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State	Finished
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Grade	**28.00** out of 30.00 (**93.33**%)

Question 1

Correct

Mark 1.00 out of 1.00

Which of the following algorithms are used to find the shortest path from a source node to all other nodes in a weighted **graph**?

- A. Djikstra's Algorithm ✔
- B. Kruskal Algorithm
- C. Prims Algorithm
- D. Adjestin Matrix and List

Your answer is correct.

The correct answer is: Djikstra's Algorithm

Question 2

Correct

Mark 1.00 out of 1.00

What is a hash table?

- A. A structure used for storage
- B. A structure used to implement **stack** and **queue**
- C. A structure that maps values to keys
- D. A structure that maps keys to values ✔

Your answer is correct.

The correct answer is: A structure that maps keys to values

Question 3

Incorrect

Mark 0.00 out of 1.00

Which of the following is the advantage of the array data structure?

- A. Elements of mixed data types can be stored. ✖
- B. Elements of an array cannot be sorted
- C. Index of the first element starts from 1.
- D. Easier to access the elements in an array

Your answer is incorrect.

The correct answer is: Easier to access the elements in an array

Question 4

Correct

Mark 1.00 out of 1.00

What is direct addressing?

- A. Fewer array positions than keys
- B. Distinct array position for every possible key ✔
- C. Same array position for all keys
- D. Fewer keys than array positions

Your answer is correct.

The correct answer is: Distinct array position for every possible key

Question 5

Correct

Mark 1.00 out of 1.00

Which of the following is the disadvantage of the array?

- A. **Stack** and **Queue** data structures can be implemented through an array.
- B. Index of the first element in an array can be negative
- C. Elements can be accessed sequentially.
- D. Wastage of memory if the elements inserted in an array are lesser than the allocated size ✔

Your answer is correct.

The correct answer is: Wastage of memory if the elements inserted in an array are lesser than the allocated size

Question 6

Correct

Mark 1.00 out of 1.00

Which one of the following is the process of inserting an element in the **stack**?

- A. add
- B. enqueue
- C. insert
- D. push ✔

Your answer is correct.

The correct answer is: push

Question 7

Correct

Mark 1.00 out of 1.00

When the user tries to delete the element from the empty **stack** then the condition is said to be a ____

- A. NULL
- B. empty
- C. delete
- D. underflow ✔

Your answer is correct.

The correct answer is: underflow

Question 8

Correct

Mark 1.00 out of 1.00

If the size of the **stack** is 10 and we try to add the 11th element in the **stack** then the condition is known as___

- A. Grabage collection
- B. segementation fault
- C. underflow
- D. overflow ✔

Your answer is correct.

The correct answer is: overflow

Question 9

Correct

Mark 1.00 out of 1.00

Which one of the following is not the application of the **stack** data structure

- A. Recursion
- B. Asynchronous data transfer ✔
- C. String reversal
- D. Backtracking

Your answer is correct.

The correct answer is: Asynchronous data transfer

Question 10

Correct

Mark 1.00 out of 1.00

Which data structure is mainly used for implementing the recursive algorithm?

- A. **Tree**
- B. **Linked List**
- C. **Queue**
- D. **Stack** ✔

Your answer is correct.

The correct answer is: **Stack**

Question 11

Correct

Mark 1.00 out of 1.00

How can we describe an array in the best possible way?

- A. Arrays are immutable.
- B. The Array is not a data structure
- C. The Array shows a hierarchical structure.
- D. Container that stores the elements of similar types ✔

Your answer is correct.

The correct answer is: Container that stores the elements of similar types

Question 12

Correct

Mark 1.00 out of 1.00

Which one of the following node is considered the top of the **stack** if the **stack** is implemented using the **linked list**?

- A. First and Last node
- B. First node ✔
- C. last node
- D. In between node

Your answer is correct.

The correct answer is: First node

Question 13

Correct

Mark 1.00 out of 1.00

What is another name for the circular **queue** among the following options?

- A. head list
- B. square buffer list
- C. head-tail list
- D. Ring buffer ✔

Your answer is correct.

The correct answer is: Ring buffer

Question 14

Correct

Mark 1.00 out of 1.00

A list of elements in which enqueue operation takes place from one end, and dequeue operation takes place from one end is__

- A. **Queue** ✔
- B. Array
- C. **Tree**
- D. **Stack**

Your answer is correct.

The correct answer is: **Queue**

Question 15

Correct

Mark 1.00 out of 1.00

Which one of the following is not the type of the **Queue**?

- A. Double ended **Queue**
- B. Single ended **Queue** ✔
- C. Circular **Queue**
- D. Linear **Queue**

Your answer is correct.

The correct answer is: Single ended **Queue**

Question 16

Correct

Mark 1.00 out of 1.00

Which one of the following is the overflow condition if linear **queue** is implemented using an array with a size MAX_SIZE?

