Wipro Elite NTH Coding Programming Q&A - Paper 4

C Programming

1. What will be the data type returned for the following C function?

```
1.      #include <stdio.h>
2.      int func()
3.      {
4.          return (double)(char)5.0;
5.      }
```

a) char
b) int
c) double
d) multiple type-casting in return is illegal

Answer: b

2. What will be the output of the following C code?

```
const char pla[] = "string1";
const char src[] = "string2";
printf("Before memmove place= %s, src = %s\n", pla, src);
memmove(pla, src, 7);
printf("After memmove place = %s, src = %s\n", pla, src);
```

a) Before memmove place= string1, src = string2 After memmove place = string2, src = string2
b) Before memmove place = string2, src = string2 After memmove place= string1, src = string2
c) Before memmove place = string2, src = string1 After memmove place= string2, src =string2
d) Before memmove place= string1, src = string2 After memmove place=string1, src = string1

Answer: a
Explanation: In the C library function void *memmove(void *str1, const void *str2, size_t n) copies n characters from str2 to str1.

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CPP

3. Which of the header file is used to implement algorithms provided by C++ STL?
   a) <algorithm>
   b) <header>
   c) <algos>
   d) <Algorithm>

   Answer: a
   Explanation: <algorithm> header is provided by the C++ to use STL algorithms.

4. Pick out the compound assignment statement.
   a) a = a – 5
   b) a = a / b
   c) a -= 5
   d) a = a + 5
   Answer: c
   Explanation: When we want to modify the value of a variable by performing an operation on the value currently stored, We will use compound assignment statement. In this option, a -=5 is equal to a = a-5.

5. Which method do we use to append more than one character at a time?
   a) append
   b) operator+=
   c) data
   d) both append & operator+=

   Answer: d
   Explanation: C++ allows to append more characters to string using both inbuilt append() function and using operator overloaded += operator.

Java

6. Which of these is an incorrect array declaration?
   a) int arr[] = new int[5]

b) int [] arr = new int[5]
c) int arr[] = new int[5]
d) int arr[] = int [5] new

Answer: d
Explanation: Operator new must be succeeded by array type and array size.

7. In the following Java code, which code fragment should be inserted at line 3 so that the output will be: “123abc 123abc”?

```
1. StringBuilder sb1 = new StringBuilder("123");
2. String s1 = "123";
3.  // insert code here
4. System.out.println(sb1 + " " + s1);
```

a) sb1.append(“abc”); s1.append(“abc”);
b) sb1.append(“abc”); s1.concat(“abc”);
c) sb1.concat(“abc”); s1.append(“abc”);
d) sb1.append(“abc”); s1 = s1.concat(“abc”);

Answer: d
Explanation: append() is stringbuffer method and concat is String class method. append() is stringbuffer method and concat is String class method.

Data Structures

8. What are the dimensions of an incidence matrix?
a) Number of edges*number of edges
b) Number of edges*number of vertices
c) Number of vertices*number of vertices
d) Number of edges * (½ * number of vertices)
Answer: b
Explanation: Columns may represent edges and vertices may be represented by the rows.

9. The essential condition which is checked before deletion in a linked queue is?
a) Underflow
b) Overflow

c) Front value
d) Rear value

Answer: a
Explanation: To check whether there is element in the list or not.

10. Which one of the following data structures are preferred in database-system implementation?
a) AVL tree
b) B-tree
c) B+ -tree
d) Splay tree

Answer: c
Explanation: The database-system implementations use B+ -tree data structure because they can be used for multilevel indexing.