Instructions: Submit your answers to these questions to the Curator as Quiz1 by the posted due date and time. No late submissions will be accepted.

For questions 1 through 4, assume the following variables have been declared:

```cpp
int    anInt;
double aDble;
char   aChar;
```

and assume the standard input stream `cin` contains the following values, separated by tabs:

```
1.2     4.5     A     -46.32
```

Determine the value of the indicated variable after the execution of the given statement; each question is independent, that is, each starts with the stream contents shown above.

1. aChar after `cin >> anInt >> aChar;`
   1) 4  
   2) '4'  
   3) '\t' (a tab)  
   4) '.'  
   5) None of these

2. aChar after `cin >> aDble >> aChar;`
   1) 4  
   2) '4'  
   3) '\t' (a tab)  
   4) '.'  
   5) None of these

3. anInt after `cin >> aDble >> anInt;`
   1) 2  
   2) '4'  
   3) 4  
   4) 4.5  
   5) None of these

4. anInt after `cin >> anInt;`
   ```cpp
   cin.get(aChar);
   cin >> anInt;
   ```
   1) 1  
   2) 2  
   3) 4  
   4) 5  
   5) None of these

5. Given the declaration `int TestScore = 78;`, which of the output statements given below will produce the output:
   ```
   1234567890
   Score: 78
   ```
   1) `cout << "1234567890" << endl`  
   2) `cout << "1234567890" << endl`  
   3) `cout << "1234567890" << endl`  
   4) All of the above  
   5) 1 and 2 only  
   6) 1 and 3 only  
   7) 2 and 3 only  
   8) None of these
6. Among the binary C++ operators +, -, *, /, and %, which have the lowest precedence when an expression is evaluated?

1) + and –
2) * and /
3) *, /, and %
4) +, -, and %
5) None of these

7. Suppose that the input stream cin contains the IP address: 298.173.41.142

Assuming that the variables A and B are declared as ints, which of the following code fragments will correctly read the second part of the IP address (173) into the variable B?

1) cin >> A;
cin.ignore(100, '.');
cin >> B;
2) cin >> A;
char ch;
cin.get(ch);
cin >> B;
3) cin.ignore(100, '.');
icin.get(A);
cin.get(B);
4) cin.ignore(100, '.');
icin >> B;
5) All of the above
6) 1 and 2 only
7) 1 and 3 only
8) 2 and 3 only
9) 2, 3 and 4 only
10) None of these

For questions 8 through 11, consider executing the code fragment:

```cpp
bool A, B, C, D;
// code that assigns values to A, B, C, and D
if (A && B)
  if (!C || !D)
    cout << "one" << endl;
  else if (D)
    cout << "two" << endl;
else
  cout << "three" << endl;
else if (C != D)
  cout << "four" << endl;
else if (C)
  cout << "five" << endl;
else
  cout << "six" << endl;
```

8. What of the following sets of values for A, B, C, and D would cause the string "one" to be printed?

A | B | C | D
---|---|---|---
1) true | true | true | true
2) true | true | true | false
3) true | true | false | true
4) true | true | false | false
5) All of the above
6) 1 and 2 only
7) 1, 2 and 3 only
8) 2 and 3 only
9) 2, 3 and 4 only
10) None of these
9. What of the following sets of values for A, B, C, and D would cause the string "four" to be printed?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>true</td>
<td>false</td>
<td>true</td>
<td>true</td>
</tr>
<tr>
<td>2</td>
<td>false</td>
<td>true</td>
<td>false</td>
<td>true</td>
</tr>
<tr>
<td>3</td>
<td>false</td>
<td>true</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>4</td>
<td>false</td>
<td>false</td>
<td>false</td>
<td>false</td>
</tr>
<tr>
<td>5</td>
<td>All of the above</td>
<td>8</td>
<td>2 and 3 only</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1 and 2 only</td>
<td>9</td>
<td>1, 3 and 4 only</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1, 2 and 3 only</td>
<td>10</td>
<td>None of these</td>
<td></td>
</tr>
</tbody>
</table>

