Name: _____ SS#: _____ Section: _____

CMSC 201H, CMSC 201 sections 101 & 102 — Computer Science I
October 1, 1993 — Quiz 1

True or False Questions

Circle True or False after each question:

1. A variable declaration sets the variable to zero.

   TRUE FALSE

2. The expression `++x` changes the value of `x`.

   TRUE FALSE

3. In the expression `a - b - c`, first `c` is subtracted from `b` then the difference is subtracted from `a`.

   TRUE FALSE

4. In the expression `a + b * c`, first `c` is multiplied by `b`, then the result is added to `a`.

   TRUE FALSE

5. The expressions `5 / 2` and `5 / 2.0` are equivalent.

   TRUE FALSE

6. In syntactically correct C programs, a block of statements surrounded by { and } may appear anywhere a simple statement may appear.

   TRUE FALSE

7. Every C expression has a value and a type.

   TRUE FALSE

Multiple Choice

1. Which of the following is a legal identifier in C:

   (a) `NINE_TO_FIVE`
   (b) `Nine-to-five`
   (c) `9_to_5`
   (d) `9-to-5`

2. A new line (carriage return) may occur in any of the following places *except*

   (a) Between quotation marks " of a string constant.
   (b) Between two simple statments.
   (c) Between parentheses ( ) in a expression.
   (d) Between `int` and a variable name.

3. Which of the following is a keyword:

   (a) `main`
   (b) `int`
   (c) `while`
   (d) `printf`

4. What is the value of

   ```
   1 + 2 * (3 + 4 / 5) + 6 - 7 * 8 / 9
   ```
   ?

   (a) 2
   (b) 6
   (c) 7
   (d) 21

5. What is the value of `7 - 6 * (5 - 4 - 3) / 2 + 1` ?

   (a) -5
   (b) -4
   (c) 6
   (d) 14

6. Which of the following expressions has the value 0 exactly the value of the integer variable `n` is divisible by 3 ?

   (a) `n % 3`
   (b) `3 % n`
   (c) `n / 3`
   (d) `(n / 3) - (n % 3)`

7. Let `flag` and `test` be variables of type `bool`. What are the values of `flag` and `test` after these statements?

   ```
   flag = test = FALSE ;
   flag = (3 < 17) || (test = TRUE) ;
   ```

   (a) `flag` is `FALSE`, `test` is `FALSE`.
   (b) `flag` is `FALSE`, `test` is `TRUE`.
   (c) `flag` is `TRUE`, `test` is `FALSE`.
   (d) `flag` is `TRUE`, `test` is `TRUE`.

8. Which of the given expressions is equivalent to the following expression?

   ```
   !( x < 3 || x > 5)
   ```

   (a) `(x >= 3 && x <= 5)`
   (b) `(x > 3 && x < 5)`
   (c) `(x < 3 && x > 5)`
   (d) `(x <= 3 && x >= 5)`

Short Answers

1. What is the output of the following code?

```
int a, b ;

a = b = 3 ;
b *= a ;
a += ++b ;
printf("a = %d, b = %d\n", a, b) ;
```

2. What is the output of the following code?

```
int a, b ;

a =  7 ;
b = 17 ;
if ( 2 * a >= b ) {
   printf("She sells\n") ;
} else if ( b - a >= b / 2 ) {
   printf("sea shells\n") ;
} else {
   printf("by the seashore\n") ;
}
```

3. What is the output of the following code?

```
int i, n;

i = 1 ;
n = 1 ;
while (n < 1000) {
   i++ ;
   n += 2*n ;
}
printf ("i = %d,  n = %d\n", i, n) ;
```