

**Instructions:** This homework assignment focuses primarily on some of the basic syntax and semantics of C++. The answers to the following questions can be determined from Topics 2 through 8 of the lecture notes and Chapters 2 through 5 of the text.

After you have analyzed the questions and decided what answers you believe are correct, you may find it useful to write some short programs to test your logic. Submit your answers to the Curator collection point HWQuiz4B.

For questions 1 through 6, assume the following variables have been declared

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

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

1.2	49A	.18	-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.

- [10 points] `anInt` after executing `cin >> anInt >> aChar;`
  - 1
  - 2
  - 12
  - 4
  - 45
  - 1245
  - None of these
- [10 points] `aChar` after executing `cin >> anInt >> aChar;`
  - 4
  - '4'
  - '\t' (a tab)
  - '.'
  - None of these
- [10 points] `aDble` after executing `cin >> anInt >> aDble;`
  - 1.0
  - 1.2
  - 12.0
  - 4.0
  - 4.9
  - 46.0
  - 46.3
  - 46.32
  - None of these
- [6 points] `aChar` after executing `cin >> aDble >> aChar;`
  - 4
  - '4'
  - '\t' (a tab)
  - '.'
  - 'A'
  - '2'
  - '9'
  - '-'
  - None of these
- [10 points] `anInt` after executing
 

```
cin >> anInt;
cin.get(aChar);
cin >> anInt;
```

  - 1
  - 2
  - 12
  - 4
  - 9
  - 49
  - 46
  - 32
  - None of these

6. [15 points] Given the declaration `int TestScore = 78;`, which of the output statements given below will produce the output:

```
0123456789012345
Score:          78
```

- |  |                     |
|--|---------------------|
| 1) <code>cout &lt;&lt; "0123456789012345" &lt;&lt; endl</code><br><code>&lt;&lt; "Score:          " &lt;&lt; TestScore &lt;&lt; endl;</code>         | 4) All of the above |
| 2) <code>cout &lt;&lt; "0123456789012345" &lt;&lt; endl</code><br><code>&lt;&lt; "Score:" &lt;&lt; setw(8) &lt;&lt; TestScore &lt;&lt; endl;</code>  | 5) 1 and 2 only     |
| 3) <code>cout &lt;&lt; "0123456789012345" &lt;&lt; endl</code><br><code>&lt;&lt; "Score:" &lt;&lt; setw(10) &lt;&lt; TestScore &lt;&lt; endl;</code> | 6) 1 and 3 only     |
|  | 7) 2 and 3 only     |
|  | 8) None of these    |

For questions 7 and 8, consider execution of the following C++ `switch` statement:

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

switch (Enter) {
case 1:  Enter = -4;
case 2:  Enter = -6;
case 4:  Enter = -8;
        break;
case 6:  Enter = -10;
        break;
default: Enter = -1;
}
```

7. [10 points] What would the value of `Enter` be after execution of this code if the value read for `Enter` were 1?
- |       |       |                  |
|-------|-------|------------------|
| 1) -4 | 3) -8 | 5) -10           |
| 2) -6 | 4) -1 | 6) None of these |
8. [10 points] What would the value of `Enter` be after execution of this code if the value read for `Enter` were 10?
- |       |       |                  |
|-------|-------|------------------|
| 1) -4 | 3) -8 | 5) -10           |
| 2) -6 | 4) -1 | 6) None of these |

9. [15 points] Consider the C++ expression: `!(A || !B && C)`

Which of the following C++ expressions are equivalent to the one given above? Two expressions are equivalent if they will always have the same value, no matter what values the variables in them have.

- |   |   |
|---|---|
| 1) <code>!A &amp;&amp; B    !C</code>   | 5) <code>(!A    B) &amp;&amp; !C</code> |
| 2) <code>!A    B &amp;&amp; !C</code>   | 6) <code>!A    (B &amp;&amp; !C)</code> |
| 3) <code>(!A &amp;&amp; B)    !C</code> | 7) None of them are equivalent.         |
| 4) <code>!A &amp;&amp; (B    !C)</code> |   |