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**Time taken** 10 mins

**Grade** 10.00 out of 18.00 (56%)

Question **1**

Incorrect

Mark 0.00 out of 1.00

Select all those that are not non linear data structure from the given options.

☐ a. Tree

☒ b. Linked List

✗

☐ c. Graph

☒ d. Array

✗

Your answer is incorrect.

The correct answers are:

Graph,

Tree

Question **2**

Correct

Mark 1.00 out of 1.00

Search complexity of Binary search is \_\_\_\_\_.

☐ a.  $O(n^1)$

☐ b. None of these

☒ c.  $O(\log n)$

☐ d.  $O(n \log n)$

☐ e.  $O(1)$

✓

Your answer is correct.

The correct answer is:

$O(\log n)$



Question **3**

Incorrect

Mark 0.00 out of 1.00

Binary search algorithm cannot be applied to \_\_\_\_\_.

- ☐ a. Pointer array
- ☒ b. sorted linked list
- ☐ c. None of these
- ☐ d. sorted binary trees
- ☐ e. sorted linear array

✖

Your answer is incorrect.

The correct answer is: Pointer array

Question **4**

Incorrect

Mark 0.00 out of 1.00

How much memory does a boolean variable occupy?

- ☐ a. 2 Bits
- ☐ b. None of these
- ☐ c. 2 Byte
- ☒ d. 1 Byte
- ☐ e. 1 Bit

✖

Your answer is incorrect.

The correct answer is:

1 Bit



Question **5**

Correct

Mark 1.00 out of 1.00

Consider the student records of your class sorted in student id order. How much time it will take to search a student name with student id x.

- ☒ a.  $O(\log n)$
- ☐ b.  $O(\log \log n)$
- ☐ c.  $O(n)$
- ☐ d.  $O(1)$



Your answer is correct.

The correct answer is:

$O(\log n)$

Question **6**

Correct

Mark 1.00 out of 1.00

Time Complexity of obtaining n rectangles by folding paper once in each operation is?

- ☒ a.  $O(\log n)$
- ☐ b. None of these
- ☐ c.  $O(n^1)$
- ☐ d.  $O(1)$
- ☐ e.  $O(n \log n)$



Your answer is correct.

The correct answer is:

$O(\log n)$



Question **7**

Incorrect

Mark 0.00 out of 1.00

Which of the following statements is/are not correct about Garbage Collection in JAVA?

- ☒ a. It makes memory management efficient. ✗
- ☒ b. It is an automatic process. ✗
- ☒ c. Process of reclaiming the runtime used memory by destroying the unused objects. ✓
- ☐ d. Removes referenced objects from heap memory.

Your answer is incorrect.

The correct answers are:

Removes referenced objects from heap memory.,

Process of reclaiming the runtime used memory by destroying the unused objects.

Question **8**

Incorrect

Mark 0.00 out of 1.00

Which of the following is/are not correct?

- ☐ a. The operand (s) specifies the type of operation to be performed on the opcode.
- ☐ b. Each computer instruction consists of sixteen bits divided into four 4-bit fields.
- ☒ c. 20 bits are needed to address any single word in memory if the computer has 8 MB of memory and each word in this computer is 8 bytes. ✗
- ☐ d. The total number of uniquely identifiable locations in memory is called the address space.

Your answer is incorrect.

The correct answer is:

The operand (s) specifies the type of operation to be performed on the opcode.



Question **9**

Correct

Mark 1.00 out of 1.00

Which of the following kind of function represent running time of an algorithm?

- ☒ a. Increasing function
- ☐ b. Decreasing function
- ☐ c. Both (a) and (b)
- ☐ d. None (a) and (b)



Your answer is correct.

The correct answer is:  
Increasing function

Question **10**

Correct

Mark 1.00 out of 1.00

Which of the following are linear data structures?

- ☐ a. Stack
- ☒ b. All of these
- ☐ c. Array
- ☐ d. Linked List
- ☐ e. Queue



Your answer is correct.

The correct answer is:  
All of these



Question **11**

Correct

Mark 1.00 out of 1.00

What does Big Oh notation represents?

- ☒ a. Maximum time required to run a program
- ☐ b. Minimum time required to run a program.
- ☐ c. Average time required to run a program
- ☐ d. None of the above.
- ☐ e. All of these



Your answer is correct.

The correct answer is:

Maximum time required to run a program

Question **12**

Correct

Mark 1.00 out of 1.00

In Java the data type *char* is commonly

- ☐ a. 8-bit Unicode character
- ☒ b. 16-bit Unicode character
- ☐ c. 32-bit Unicode character
- ☐ d. 64-bit Unicode character
- ☐ e. None of these



Your answer is correct.

The correct answer is:

16-bit Unicode character



## Question 13

Incorrect

Mark 0.00 out of 1.00

Given an array  $s = \{\text{"Gujrat", "Odisha", "Kashmir", "Tamilnadu"}\}$ , what shall be output of the code fragment `System.out.println("s = " + Arrays.toString(s));`

- ☐ a.  $s = [\text{GOKT}]$
- ☒ b.  $s = [\text{GujratOdishaKashmirTamilnadu}]$
- ☐ c.  $s = [\text{G, O, K, T}]$
- ☐ d.  $s = [\text{Gujrat, Odisha, Kashmir, Tamilnadu}]$

✖

Your answer is incorrect.

The correct answer is:

$s = [\text{Gujrat, Odisha, Kashmir, Tamilnadu}]$

## Question 14

Incorrect

Mark 0.00 out of 1.00

What is the asymptotic relation between functions  $f(n) = \sqrt{n}$  and  $g(n) = (\log n)^7$ ?

- ☐ a.  $f(n) = \Omega(g(n))$
- ☒ b.  $f(n) = O(g(n))$
- ☐ c.  $f(n) = \Theta(g(n))$
- ☐ d. None of these

✖

Your answer is incorrect.

The correct answer is:

$f(n) = \Omega(g(n))$

Question **15**

Correct

Mark 1.00 out of 1.00

Which of the following asymptotic relation is an equivalence relation?

- ☒ a.  $\Theta$
- ☐ b.  $O$
- ☐ c.  $\Omega$
- ☐ d.  $\omega$
- ☐ e. All of these



Your answer is correct.

The correct answer is:

$\Theta$

Question **16**

Incorrect

Mark 0.00 out of 1.00

If the complexity of an algorithm is defined as  $O(n^2)$ , then out of the following notations, which can be used?

- ☒ a.  $O(\log n)$
- ☐ b.  $O(n^3)$
- ☒ c.  $O(n^1)$
- ☐ d.  $O(n^4)$



Your answer is incorrect.

The correct answers are:  $O(n^3)$ ,  
 $O(n^4)$





Question **17**

Correct

Mark 1.00 out of 1.00

Primitive data types are passed by which of the following in Java.

- ☐ a. Pass by reference
- ☐ b. Both call by value and reference
- ☐ c. The variable's pointer is passed
- ☒ d. Pass by Value



Your answer is correct.

The correct answer is:

Pass by Value

Question **18**

Correct

Mark 1.00 out of 1.00

String object in java is immutable?

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

[◀ Array \(New\)](#)

Jump to...

[LinkedList \(New\) ▶](#)

