浙江大学 2014－2015 学年冬季学期

《程序设计基础》课程期末考试试卷

课程号：__211Z0040__， 开课学院：__计算机学院__

考试试卷：√A 卷、B 卷（请在选定项上打√）

考试形式：√闭、开卷（请在选定项上打√），允许带__/__入场

考试日期：_2015_年_01_月_28_日，考试时间：_120_分钟

诚信考试，沉着应考，杜绝违纪.

考生姓名：_____学号：_____所属院系：_____

(注意：答题内容必须写在答题卷上，写在本试题卷上无效)

Section 1: Single Choice(2 marks for each item, total 20 marks)

1. Which one below is **NOT** a valid identifier in the C programming language? _____.
   A. printf B. _ever C. “char” D. true
2. Given ***a***, ***b*** and ***c*** as three double variables, which one below is **NOT** equivalent to ***a/b/c***? _____.
   A. (a/b)/c B. a/(b/c) C. a/(b*c) D. a/c/b
3. Which function header is **NOT** correct? _____.
   A. void f(void) B. void f(int i) C. void f(int i,j) D. void f(int i, int j)
4. Given the code below, what will be the value of ***i*** after the loop? _____.

```
int i;
while ( i<10 ) i++;
```

   A. 10 B. 11 C. 9 D. None of above.
5. Given the declarations: ***int a[5], *p=a;*** which expression is equivalent to the expression ***p+1*** ? _____.
   A．a[1] B. &a+1 C．a+1 D. p[2]-1
6. For the declarations: ***int a[]={1,2,3,4,5},*p=a+1, y;*** what will be the value of variable ***y*** after executing ***y=(*p)++***; ? _____.
   A．y=1 B．y=2 C．y=3 D. Syntax error.
7. For the declarations: ***int *p[2], n[5];*** which assignment expression is correct? _____ .
   A．p=n B. p=&n[0] C．p[0]=n D. p[0]=n++
8. Given the following code fragment, the loop condition ***str[i]!='\0'*** could be replaced by which choice? _____.

```
char str[20]="hello, world";
for (i = 0; str[i] != '\0'; i++) putchar(str[i]);
```

   A．str[i] B．i < 20 C．!(str[i] = '\0') D．i <= 20

9. Which function-calling statement could be used, to open a text file entitled "***abc.tx***t" and located in the folder "***user***" within D diskette, which is opened for the reading and writing operation? _____.

   A. fopen("D:\user\abc.txt","r") B. fopen("D:\\user\\abc.txt","r+")

   C. fopen("D:\user\abc.txt","rb") D. fopen("D:\\user\\abc.txt","w")

10. In the following code fragments, which item is completely correct? _____.

    A. int *p[5]; scanf("%d", p[0]); B. int *p; scanf("%d", p);

    C. int n[10], *p=n; scanf("%d", p); D. int n, *p; *p= &n; scanf("%d", p);

Section 2: Fill in the blanks（2 marks for each item, total 30 marks）

1. The value of expression ***3/6*2.0*** is _____.
2. The value of expression ***'9'-'0'*** is _____.
3. Given:

   ```
   char c = 255;
   printf("%d", c);
   ```

   The output should be: _____.
4. Given:

   ```
   int b=50;
   if ( 1<b<10 ) printf("ok") else printf("no");
   ```

   the output is _____.
5. The following code fragment will print out _____.

   ```
   void swap(int *pa, *pb)
   {
      int *t = pa;
      pa = pb;
      pb = t;
   }
   int a = 1, b = 2;
   swap(&a, &b);
   printf("%d#%d#", a, b);
   ```
6. The output of the code below is _____.

   ```
   char *s="abc";
   while ( *s++ ) if (*s) putchar(*s-1);
   ```
7. Given the declaration: ***char *s;***, write a statement which could be used to allocate 10 bytes from the system and assign the first address to the variable ***s*** _____.
8. Try to use the function-call of ***fscanf***, to replace the function-call of ***scanf("%d",&m)***; _____.
9. Given the declaration: ***char *s;*** , write an expression without any function-calling, which is equivalent to the expression ***strlen(s)==1*** _____.
10. Given the declaration: ***int a[3][2]={1,2,3,4,5,6}***; what is the value of expression ***(a[1]+1)[0]*** ?_____.

11. The value of expression ***!*("2015-01-28"+5)*** is _____.
12. The output of the code below is _____.

```
char x[ ]="hello,world\012345";
printf("%d#%d#"，sizeof(x)，strlen(x));
```

13. The output of the code below is _____.

```
char *a[3]={"one", "two","three"}, **p=a;
printf("%s#", *(++p)+1);
printf("%c#", **p-1);
```

14. Given the declarations: ***FILE *infp, *outfp;***, write a statement: it is used to write a letter, which is read from a file pointer ***infp***, into the file pointer ***outfp***, which points to an output file. _____.
15. Given the declaration: ***char s[10]="12345678"***; what will be the value of ***strlen(s)*** after executing ***strcpy(s+2,s+5)***; _____.

