Oct 20 Quiz Solution

1. Identify and correct the errors in each of the following statements:

a)
```
if (c < 10);
   cout <<  "c is less than 10\n";
```
→ ; should be deleted.
```
if (c < 10)
  cout <<  "c is less than 10\n";
```

b)
```
if (c => 10)
   cout << "c is equal to or greater than 10\n";
```
→ => should be >=
```
if (c <= 10)
   cout << "c is equal to or greater than 10\n"
```

2. State whether each of the following is true or false. If false, explain why.

a) Comments cause the computer to print the text after the // on the screen when the program is executed. (False. Comments do not cause any action to performed when the program is executed.)

b) All variables must be declared before they are used. (True)

c) All variables must be given a type when they are declared. (True)

d) C++ considers the variable identifiers TimeOfDate and timeofdate to be identical. (False. C++ is case sensitive, so these variables are unique)

e) Declarations can appear almost anywhere in the body of a C++ function. (True)

f) The modulus operator (%) can be used only with integer operands. (True)

g) The arithmetic operators *, /, %, +, and – all have the same level of precedence. (False. The arithmetic operators *, /, and % have the same precedence, and the operators + and – have a lower precedence.)

h) A C++ program that prints three lines of output must contain three output statements using `cout`. (False. A single output statement using cout containing multiple \n escape sequences can print several lines.)

3. What does the following program do? Write down the output generated.

```
#include <iostream.h>
int main()
{
  cout << "Welcome to C++!\n";
  for (int i=1; i <= 5; i++) {
  for (int j=1; j <= i; j++) {
     for (int k=1; k <= j; k++)
         cout << '*';
     cout << endl;
     }
     cout << endl;
```

```
    }
    return 0;
  }
```

ANS:

```
Welcome to C++!
*

*
**

*
**
***

*
**
***
****

*
**
***
****
*****
```

4. Determine the values of each variable after the calculation is performed assume that when each statement begins executing all variables have the integer value 10.

```
a) product *= x++;
b) product *= ++x;
c) quotient /= ++x;
```

ANS:

a) x: 11 product: 100

b) x: 11 product: 110

c) x: 11 quotient: 0