

Started on	Friday, 6 September 2019, 6:52 AM
State	Finished
Completed on	Friday, 6 September 2019, 6:53 AM
Time taken	33 secs
Grade	0.00 out of 25.00 (0%)

Question **1**  
Not answered  
Marked out of 1.00

16. What will the output of the following pseudocode statements be? (Note: Assume that when two data types are processed through an operator. The answer maintains the same data type as that of input. Also, all data types have enough range to accommodate any number. If two different data types are operated upon, the result assumes the data type that is more expressive.) Integer a = 456, b, c, d = 10 b = a/b c = a - b Print c

Select one:

- ☐ a. 411
- ☐ b. 410
- ☐ c. 410.4
- ☐ d. 411.4

The correct answer is: 411

Question **2**  
Not answered  
Marked out of 1.00

175. A sorting algorithm traverses through a list, comparing adjacent elements and switching them under certain conditions. What is this sorting algorithm called?

Select one:

- ☐ a. Heap sort
- ☐ b. Bubble sort
- ☐ c. Quick sort
- ☐ d. Insertion sort

The correct answer is: Bubble sort

Question **3**

Not answered

Marked out of  
1.00

162. Refer to the pseudocode given in the 'Passage'. The code is similar to that in C++ and is self-explanatory. An accessible member Function and a data member for an object are accessed by the statements objectname. Functionname and objectname. datamembername, respectively. Which statement should be deleted from the code to rectify the error in it?

```
class brush
{
private:
integer size, c
rcode
function getdata( ) { .... } // Statement 1
public:
integer name // Statement 2
function putdata( ) { .... }
}
function main
{
brush b1, b2
print b1.name //Statement 3
b2.getdata( ) //Statement 4
}
```

Select one:

- ☐ a. Statement 1
- ☐ b. Statement 3
- ☐ c. Statement 4
- ☐ d. Statement 2

The correct answer is: Statement 4

Question **4**

Not answered

Marked out of  
1.00

163. What will happen if some indentations are made in some statements of a code written in C++?

Select one:

- ☐ a. Lower memory requirement for the code
- ☐ b. Better readability of the code
- ☐ c. Faster execution of the code
- ☐ d. Correction of errors in the code

The correct answer is: Better readability of the code

Question **5**

Not answered

Marked out of  
1.00

167. In an implementation of a linked list, each node contains data and address. Which of the following can the address field possibly contain?

Select one:

- ☐ a. Its own address
- ☐ b. Address of the first node
- ☐ c. Address of the last node
- ☐ d. Address of the next node in sequence

The correct answer is: Address of the next node in sequence

Question **6**

Not answered

Marked out of  
1.00

157. Why is an algorithm designer concerned primarily about the run time and not the compile time while calculating time complexity of an algorithm?

Select one:

- ☐ a. Compile time is a function of run time.
- ☐ b. Compile time is always more than the run time.
- ☐ c. Run time is always more than the compile time.
- ☐ d. A program needs to be compiled once but can be run several times.

The correct answer is: Run time is always more than the compile time.

Question **7**

Not answered

Marked out of  
1.00

177. The following operations are performed on an empty stack  $\hat{A}$ .

PUSH( 1)

PUSH( 2)

POP

PUSH(5)

PUSH(6)

POP

What will the stack contain after these operations?

(Note: The top of the stack is underlined in the options below.)

Select one:

- ☐ a. 5 6
- ☐ b. 5 6
- ☐ c. 1 5
- ☐ d. 1 5

The correct answer is: 1 5

Question **8**

Not answered

Marked out of  
1.00

158. A complete binary tree has a property that the value at each node is at least as large as the values at its children nodes What is this binary tree known as ?

Select one:

- ☐ a. AVL Tree
- ☐ b. Heap
- ☐ c. Completely Balanced Tree
- ☐ d. Binary Search Tree

The correct answer is: Heap

Question **9**

Not answered

Marked out of  
1.00

164. Which of the following implies that there are two loops that are nested?

Select one:

- ☐ a. Two loop with the same iteration count
- ☐ b. Two loops, one inside the other
- ☐ c. Two loops, one after the other
- ☐ d. One loop with two different iteration counts

The correct answer is: Two loops, one inside the other

Question **10**

Not answered

Marked out of  
1.00

176. Which of the following can be inherited by a derived class from a base class?

Select one:

- ☐ a. Data members
- ☐ b. Constructors and destructors
- ☐ c. Data members and member functions
- ☐ d. Member functions

The correct answer is: Data members and member functions

Question **11**

Not answered

Marked out of  
1.00

166. Assume the following precedence (high to low). Operators in the same row have the same precedence. ( ) \* / + - AND OR The precedence is from left left to right in the expression for the operators with equal precedence. Which of the following statements is TRUE about the output of the code statements given below? integer a = 40, b = 35, c = 20, d = 10  
print a \*b / c - d print a \* b / (c - d)

Select one:

- ☐ a. The outputs differ by 160.
- ☐ b. The outputs differ by 80.
- ☐ c. The outputs the same.
- ☐ d. The outputs differ by 50.

The correct answer is: The outputs differ by 80.

Question **12**

Not answered

Marked out of  
1.00

168. A programmer prepares a questionnaire with "true or false" type of questions. He wants to define a data type that stores the responses if the candidates for the questions. Which of the following is the most suited data type for this purpose?

