

Student Name:

Branch:

1. Consider the following program

```
int y;
cin >> y;
if (y < 20) {
    if (y != 21)
        cout << "cond1_";
    else
        --y;
} else {
    if (y == 12)
        y *= 2;
    else
        cout << "cond2_";
}
cout << y << endl;
```

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

(a) 21

(b) 18

(c) 12

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) $x = 3$ ☐ "no thing will be printed" ☐ 9,default,6, ☐ default, ☐ 12, ☐ default,6 ☐ 12,default,(b) $x = 1$ ☐ "no thing will be printed" ☐ 9,default,6, ☐ default, ☐ 12, ☐ default,6 ☐ 12,default,3. Assuming $\text{int } x = 4$, 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) $x = x * 3 \% 7$;☐ 10 ☐ 5 ☐ 1(c) $x = 5/x \ \&\& \ x - 4$;☐ 1 ☐ 0 ☐ True ☐ False(d) $x = x ++ \% 5 \parallel x - 3$;☐ 1 ☐ 0 ☐ True ☐ False ☐ 6

4. Write a C++ condition to express the following

(a) z is a positive even number

(b) z could be 5 or more but not odd

5. What is the output of the following

```
int y = 12;
if (1 < ++y )
    if ( 36 > y++)
        cout <<"This_group\t";
    cout <<"Perfect.";
```

Good luck!!!