*EL-213: Computer Organization & Assembly Language Lab*

**Student ID: Section:**

1. Convert the following C++ code to assembly language. Also for each part, write the final values of variables *a, b* & *var*:

**(i)**

int a = 5, b = 6;  
for( int x = 5; x < 10; x = x + 1 ){  
b += c;  
a += c;  
}

**(ii)**

int a=5, b =0, var;

do  
{  
b++;  
--a;  
for(int x = 0; x < 10 ; x++){  
b += 2;  
var = b;  
}  
} while(a > 0)

**(iii)**

int a = 10, b = 30, var = 1;  
for(int i = 0; i < 5; i++){  
a = a + b;  
for(int j = 10; j > 0; j--){  
a = a - 1;  
var += 9;  
}  
}

2. Convert the following code to assembly language. Also write the final values of all the variables along with values of Sign Flag & Zero Flag:

int m = 3, n = 12, p = 0, x = 2;  
for (int i = 0; i < 6; i+=2){  
p = n – m;  
for(int j = 1 ; j < 3; j++){  
x \*= 2;  
}  
}