

# Laboratory Worksheet #02

## Logic Exercise

Answer the following questions given:

```
char a,b,c,d;
```

```
a = 0x00;
```

```
b = 0x0F;
```

```
c = 0x09;
```

What is the value of **d** after execution of the following lines?

1) `d = a & c;` \_\_\_\_\_

2) `d = b & c;` \_\_\_\_\_

3) `d = b & 0x04;` \_\_\_\_\_

4) `d = b & 0x33;` \_\_\_\_\_

5) `d = b & !c;` \_\_\_\_\_

Are the following TRUE or FALSE?

6) `(a && c)` \_\_\_\_\_

7) `(b && c)` \_\_\_\_\_

8) `(b && 0x04)` \_\_\_\_\_

What is the value of **d** after execution of the following lines?

9) `d = a | c;` \_\_\_\_\_

10) `d = b | 0x10;` \_\_\_\_\_

11) `d = b | a;` \_\_\_\_\_

12) `d = b | !a;` \_\_\_\_\_

Convert the following hex numbers to binary:

13) `(a || c)` \_\_\_\_\_

14) `(a || (c & 0x10))` \_\_\_\_\_

15) `(a || !b)` \_\_\_\_\_

When complete, include Worksheet 2 with your Laboratory 1-1 Pre-lab submission.