计算机科学系　　2010 上学期

# 《程序设计 I》期末考试试题(A)

任课教师：吴维刚、刘聪、舒忠梅　考试形式：闭卷　考试时间：2 小时

年级：10　专业：　计科、网工、信安

## 1. Single Choice Questions. 20points.

1) CCBAA
6) CBBBD
11) ACDCC
16) ACCDC

## 2. Mistakes identification. 20points.

| 1) | 2) |
|---|---|
| Line 4): incorrect return type.<br>Line 15): m, n are not initialized. | Line 5): i is not declared<br>Line 9): i <= length should be i<length<br>Line 10): == should be != |

## 3. Program output analysis. 20points.

| 1) | 2) |
|---|---|
| num = 1<br>result = 2<br>num = 3<br>result = 6<br>num = 9<br>gint = 2 | Number of loops: 5 |

## 4. Fill-in

| 1) | 2) |
|---|---|
| (1) s=0;<br>(2) c=a+b; | (1) j<i<br>(2) j = 4-i<br>(3) cout<<endl; |

## 5. Programming design. 20points.

Function: 15 points; Programming style: 5 points.

```
//Sample 1: with the assistance of additional array
#include<iostream>
#include<cstring>
using namespace std;

void seprtDigLet(char *string){

	int len = strlen(string);
	char *resul = new char[len+1];

	int i, j, k, l;

	i = k = 0;
	j = l = len-1;

	resul[len] = '\0';

	for(;i<len; i++, j--){
	    if(string[i]>='0'&&string[i]<='9'){
		resul[k]=string[i];
		k++;
	    }
	    if(string[j]>='a'&&string[j]<='z'||string[j]>='A'&&string[j]<='Z'){
		resul[l]=string[j];
		l--;
	    }
	}
	strcpy(string, resul);

	delete resul;
}
int main()
{
	char str[100];
	cin>>str;
	seprtDigLet(str);
	cout<<"-----"<<endl;
	cout<<str<<endl;
}
```

```
//Sample 2: no additional array is needed
#include<iostream>
#include<cstring>
using namespace std;

void seprtDigLet(char *string){

	int len = strlen(string);

	for(int i = 0,j=0; i<len-1; i++){
	    char tmp;
	    if(string[i]>='a'&&string[i]<='z'||string[i]>='A'&&string[i]<='Z'){
	        for(j = i+1;j<len;j++)
	            if(string[j]>='0'&&string[j]<='9'){
	                tmp = string[j];
	                for(;j>i;j--)
	                    string[j]=string[j-1];
	                string[i]=tmp;
	                break;
	            }
	    }
	}
}
int main()
{
	char str[100];
	cin>>str;
	seprtDigLet(str);
	cout<<"-----"<<endl;
	cout<<str<<endl;
}
```