

佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第 1 頁共 9 頁 (C++ 或 Java 版本題目，僅挑一個版本作答！)

1. What is the output of the following code? (10 points)

```
#include <iostream>
using namespace std;
int main( )
{
    int x = 36, y = 5, z = 8;
    cout << x % y << endl;
    cout << x / z << endl;
    cout << static_cast<double>(x) / y << endl;
    cout << static_cast<double>(z / y) << endl;
    cout << (double)x / z << endl;
    return 0;
}
```


2. Rewrite the following for loop as while loop. (10 points)

```
#include <iostream>
using namespace std;
int main( )
{
    for (int i = 1; i <= 1000; i++) cout << i << endl;
    return 0;
}
```

int main()
{
}

佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第2頁共9頁 (C++或Java 版本題目，僅挑一個版本作答！)

3. Rewrite the following **multiway if-else** statement with one **switch** statement. (12 points)

```
#include <iostream>
using namespace std;
int main ( )
{
    char ch = 'i';
    if (ch == 'A' || ch == 'a')
        cout << "ACER" << endl;
    else if (ch == 'H' || ch == 'h')
        cout << "HP" << endl;
    else if (ch == 'I' || ch == 'i')
        cout << "IBM" << endl;
    else
        cout << "Unknown" << endl;
    return 0;
}
```

```
int main( )
{

```

不可使用計算機、電子字典及手提電腦等電子產品！

佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第3頁共 9 頁 (C++或 Java 版本題目，僅挑一個版本作答！)

4. Rewrite the following **switch** statement with one **multiway if-else** statement. (12 points)

```
#include <iostream>
using namespace std;
int main( )
{
    int num = 8;
    switch (num)
    {
        case 1:
        case 3:
        case 5: cout << "Odd" << endl; break;
        case 2:
        case 4:
        case 6: cout << "Even" << endl; break;
        default: cout << "Unknown" << endl; break;
    }
    return 0;
}
```

int main()
{
}

佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第4頁共9頁 (C++或Java版本題目，僅挑一個版本作答！)

5. What is the output of the following program? (12 points)

```
#include <iostream>
using namespace std;
int main()
{
    int i;
    const int arraySize = 4;
    int array[arraySize];
    int *ip1, *ip2;
    ip1 = array;
    ip2 = new int[arraySize];
    for (i = 0; i < arraySize; i++)
    {
        array[i] = i * 2;
        ip2[i] = i + 2;
    }
    for (i = 0; i < arraySize; i++)
        cout << ip1[i] << " ";
    cout << endl;
    for (i = 0; i < arraySize; i++)
        cout << *(ip2 + i) << " ";
    cout << endl;
    for (i = 0; i < arraySize; i++)
        array[i] += ip2[i];
    for (i = 0; i < arraySize; i++)
        cout << *(ip1 + i) << " ";
    cout << endl;
    for (i = 0; i < arraySize; i++)
        cout << ip2[arraySize - 1 - i] << " ";
    cout << endl;
    return 0;
}
```


佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第5頁共9頁 (C++或Java版本題目，僅挑一個版本作答！)

6. What is the output of the following program? (8 points)

```
#include <iostream>
using namespace std;
template<class T>
void swapValues(T& v1, T& v2)
{
    T temp;
    temp = v1;
    v1 = v2;
    v2 = temp;
}
int main( )
{
    int one = 1, two = 2;
    double three = 3.3, four = 4.4;
    char five = '5', six = '6';
    long seven = 77, eight = 88;
    swapValues(one, two);
    cout << one << " " << two << endl;
    swapValues(three, four);
    cout << three << " " << four << endl;
    swapValues(five, six);
    cout << five << " " << six << endl;
    swapValues(seven, eight);
    cout << seven << " " << eight << endl;
    return 0;
}
```


佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第6頁共9頁 (C++或Java版本題目，僅挑一個版本作答！)

7. What is the output of the following code? (8 points)

```
#include <iostream>
#include <cmath>
#include <cstdlib>
using namespace std;
int main( )
{
    double x = 9;
    double y = 2;
    double z = - 0.7;
    double w = 0.3;
    cout << sqrt(x) << " " << pow(x, y) << endl;
    cout << fabs(z) << " " << fabs(w) << endl;
    cout << floor(z) << " " << floor(w) << endl;
    cout << ceil(z) << " " << ceil(w) << endl;
    return 0;
}
```


8. What is the output of the following code? (10 points)

```
#include <iostream>
using namespace std;

class DayOfYear
{
public:
    DayOfYear(int monthValue, int dayValue)
        : month(monthValue), day(dayValue) { };
    DayOfYear() : month(1), day(1) { };
    void output();
private:
    int month;
    int day;
};
```

佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第7頁共9頁 (C++或 Java 版本題目，僅挑一個版本作答！)

```
int main()
{
    const int size = 6;
    DayOfYear dataPoint[size];
    int i;
    for (i = 0; i < size; i += (size - 1))
    {
        cout.width(2);
        cout << i;
        dataPoint[i].output();
    }
    for (i = 0; i < size; i++)
        dataPoint[i] = DayOfYear(i + 1, i + 2);
    for (i = 0; i < size; i += 2)
    {
        cout.width(2);
        cout << i;
        dataPoint[i].output();
    }
    return 0;
}

void DayOfYear::output()
{
    cout.width(3);
    cout << month;
    cout.width(3);
    cout << day << endl;
}
```


佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第8頁共9頁 (C++或 Java 版本題目，僅挑一個版本作答！)

9. What is the output of the following program? (8 points)

```
#include <iostream>
#include <vector>
using namespace std;
int main( )
{
    vector<int> v(3);
    cout << v.size( ) << endl;
    v[0] = 11;
    v[1] = 22;
    for (int i = 0; i < v.size( ); i++)
        cout << v[i] << " ";
    cout << endl;
    v.push_back(33);
    v.push_back(44);
    cout << v.size( ) << endl;
    for (int j = 0; j < v.size( ); j++)
        cout << v[j] << " ";
    cout << endl;
    return 0;
}
```


佛光人文社會學院九十六學年度碩士班招生考試試題卷

系所別：資訊學系碩士班

科目：程式設計 (C++) 用紙第9頁共9頁 (C++或 Java 版本題目，僅挑一個版本作答！)

10. Fill in the output in the following **Sample Dialogue**. (10 points)

```
#include <iostream>
using namespace std;
int main( )
{
    int *p1, *p2, *p3, *p4, n1, n2;
    n1 = 3;
    n2 = 7;
    p1 = &n1;
    p2 = &n2;
    p3 = &n1;
    p4 = &n2;
    p1 = p2;
    *p3 = *p4;
    *p1 = 5;
    cout << &n1 << " " << &n2 << endl ;
    cout << p1 << " " << p2 << endl ;
    cout << p3 << " " << p4 << endl;
    cout << *p1 << " " << *p2 << endl ;
    cout << *p3 << " " << *p4 << endl;
    cout << &(*p1) << " " << &(*p3) << endl ;
    return 0;
}
```

Sample Dialogue

0	0	1	2	F	F	6	C		0	0	1	2	F	F	6	8			