浙江大学 2017－2018 学年冬学期

《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：__2018__年__01__月__21__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. In the following notations, _____can ***NOT*** express a single-character constant(单字符常量) correctly.
   A．'%c'　　B．127　　C．'\077'　　D．55
2. Given: ***char a[][4]={{1,2}, {3,4}, {5}};*** , the value of expression ***sizeof(a[0])*** is _____.
   A．9　　B．4　　C．24　　D．unknown
3. Which one below is ***NOT*** reserved for use as keyword in C? _____.
   A．case　　B．return　　C．FILE　　D．unsigned
4. Which one below is ***NOT*** an alternative for the conditional expression: ***a<b && a>c***? _____.
   A． !(a>=b) && a>c　　B．!(a>=b)&& !(a-c)
   C．!(a>=b || a<= c)　　D. !(a>=b || !(a>c))
5. Given: ***int n[5][5]***; which statement of element-accessing is wrong? _____.
   A．*n = 0;　　B．*n[1] = 1;　　C．n[5][-5] = 1;　　D．n[-1][6] = 1;
6. Which of the following is ***NOT*** correct? _____.
   A.The global variable is defined outside the function.
   B. The local variable is defined inside the function.
   C. The static variable is defined outside the function.
   D. The automatic variable is defined inside the function.
7. Which one below is different from the other three? _____.
   A. for (i=j=0 ;i<100 ;i++, j++);
   B. i=j=0; while (i<100) {i++; j++;}
   C. i=0 ;while ((j=i)<100) {i++;}
   D. i=0; j=0; do {i++; j++} while (j<=100);
8. Given: ***int a[10], *p[10];*** , which of following assignment is correct?_____.
   A．p=a　　B．p=&a[1]　　C．*p=a　　D．p[0]=*a
9. Given: ***int a[5], *p=a;*** , which statement below is completely correct? _____.
   A．scanf("%d", &p)；　　B．scanf("%d", &(a+1));
   C．scanf("%d", a+5);　　D．scanf("%d", *&p);
10. Which of the following is correct？ _____.

```
main()
{
    int n[10];
    …
    fun(n);
    …
}
int fun(int a[])
{
   …
}
```

A.Within the function ***fun***, ***a*** is an initial address of an array, whose value cannot be changed.
B. Within the function ***main***, the reference such as ***&n*** is invalid.
C.Because of call-by-value, the elements of the array ***n*** cannot be changed within the ***fun***.
D. Within the function ***fun***, the reference such as ***&a*** is invalid.

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

1. The value of expression ***3/6*.2*** is _____.
2. The value of expression ***! "01-21-2018"[7]*** is _____.
3. Given: ***int c = 'w';***, the value of expression ***c+='A'-'a'=='W'*** is _____.
4. Given: ***int x = 5;***, after execute ***if(x==5 || (x-=3)) x++;*** the result of ***x*** is _____.
5. Given: ***char s[]="123\029\08";*** , then ***sizeof(s)*** and ***strlen(s)*** will be_____ respectively .
6. After executing the following code fragment, the value of ***n*** is _____.
   ```
   int n; for (n=-1; n;  n--) ;
   ```
7. After executing the following code fragment, the output is _____.
   ```
   int i, b;
   i=b=1;
   switch(i){
       case 0: b+=1;
       case 1: b+=2;
       case 3: switch (b) {
                   case 3: i++;
                   default: break;
               }
               i+=1;
   }
   printf("%d#%d#", i, b);
   ```
8. The following code fragment will output _____.
   ```
   char *week[]={"Mon", "Tue","Wed","Thu","Fri","Sat","Sun"}, **pw=week;
   char c1, c2;
   c1 = (*++pw)[1];
   c2 = *++pw[1];
   printf("%c#%c#", c1, c2);
   ```
9. The value of expression ***strcmp("abcabc","aabbcc"+1) < 0*** is _____.
10. The following code fragment will output _____.
    ```
    void PlusOne(int  x) { x++;}
    int x = 0;
    PlusOne(x);
    printf("%d", x);
    ```

11. The following code fragment will output_____.

```
int n=1;
int fun(int m)
{
    static int x=1;
    int y=0, n;
    x++; ++y;
    m+=x+y;
    n=m*2;
    return m;
}
int main()
{
    printf("%d#%d#", fun(fun(n)), n);
}
```

12. The following code fragment will output _____.

```
int a[]={1,2,3,4,5,6,7,8}, *p, s;
for(s=0, p=a+5; p>a-1; p--)  s += *p;
printf("%d", s);
```

13. Given: ***char * s;***, which expression could replace the condition ***i<strlen(s)*** in the loop statement: ***for(i=0; i<strlen(s);i++)*** ?_____.
14. Try to use the function-call of ***fscanf()***, to replace the function-call of ***scanf("%d",&m)***; _____
15. For the declaration: ***int a[3][4]={{0,1,2},{4,5,6},{7,8}};***, the value of the element of ***a[1][-2]*** is_____.