10. No matter what values A, B, C and D have, the given code fragment will produce some output.

1) True 2) False 3) None of these

11. What of the following sets of values for A, B, C, and D would cause the string "three" to be printed?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>true</td>
<td>true</td>
<td>true</td>
<td>true</td>
</tr>
<tr>
<td>2</td>
<td>true</td>
<td>true</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>3</td>
<td>true</td>
<td>true</td>
<td>false</td>
<td>true</td>
</tr>
<tr>
<td>4</td>
<td>true</td>
<td>true</td>
<td>false</td>
<td>false</td>
</tr>
<tr>
<td>5</td>
<td>All of the above</td>
<td>8</td>
<td>2 and 3 only</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1 and 2 only</td>
<td>9</td>
<td>1, 3 and 4 only</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1, 2 and 3 only</td>
<td>10</td>
<td>None of these</td>
<td></td>
</tr>
</tbody>
</table>

12. Consider executing the following code fragment (assume \( x \) is an \texttt{int} variable):

```cpp
if ( x <= 0 )
    cout << "One" << endl;
else if ( x <= 10 )
    cout << "Two" << endl;
else if ( x <= 20 )
    cout << "Three" << endl;
```

The string "Two" will be printed if and only if \( x \) satisfies the condition:

1) \( x \leq 10 \) 4) \( 0 \leq x < 10 \)
2) \( 0 < x \) and \( x < 10 \) 5) \( 0 \leq x \)
3) \( 0 < x \) and \( x \leq 10 \) 6) None of these

13. What value is printed for \texttt{loopCount} if the following code fragment is executed?

```cpp
int loopCount = 1, alpha = 5;
while (loopCount <= 145) {
    alpha = alpha + 7;
    loopCount++;
}
cout << "loopCount = " << loopCount << endl;
```

1) 1 3) 145 5) None of these
2) 144 4) 146

5) None of these
For questions 14 and 15, consider execution of the following C++ switch statement:

```cpp
int Enter = 10;
cin >> Enter;

switch (Enter) {
    case 1: Enter = -4;
    case 2: Enter = -6;
    case 4: break;
    case 6: Enter = -8;
            break;
    default: Enter = -1;
}
```

14. What would the value of `Enter` be after execution of this code if the value read for `Enter` were 4?

1) -4  
2) -6  
3) -8  
4) -1  
5) 10  
6) None of these

15. What would the value of `Enter` be after execution of this code if the value read for `Enter` were 1?

1) -4  
2) -6  
3) -8  
4) -1  
5) 10  
6) None of these

16. What is the logical condition under which the following while loop will terminate?

```cpp
int Beta = 5;
while (Beta >= 0 && Beta < 10) {
    cout << Beta << endl;
    cin >> Beta;
}
```

1) Beta < 0 && Beta >= 10  
2) Beta <= 0 && Beta > 10  
3) Beta < 0 || Beta > 10  
4) Beta <= 0 || Beta >= 10  
5) Beta < 0 || Beta >= 10  
6) None of these

17. What is the output of the following code fragment?

```cpp
int n = 1;
while (n <= 5) {
    cout << n << ' ';
    n++;
}
```

1) 1 2 3 4 5  
2) 1 2 3 4  
3) 1 1 1 forever  
4) 2 3 4 5  
5) 2 3 4 5 6  
6) None of these
18. What is the output of the following code fragment?

```cpp
int n = 1;
while (n <= 5) {
    n++;
    cout << n << ' ';
}
```

1) 1 2 3 4 5  
2) 1 2 3 4  
3) 1 1 1 forever  
4) 2 3 4 5  
5) 2 3 4 5 6  
6) None of these

19. To produce the output 2 4 6 8 10, what loop condition should be used in the blank below?

```cpp
int N = 0;
do {
    N = N + 2;
    cout << N << ' ';
} while (_______);
```

1) N <= 10  
2) N < 10  
3) N < 8  
4) N >= 2  
5) N > 8  
6) None of these

20. Which for loop is equivalent to the following while loop? Equivalent here means that the value of each of the variables would be the same when the code has completed execution.

```cpp
int count = -5, sum = 0;
while (count <= 15) {
    sum = sum + count;
    count++;
}
```

1) int count, sum = 0;
    for (count = -5; count <= 15; count++)
        sum = sum + count;

2) int count, sum = 0;
    for (count = -5; count <= 15; count++) {
        sum = sum + count;
        count++;
    }

3) int count, sum;
    for (count = -5, sum = 0; count <= 15; count++) {
        sum = sum + count;
    }

4) int count, sum = 0;
    for (count = 1; count <= 21; count++)
        sum = sum + count;

5) All of these  
6) 1 and 2 only  
7) 1 and 3 only  
8) 1 and 4 only  
9) None of these