- A. rear=MAX_SIZE -1 ✔
- B. rear = MAX_SIZE
- C. rear = front+1
- D. rear = front

Your answer is correct.

The correct answer is: rear=MAX_SIZE -1

Question 17

Correct

Mark 1.00 out of 1.00

Which one of the following is the overflow condition if a circular **queue** is implemented using array having size MAX?

- A. front=(rear+1) mod max ✔
- B. front= MAX-1
- C. rear= MAX-1
- D. rear=(rear+1) mod max

Your answer is correct.

The correct answer is: front=(rear+1) mod max

Question 18

Correct

Mark 1.00 out of 1.00

The time complexity of enqueue operation in **Queue** is __

- A. O👎
- B. O(n logN)
- C. O(1)✔
- D. O(lon n)

Your answer is correct.

The correct answer is: O(1)

Question 19

Correct

Mark 1.00 out of 1.00

Which of the following that determines the need for the Circular **Queue**?

- A. Follows the LIFO principle
- B. Follows the FIFO principle
- C. Avoid wastage of memory✔
- D. Access the **Queue** using priority

Your answer is correct.

The correct answer is: Avoid wastage of memory

Question 20

Incorrect

Mark 0.00 out of 1.00

Which one of the following is the correct way to increment the rear end in a circular **queue**?

- A. rear =rear+1
- B. rear = front
- C. (rear % max) + 1
- D. (rear+1) % max✖

Your answer is incorrect.

The correct answer is: (rear % max) + 1

Question 21

Correct

Mark 1.00 out of 1.00

In the **linked list** implementation of **queue**, where will the new element be inserted?

- A. At the head or tail position of the **linked list**
- B. At the head position of the **linked list**
- C. At the tail position of the **linked list** ✔
- D. At the middle position of the **linked list**

Your answer is correct.

The correct answer is: At the tail position of the **linked list**

Question 22

Correct

Mark 1.00 out of 1.00

How can we initialize an array in C language?

- A. int arr[2]={10, 20}; ✔
- B. int arr(2) = {10, 20};
- C. int arr(2) = (10, 20);
- D. int arr[2]=(10, 20);

Your answer is correct.

The correct answer is: int arr[2]={10, 20};

Question 23

Correct

Mark 1.00 out of 1.00

Which one of the following is not the application of the **Queue** data structure?

- A. Data is transferred asynchronously
- B. Load balancing
- C. Balancing of symbols ✔
- D. Resource shared between various systems

Your answer is correct.

The correct answer is: Balancing of symbols

Question 24

Correct

Mark 1.00 out of 1.00

Which data structure is the best for implementing a priority **queue**?

- A. **Stack**
- B. Data Sections
- C. Code Section
- D. Heap ✔

Your answer is correct.

The correct answer is: Heap

Question 25

Correct

Mark 1.00 out of 1.00

Which of the following sorting algorithms can be used to sort a random **linked list** with minimum time complexity?

- A. Quick Sort
- B. Merge Sort ✔
- C. Insertion Sort
- D. Heap Sort

Your answer is correct.

The correct answer is: Merge Sort

Question 26

Correct

Mark 1.00 out of 1.00

Which one of the following techniques is not used in the Binary **tree**?

- A. Postorder traversal
- B. Preorder traversal
- C. Inorder traversal
- D. Randomized traversal ✔

Your answer is correct.

The correct answer is: Randomized traversal

Question 27

Correct

Mark 1.00 out of 1.00

How can we define a AVL **tree**?

- A. A **tree** which is a binary search **tree** but unbalanced **tree**.
- B. A **tree** with utmost two children
- C. A **tree** with utmost three children
- D. A **tree** which is binary search **tree** and height balanced **tree**. ✔

Your answer is correct.

The correct answer is: A **tree** which is binary search **tree** and height balanced **tree**.

Question 28

Correct

Mark 1.00 out of 1.00

Which of the following is a Divide and Conquer algorithm?

- A. Insert sort
- B. Quick sort
- C. Merge sort ✔
- D. Bubble sort

Your answer is correct.

The correct answer is: Merge sort

Question 29

Correct

Mark 1.00 out of 1.00

Which of the following represents the Postorder Traversal of a Binary **Tree**?

- A. Root -> Left ->Right
- B. Left -> Root -> Right
- C. Root -> Right -> Left
- D. Left ->Right -> Root ✔

Your answer is correct.

The correct answer is: Left ->Right -> Root

Question 30

Correct

Mark 1.00 out of 1.00

In a **graph** of n nodes and n edges, how many cycles will be present?

A. Depends on nodes
B. Exactly N
C. Exactly 1 ✔
D. Depends on the **graph**

Your answer is correct.

The correct answer is: Exactly 1