

Nov, 1997

陳錦憲 計程期考

共8題(不必抄題), 共105分(超過100分以100分計)

1.(10%) Given these values for the **int** variables i, j, m, and n:

i=6, j=7, m=11, n=11

what is the output of the following code?

```

cout << "Madam";
if (i < j)
    if (m != n)
        cout << "How";
    else
        cout << "Now";
cout << "I'm";
if (i >= m)
    cout << "Cow";
else
    cout << "Adam";

```

2.(10%) Match each logical expression in the left column with the logical expression in the right column that tests for the same condition.

_____ a. $x < y \ \&\& \ y < z$	(1) $!(x != y) \ \&\& \ y == z$
_____ b. $x > y \ \&\& \ y >= z$	(2) $!(x <= y \    \ y < z)$
_____ c. $x != y \    \ y == z$	(3) $(y < z \    \ y == z) \    \ x == y$
_____ d. $x == y \    \ y <= z$	(4) $!(x >= y) \ \&\& \ !(y >= z)$
_____ e. $x == y \ \&\& \ y == z$	(5) $!(x == y \ \&\& \ y != z)$

3.(10%) What is printed by the following program fragment? (All variables are of type **int**.)

```

for (row = 1; row <= 10; row++){
    for (col = 1; col <= 10 - row; col++){
        cout << '*';
    }
    for (col = 1; col <= 2 * row - 1; col++){
        cout << ' ';
    }
    for (col = 1; col <= 10 - row; col++){
        cout << '*';
    }
    cout << endl;
}

```

4.(10%) What is the output of the following code?

```

9
for (j = 0; j < 10; j++){
    i = 10 - j;
    while (--i){
        cout << i;
    }
    cout << endl;
}

```

5. (10%) What is the output of the following code?

```
void test (int&, int);

int main()
{
    int a;
    int b;
    a = 4; b = 3;
    test (a, b);
    b += 10;
    cout << "from main: a=" << a << ", b=" << b << endl;
    return 0;
}

void test (int& b, int a)
{
    b += 5;
    a += 2;
    cout << "from test: a=" << a << ", b=" << b << endl;
}
```

6. (15%) What is the output of the following code?

```
n = 5
for (i = 5; i > 0; i--){
    switch (--n){
        case 1: cout << "Bill";
        case 2: cout << "Mary";
        case 3: cout << "Joe"; break;
        case 4: cout << "Ann";
        default: cout << "Boy";
    }
    cout << "win! \n";
}
```

7. (20%) What are the outputs of the following code?

```
int dance (int&, int);
int x;

int main()
{
    int y, z;
    x = 6;
```

```

    y = x + 2;
    z = y + 3;
    z = z + dance(z, y);
    z = z + dance(y, z);
    cout << " x = " << x << " y = " << y << " z = " << z << endl;
    return 0;
}

int dance(int& y, int& z)
{
    x = (++y) + (z++)
    cout << " x = " << x << " y = " << y << " z = " << z << endl;
    return z;
}

```

8. (20%) What is the output of the following code?

```

void ZeroOut (int[], int);
void PT (int[], int, int);

int main()
{
    int rel[6] = {23, 12, 7, 15, 6, 11};
    PT (rel, 1, 5);
    ZeroOut (rel+2, 3);
    PT (rel+1, 1, 3);
    return 0;
}

void ZeroOut (int arr[], int n)
{
    int i;
    for (i = 0; i < n; i++)
        arr[i] = 0;
}

void PT (int arr[], int x, int y)
{
    int i;
    for (i = x; i < x + y; i++)
        cout << arr[i];
    cout << endl;
}

```