Section 3: Read each of the following programs and answer questions (5marks for each item, total 30 marks)

1. What is the output of the following program? _____.

```
#include <stdio.h>

void swap(int *a, int b)
{
    int m, *n;

    n=&m;
    *n=*a;
    *a=b;
    b=*n;
}

int main()
{
    int x=8,y=1;

    swap(&x,y);
    printf("%d#%d#",x,y);
}
```

2. When input: ***123***, what is the output of the following program_____.

```
#include <stdio.h>

int f(char s[], int b)
{
   int i=0, n=0;
```

```
    while (s[i]!='\0') {
        n=n*b+s[i]-'0';
        i++;
    }
    return n;
}

int main()
{
    char s[20];
     int n;

    scanf("%s",s);
    printf("%d", f(s,5));
}
```

3. When the following program's input is
   ing<Enter>
   This is a long test string<Enter>
   the output of the program is _____.

```
#include <stdio.h>
#include <string.h>

int main()
{
    char s[100], t[100], ch, *p;
    int count, i;

    gets(s);
    gets(t);
    for (i = 0; i < strlen(s); i++) {
        count=0;
        p = t;
        while (*p != '\0') {
            if (*p == s[i]) count++;
            p++;
        }
        printf("%c %d ", s[i], count);
    }
}
```

4. The output of the following program's is _____.

```
 #include <stdio.h>
#include <string.h>

void fun(char *s[], int n)
{
     char *t;
     int i,j;
```

```
    for (i=0; i<n; i++)
        for (j=i+1; j<n; j++)
            if (strlen(s[i])> strlen(s[j])) {
                t=s[i];
                s[i]=s[j];
                s[j]=t;
            }
}

int main()
{
    char *s[]={"the population of", "the city", "has reached", "top level"};

    fun(s,4);
    printf("%s,%s\n",s[0],s[3]);
}
```

5. The following program will print out _____.

```
#include <stdio.h>

void p1(int v[])
{
    int i,j,temp;

    for (i=1; i<4; i++)
        for (j=i-1; j>=0&&v[j]<v[j+1]; j--) {
            temp = v[j];
            v[j]=v[j+1];
            v[j+1]=temp;
        }
}

void p2(int v1[], int v2[])
{
    int i=0, j=0;

    while (i<4 && j<4) {
        if (v1[i]>v2[j])  {
            printf("%d ", v1[i++]);
        } else {
            printf("%d ", v2[j++]);
        }
    }
    while (i<4)  printf("%d ", v1[i++]);
    while (j<4)  printf("%d ", v2[j++]);
}

main()
{
    int a[2][4]={{5,3,7,2},{4,1,8,6}};

    p1(a[0]);
    p1(a[1]);
    p2(a[0],a[1]);
}
```

6. When input: ***8 1 2 3 4 5 6 7 8***, the following program will print out _____.

```
#include <stdio.h>
#include <stdlib.h>

void F1(int *a, int n)
{
    int t, *b = a + n - 1;

    while (a < b) {
      t = *a;
     *a = *b;
     *b = t;
      a++;
      b--;
   }
}

void F2(int *a, int n)
{
   int i,t;

   if (n <= 1) return;
   for (i = 0; i < n/2; i++){
       t = *(a + i);
       *(a + i) = *(a + n - 1 - i);
       *(a + n - 1 - i) = t;
   }
}

int main(void )
{
    int i, n, *a;

    scanf("%d", &n);
    if ((a = (int*)malloc(n*sizeof(int))) == NULL) return 2;
    for (i = 0; i<n;i++)  scanf("%d",a + i);
    F1(a + n/4, n/2);
    F2(a, n);
    for (i = 0; i < n; i++)  printf("%d#",*(a + i));
    return 0;
}
```

Section 4: According to the specification, complete each program (2 marks for each blank, total 20 marks)

1. There is an increasing ordered (升序) character list in a text file ***in.txt***. The following program read in this list, calculate the number of duplicates(重复) and write each character and its frequency of occurrence (>1) (大于 1 的出现次数) into the file ***out.txt***. For example, if the ***in.txt*** contains ***"abbcddddddddddde"***, the list ***"ab2cd12e"*** will be written into ***out.txt***.

```
#include <stdio.h>

main()
{
    FILE *fp1, *fp2;
    char last, c;
    int count=0;

    fp1=fopen("in.txt", "r");
    fp2=fopen("out.txt", "w");
    if (_______(1)_______) return (0);
    last='\0';
    while (______(2)_____) {
        count++;
        if (c!=last) {
            if (count>1) _______(3)______;
            count=0;
            _______(4)______;
            last=___(5)____;
        }
    }
    fclose(fp1);
    fclose(fp2);
}
```

2. Function ***strncat(char *ret, char *s2, int n)*** copy at most ***n*** characters from ***s2*** to ***ret***.
   The output of the following program is:

   WooMan

   GoodWoMan

   Please complete the program.

```
#include <stdio.h>

char *strncat(char *ret, char *s2, int n)
{
    char *s1=ret;

    if (n>0) {
        while (_____(6)____);
        s1--;
        while (*s1++=_____(7)____) {
            if (--n>0) continue;
            *s1=_____(8)_____;
            break;
        }
        return ret;
    } else {
        return s1;
    }
}
```

```
main()
{
      char s[100]=”Good”;
      char t1[100]=”Woo”;
      char t2[100]=”Manager”;

      strncat(_____(9)_____);
      printf(“%s\n”, t1);
      strncat(_____(10)_____);
      printf(“%s\n”, s);
}
```