

# 國立中央大學101學年度碩士班考試入學試題卷

所別：生物醫學工程研究所碩士班 甲組(一般生) 科目：程式設計 共 2 頁 第 1 頁  
本科考試可使用計算器，廠牌、功能不拘 \*請在試卷答案卷(卡)內作答

1. (10%) What is the difference between “Client-Side scripting” and “Server-side scripting”?
2. (10%) Explain what the Object-oriented programming (OOP) is.
3. (10%) List both the characteristics and differences between C++, Java and MATLAB.

4. (14%) List the print number (x) of each step in the following program:

```
#include <iostream>
using namespace std;
int main()
{
    int x=2,y,z;
    x *=(y=z=3); cout << x << endl;
    x ==(y=z); cout << x << endl;
    x =(y==z); cout << x << endl;
    x =(y&z); cout << x << endl;
    x =(y&&z); cout << x << endl;
    y=4;
    x=(y|z); cout << x << endl;
    x=(y||z); cout << x << endl;
    return 0;
}
```

5. (20%) Assume every character or integer contains 8 digits. what will be the output of the following C code?

(a) #include <iostream>  
using namespace std;  
int main()  
{  
 unsigned char a=0xB3;  
 int b; b=a\*2;  
 cout << b;  
 return 0;  
}

- (b) What is the output if we replace the highlighted line with:  
int b; b=~a>>4;

注意：背面有試題

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6. (16%) Write a program to calculate a 5-digit number abcde, where  $abcde * 4 = edcba$  and digits are not repeatable. [The code has to be written in C or C++; Variables need to be declared]
  
7. (20%) Use 'for' loops to multiply two matrix:  $A(i)(p)$  and  $B(p)(k)$ , and restore the values to a new matrix  $C(i)(k)$ . [The code has to be written in C or C++; Variables need to be declared]

注意：背面有試題