Midterm Exam - Group C | Time: 45 minutes | COMP 104

Student Name:

Branch:

1. Write a $C++$ condition to express the following

   (a) y is odd but not 13

   (b) n is divisible by 7 or divisible by 5

2. Consider the following snippet of the code.

```
switch (x*3){
    case 9: cout <<"9,";
    default: cout <<"default,";
    case 6: cout <<"6,"; break;
    case 12: cout <<"12,";
}
```

   What is the output when

   (a) $x = 6$

   ◯ *"no thing will be printed"* ◯ 9,default,6, ◯ default, ◯ 12, ◯ default,6 ◯ 12,default,

   (b) $x = 4$

   ◯ *"no thing will be printed"* ◯ 9,default,6, ◯ default, ◯ 12, ◯ default,6 ◯ 12,default,

3. Assuming $int\ x = 5$, what is the value of x after executing each of the following (each one should be run individually)?

   (a) $x+ = 5+ -- x;$

   ◯ 12 ◯ 14 ◯ 13 ◯ 11

   (b) $x = x * 5\%3;$

   ◯ 10 ◯ 5 ◯ 1

   (c) $x = 5/x \ \&\& \ x - 10;$

   ◯ 1 ◯ 0 ◯ True ◯ False

   (d) $x = x\ ++\ \%5 \parallel x - 5;$

   ◯ 1 ◯ 0 ◯ True ◯ False ◯ 6

4. What is the output of the following

```
int y = 10;
if (y++ > 6)
    if ( y-- < 20)
        cout <<"This group\t";
        cout <<"Perfect.";
```

5. Consider the following program

```
int y;
cin >> y;
if (y < 15) {
    if (y != 9)
        cout << "cond1 ";
    else
        --y;
} else {
    if (y == 21)
        y *= 2;
    else
        cout << "cond2 ";
}
cout << y << endl;
```

   What will the program print if the user provides the following input?

   (a) 21

   (b) 9

   (c) 32

Good luck!!!