Select one:

- ☐ a. Character
- ☐ b. Float
- ☐ c. Integer
- ☐ d. Boolean

The correct answer is: Boolean

Question **13**

Not answered

Marked out of  
1.00

174. Which of the following options is not an instance of exponential complexities?

Select one:

- ☐ a.  $O(n^3)$
- ☐ b.  $O(n!)$
- ☐ c.  $O(nn)$
- ☐ d.  $O(2n)$

The correct answer is:  $O(n!)$

Question **14**

Not answered

Marked out of  
1.00

160. What will be the input to the second pass, if the list before starting the Radix Sort is: 729, 150, 123, 931, 348, 517?

Select one:

- ☐ a. 517, 729, 123, 931, 348, 150
- ☐ b. 150, 931, 123, 517, 348, 729
- ☐ c. 150, 123, 348, 517, 729, 931
- ☐ d. 123, 150, 348, 517, 729, 931

The correct answer is: 150, 931, 123, 517, 348, 729

Question **15**

Not answered

Marked out of  
1.00

156. How many nodes does a full tree with  $n$  non-leaf nodes contain?

Select one:

- ☐ a.  $\log n$
- ☐ b.  $2n$
- ☐ c.  $n + 1$
- ☐ d.  $2n + 1$

The correct answer is:  $2n + 1$

Question **16**

Not answered

Marked out of  
1.00

169. A programmer writes a program to find an element in the array A[5] with the elements: 8 30 40 45 70. The program is run to find a number  $x$ , that is found in the first iteration of binary search. What is the value of  $x$ ?

Select one:

- ☐ a. 40
- ☐ b. 8
- ☐ c. 30
- ☐ d. 70

The correct answer is: 40

Question **17**

Not answered

Marked out of  
1.00

173. A programmer wants the program given below to print the largest number out of three numbers entered by the user.

```
int number1, number2, number3, temp;  
input number1, number2, number3;  
if (number1 > number2)  
    temp = number1  
else  
    temp = number2  
end if  
if (??) // statement 1  
    temp = number3  
end if  
print temp
```

Which of the following should be substituted in place of '?' in Statement 1 in the code?

Select one:

- ☐ a. number3
- ☐ b. number3 > number2
- ☐ c. number3 > number1
- ☐ d. number3 > temp

The correct answer is: number3 > temp

Question **18**

Not answered

Marked out of  
1.00

178. Which of the following best describes the space complexity of a program?

Select one:

- ☐ a. Amount of hard disk space required to compile the program
- ☐ b. Amount of memory required for the program to run
- ☐ c. Amount of hard disk space required to store the program
- ☐ d. Amount of memory required for the program to compile

The correct answer is: Amount of memory required for the program to run

Question **19**

Not answered

Marked out of  
1.00

171. Consider the code given in the 'Passage'. Assume that 'a' and 'b' are passed by value. What will the output of the program be when the function calculate() is executed?

Select one:

- ☐ a. 11 - 5
- ☐ b. 6 - 5
- ☐ c. 5 - 5
- ☐ d. 10 - 5

The correct answer is: 5 - 5

Question **20**

Not answered

Marked out of  
1.00

159. A librarian has to rearrange the library books on a shelf in a proper order at the end of each day. Which of the following sorting techniques should be the librarian's ideal choice?

Select one:

- ☐ a. Heap sort
- ☐ b. Selection sort
- ☐ c. Bubble sort
- ☐ d. Insertion sort

The correct answer is: Insertion sort

Question **21**

Not answered

Marked out of  
1.00

170. A developer writes the program given below to print the sum of the squares of the first five whole numbers(0Ö4). Is the program correct? If not, which statement should be modified to correct the program?

```
integer i = 0 // Statement 1
integer sum = 0 // Statement 2
while (i<5) // Statement 3
{
    sum = i*i // Statement 4
    i = i + 1 // Statement 5
}
print sum // statement 6
```

Select one:

- ☐ a. Statement 4
- ☐ b. No error, the program is correct
- ☐ c. Statement 1
- ☐ d. Statement 6

The correct answer is: Statement 4

Question **22**

Not answered

Marked out of  
1.00

179. Which of the following members of a class cannot be inherited?

Select one:

- ☐ a. Private and Protected
- ☐ b. Public
- ☐ c. Protected
- ☐ d. Private

The correct answer is: Private

Question **23**

Not answered

Marked out of  
1.00

172. How can the largest number in a list of twenty numbers be found?

Select one:

- ☐ a. Use selection sort to sort the list in a descending order and then print the first number of the series
- ☐ b. Use bubble sort to sort the list in a descending order and then print the first number of the series
- ☐ c. Implement one iteration of selection sort for descending order and print the first number in the series
- ☐ d. None of the above

The correct answer is: Implement one iteration of selection sort for descending order and print the first number in the series

Question **24**

Not answered

Marked out of 1.00

165. Assuming that main() is the starting point of execution of program, which of the following options should replace the //missing code so as to print the value of global MyVar1 (value = 5)?

```
Integer MyVar1=5
Function main().
{
Integer MyVar1=9
Print MyVar1
Print//missing code
}
```

Select one:

- ☐ a. MyVar1[0]
- ☐ b. MyVar1.MyVar1
- ☐ c. No local variable should have the same name as the global variable
- ☐ d. ::MyVar1

The correct answer is: ::MyVar1

Question **25**

Not answered

Marked out of 1.00

161. For which of the following is the stack implementation useful?

Select one:

- ☐ a. Radix search
- ☐ b. Recursion
- ☐ c. Breadth first search
- ☐ d. None of the above

The correct answer is: Recursion

◀ Tech test 3

Jump to...

Tech test 5 ▶