(A) row major (B) column major

(C) matix major (D) none of these

Q5. An adjacency matrix representation of a graph cannot contain information of :

(A) nodes (B) edges

(C) direction of edges (D) parallel edges

Q6. Quick sort is also known as

(A) merge sort (B) heap sort

(C) bubble sort (D) none of these

Q7. An ADT is defined to be a mathematical model of a user-defined type along with the collection of all _____ operations on that model.

(A) Cardinality (B) Assignment

(C) Primitive (D) Structured

Q8. An algorithm is made up of two independent time complexities f (n) and g (n). Then the complexities of the algorithm is in the order of

(A) f(n) x g(n) (B) Max (f(n),g(n))

(C) Min (f(n),g(n)) (D) f(n) + g(n)

Q9. The goal of hashing is to produce a search that takes

(A) O(1) time (B) O(n2) time

(C) O(log n) time (D) O(n log n) time

Q10. The best average behaviour is shown by

(A) Quick Sort (B) Merge Sort

(C) Insertion Sort (D) Heap Sort

Q11. What is the postfix form of the following prefix *+ab–cd

(A) ab+cd–* (B) abc+*–

(C) ab+*cd– (D) ab+*cd–

Q.12 A queue is a,

(A) FIFO (First In First Out) list. (B) LIFO (Last In First Out) list.

(C) Ordered array. (D) Linear tree.

Q13. Which data structure is needed to convert infix notation to postfix notation?

(A) Branch (B) Queue

(C) Tree (D) Stack

Q14. Which of the following operations is performed more efficiently by doubly linked list than by singly linked list?

(A) Deleting a node whose location in given

(B) Searching of an unsorted list for a given item

(C) Inverting a node after the node with given location

(D) Traversing a list to process each node

Q15. The extra key inserted at the end of the array is called a,

(A) End key. (B) Stop key.

(C) Sentinel. (D) Transposition.

Q16. Consider that n elements are to be sorted. What is the worst case time complexity of Bubble sort?

(A) O(1) (B) O(log2n)

(C) O(n) (D) O(n2)

Q17. A characteristic of the data that binary search uses but the linear search ignores is the_____.

(A) Order of the elements of the list.

(B) Length of the list.

(C) Maximum value in list.

(D) Type of elements of the list.

Q18. In Breadth First Search of Graph, which of the following data structure is used?

(A) Stack. (B) Queue.

(C) Linked List. (D) None of the above.

Q19. The largest element of an array index is called its

(A) lower bound. (B) range.

(C) upper bound. (D) All of these.

Q20.What is the result of the following operation

Top (Push (S, X))

(A) X (B) null

(C) S (D) None of these.

ANSWER KEY

1:C

2:A

3:B

4:A

5:D

6:D

7:C

8:B

9:A

10:A

11:A

12. (A)

13. (D)

14. (A)

15. (C)

16. (D)

17. (A)

18. (B)

19. (C)

20. (A)