Question 1  (10 points)

Consider the following program:

```cpp
#include <iostream.h>
void Print(int, int&);
void main() {
    int a = 0, b = 7, n = 3;
```
Determine what value is printed for variable a in call 2 when the function call(s) are carried out.

1. 0
2. 3
3. 6   \[100.0\%\]
4. 8
5. none of the above

Score: 10.0 / 10.0

---

**Question 2 (10 points)**

Consider the following program:

```cpp
#include <iostream.h>
void Print(int, int&);
void main() {
    int a = 0, b = 7, n = 3;
    Print(5, n); // call 1
    Print(n, n); // call 2
    Print(n * n, a); // call 3
}

void Print(int a, int& b) {
    int c;
    a = 2*a;
    b = b + 1;
    c = 2 * a + b;
    cout << a << ' ' << b << ' ' << c << endl;
}
```

```cpp
void Print(int a, int& b) {  
    int c;
    a = 2*a;
    b = b + 1;
    c = 2 * a + b;
}
```
Determine what value is printed for variable c in call 2 when the function call(s) are carried out.

1. 3
2. 17
3. 20
4. 21
5. none of the above

Score: 10.0 / 10.0

Question 3 (10 points)

Consider the following program:

```c++
#include <iostream.h>
void Print(int, int&);
void main() {
    int a = 0, b = 7, n = 3;
    Print(5, n); // call 1
    Print(n, n); // call 2
    Print(n * n, a); // call 3
}

void Print(int a, int& b) {
    int c;
    a = 2*a;
    b = b + 1;
    c = 2 * a + b;
    cout << a << ' ' << b << ' ' << c << endl;
}
```

Determine what value is printed for variable a in call 3 when the function call(s) are carried out.

1. 9
2. 25
3. 25
4. 64
5. none of the above

Score: 10.0 / 10.0
Question 4 (10 points)

Consider the following program:

```cpp
#include <iostream.h>
void Print(int, int&);
void main() {
    int a = 0, b = 7, n = 3;
    Print(5, n); // call 1
    Print(n, n); // call 2
    Print(n * n, a); // call 3
}

void Print(int a, int& b) {
    int c;
    a = 2*a;
    b = b + 1;
    c = 2 * a + b;
    cout << a << ' ' << b << ' ' << c << endl;
}
```

Determine what value is printed for variable c in call 3 when the function call(s) are carried out.

1. 54
2. 56
3. 101
4. 132
5. none of the above

Score: 0.0 / 10.0

Question 5 (10 points)

Consider the following program:

```cpp
#include <iostream.h>
int SumIt(int& n, int& sum);
void main() {
    int n = 5, sum, t = 1;
    t = SumIt(n, sum);
    cout << n << endl;
}

int SumIt(int& n, int& sum) {
    
    
    return sum;
}
```

Score: 0.0 / 10.0
Determine what value (don't worry about formatting) is printed for variable n when the function call is carried out.

1. 1
2. 2
3. 5
4. 10

100.0%  5. none of the above

Score: 10.0 / 10.0

Question 6 (10 points)

Consider the following program:

```cpp
#include <iostream.h>
int SumIt(int& n, int& sum);

void main() {
    int n = 5, sum, t = 1;
    t = SumIt(n, sum);
    cout << n << endl;
    cout << sum << endl;
    cout << t << endl;
}

int SumIt(int& n, int& sum) {
    sum = 0;
    while ( n >= 1) {
        sum = sum + n;
        n--;
    }
    return 1;
}
```
Determine what value (don't worry about formatting) is printed for variable sum when the function call is carried out.

1. 0
2. 5
3. 10
100.0% 4. 15
5. none of the above

Score: 10.0 / 10.0

---

**Question 7 (10 points)**

Consider the following incomplete program:

```c++
#include <iostream.h>
void MinIt( ______ i1, ______ i2, ______ i3);

void main() {
    int a, b, c;
    cin >> a >> b >> c;
    MinIt(a, b, c);
    cout << a;
}

void MinIt( ______ i1, ______ i2, ______ i3) { // line 1
    int MinSoFar; // tracks smallest value seen
    if ( ______ ) // line 2
        MinSoFar = i1;
    else
        MinSoFar = i2;
    if (MinSoFar > i3)
        ______; // line 3
    i1 = MinSoFar;
}
```

The function MinIt( ) is intended to take three int parameters, determine the smallest of them, and set the value of the first parameter equal to the smallest of the three, without modifying either of the other parameters.

How should the blank in line 2 be filled?
Question 8  (10 points)

Consider the following incomplete program:

```c++
#include <iostream.h>
void MinIt( ______ i1, ______ i2, ______ i3);

void main() {
    int a, b, c;
    cin >> a >> b >> c;
    MinIt(a, b, c);
    cout << a;
}

void MinIt( ______ i1, ______ i2, ______ i3) { // line 1
    int MinSoFar; // tracks smallest value seen
    if ( ______ ) // line 2
        MinSoFar = i1;
    else
        MinSoFar = i2;
    if (MinSoFar > i3)
        ______ ; // line 3
    i1 = MinSoFar;
}
```

The function MinIt( ) is intended to take three int parameters, determine the smallest of them, and set the value of the first parameter equal to the smallest of the three, without modifying either of the other parameters.

How should the blank in line 3 be filled?
The function MinIt( ) is intended to take three int parameters, determine the smallest of them, and set the value of the first parameter equal to the smallest of the three, without modifying either of the other parameters.

How should the blank preceding the formal parameter \texttt{i2} in line 1 be filled?
100.0%  ▶  1. int
          2. int&
          3. either 1 or 2
          4. none of the above

Score: 10.0 / 10.0

---

**Question 10 (10 points)**

Consider the following *incomplete* program:

```cpp
#include <iostream.h>
void MinIt( ______ i1, ______ i2, ______ i3);

void main() {

    int a, b, c;
    cin >> a >> b >> c;
    MinIt(a, b, c);
    cout << a;
}

void MinIt( ______ i1, ______ i2, ______ i3) { // line 1

    int MinSoFar; // tracks smallest value seen
    if ( ______ ) // line 2
        MinSoFar = i1;
    else
        MinSoFar = i2;
    if (MinSoFar > i3)
        ______ ; // line 3
    i1 = MinSoFar;

}
```

The function MinIt( ) is intended to take three int parameters, determine the smallest of them, and set the value of the first parameter equal to the smallest of the three, without modifying either of the other parameters.

How should the blank preceding the **formal parameter i1 in line 1** be filled?

1. int
100.0%  ▶  2. int&
          3. either 1 or 2
          4. none of the above

Score: 10.0 / 10.0
Total Score: **80.0 / 100 = 80.0%**

Submission of this quiz constitutes your **Virginia Tech Honor Code Pledge:**

"On my honor, I have neither given nor received unauthorized aid on this examination."