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

1. The output of the following program is _____.

```
#include <stdio.h>
void func(int i,int a[],int n)
{
    int j, temp;
    temp=a[i];
    for (j = i; j>0 && a[j-1]>temp; j--) a[j]=a[j-1];
    a[j]=temp;
}
int main()
{
    int a[]={6,-1,8,2,3,7,1,5,4,0}, i, n;
    n=sizeof(a)/sizeof(int);
    for(i=1; i<=n/2;i++) func(i,a,n);
    for(i=0; i<n; i++)  printf("%d ", a[i]);
    return 0;
}
```

2. The following program will output _____.

```
#include <stdio.h>
int  func(int a[],int n)
{
    int i,j,k=0;
    for (i=0; i<n; i++) {
        for (j=i+1; j<n; j++) if (a[i]>a[j]) k++;
    }
    return k;
}
```

```
int main()
{
    int a[7]={7,1,5,4,2,3,6};
    printf("First:%d ", func(a,7));
    printf("Next:%d", func(a+1,6));
    return 0;
}
```

3. The following program will output _____.

```
#include <stdio.h>
void sh(int a[], int left, int right )
{
    int t, i, j;
    for (i=left, j=right; i<j; i++,j-- ) {
        t=a[i]; a[i]=a[j]; a[j]=t;
    }
}
int main()
{
    int number[]={1, 2, 3, 4, 5, 6, 7, 8}, i;
    sh(number, 0, 7);
    sh(number, 0, 2);
    sh(number, 3, 7);
    for( i=0; i<8; i++ ) printf("%d ", number[i]);
}
```

4. The following program will output _____.

```
#include <stdio.h>
int main()
{
    int a[] = {1,2,3,4,5,6},*p,*q;
    for (p=&a[5], q=a; q<p; p--, q++) {
        *p= *p + *q;
        *q= *p - *q;
        *p= *p - *q;
    }
    printf("%d#%d#", *p, *q);
}
```

5. When input ***1/2 3/4<ENTER>***, the following program will output _____.

```
#include <stdio.h>
int compare(int a, int b, int c, int d);
int lcm(int a, int b);
int gcd(int a, int b);
int main()
{
    int a,b,c,d;
    int relation;
    scanf("%d/%d %d/%d", &a, &b, &c, &d);
    relation = compare(a,b,c,d);
    if ( relation > 0 ) {
        printf("%d/%d is bigger.\n", a,b);
    } else if ( relation < 0 ) {
        printf("%d/%d is bigger.\n", c,d);
    } else {
        printf("%d/%d equals to %d/%d.\n", a,b,c,d);
    }
}
int compare(int a, int b, int c, int d)
{
```

```
        int cm = lcm(b,d);
        a = a*(cm/b);
        c = c*(cm/d);
        return a-c;
    }
    int lcm(int a, int b)
    {
        return (a*b)/gcd(a,b);
    }
    int gcd(int a, int b)
    {
        while (b>0) { int t=a%b; a=b; b=t; }
        return a;
    }
```

6. The following program will output _____.

```
#include <stdio.h>
int x, y, z, w;
void p(int y[ ], int x)
{
    int w, *z;
    *y--; z=y; x++; w = x+*++y;
    printf("%d#%d#%d#%d#",x, y[0], z[1], w);
}
int main(void)
{
    int x, y, z, w;
    x=y=z=w=1;
    do{
        static int x;
        p(&x, y);
        printf("%d#%d#%d#%d#",x,y,z,w);
     } while(0);
}
```

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

1. The following function ***int turn(char s[])*** converts the string of hexadecimal number(十六进制数字符串) to the corresponding decimal integer(十进制整数). There may be some spaces on the head of the string, and the capitals(大写字母) are not recognized. For example, ***turn(" -1b2A")*** will return the value ***-434***, which is the corresponding decimal integer of hexadecimal number ***-1b2***. Please fill in the blanks to complete the functions.

```
/*Whether the character c is in the [c1, c2] interval, 1 for YES and 0 for No*/
int IsIn(char c, char c1, char c2) { return _____(1)_____;}
int turn(char s[])
{
    int flag=1,n=0,i=0;
    while (s[i] == ' ') _____(2)_____;  /*Skip the blanks.*/
    if (s[i] == ____(3)____) {
        flag= -1; i++;
    }
    for (; i < sizeof(s); i++) {
        if  (IsIn(s[i], '0', '9'))  n = _____(4)_____;
```

```
            else if (IsIn(s[i], 'a', 'z')) n = _____(5)_____;
            else break;
        }
        return n*flag;
}
```

2. The function ***fileput(char * fname, char * text)*** creates(创建) an empty file ***fname***, then writes a string pointed by ***text*** into it. The function ***filencat(char *fname1, char *fname2, int n)*** concatenates(拼接) at most ***n*** characters from ***fname2*** to file ***fname1***. Assume that the following program will run correctly, and when it finishes running, the 3 files ***f1.txt***, ***f2.txt***, and ***f3.txt*** contain 3 strings "***WooMan***", "***Manager***", and "***GoodWoMan***" respectively. Please complete it.

```
#include <stdio.h>
char* fileput(char * fname, char * text)
{
    FILE* fp = _____(6)_____;
    if(fp == NULL)  return NULL;
    fputs(text, fp);
    fclose(fp);
    return fname;
}
char* filencat(char * fname1,  char * fname2, int n)
{
    FILE *fp1, *fp2;  char c;
    if( fname1 == NULL || fname2 == NULL)   return NULL;
    fp1 = _____(7)_____;
    fp2 = fopen(fname2, "r");
    if (fp1 == NULL || fp2 == NULL) {
        printf("%s, %s\n", fname1, fname2);
        return NULL;
    }
    c = fgetc(fp2);
    while (1)   {
        if(!n-- || feof(fp2)) _____(8)_____;
        fputc(c, fp1);
        _____(9)_____ ;
    }
    fclose(fp1); fclose(fp2);
    return fname1;
}
int main(void)
{
    if (!fileput("f1.txt","Woo")||!fileput("f2.txt","Manager")||!fileput("f3.txt","Good")) {
        printf("Fail the put\n");
        return 1;
    }
    if (!filencat("f1.txt", "f2.txt", 3) || !filencat(_____(10)_____)) {
        printf("Fail the concatenation\n");
        return 2;
    }
    printf("Complete the concatenation\n");
    return 0;
}
```