学院 | 专业 | 年级 | 班 | 姓名 | 学号

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# 西南大学　计算机与信息科学学院(软件学院)

命题教师：　　教研室或系负责人：　　主管院长：　　年　月　日

# 《 C程序设计 》课程试题 〖B〗卷

| 2019～2020学年 第2学期 | | | | | | | | | | | 期末 考试 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 考试时间 | 120分钟 | 考核方式 | 闭卷笔试 | 学生类别 | | | | 本科 | | 人数 | | |
| 适用专业或科类 | | 软件工程 | | | | | 年级 | 2019级 | | | | |
| 题号 | 一 | 二 | 三 | 四 | 五 | 六 | 七 | 八 | 九 | 十 | 合计 | |
| 得分 | | | | | | | | | | | | |
| 签名 | | | | | | | | | | | | |

**阅卷须知：阅卷用红色墨水笔书写，得分用阿拉伯数字写在每小题题号前，用正分表示，不得分则在题号前写0；大题得分登录在对应的分数框内；统一命题的课程应集体阅卷，流水作业；阅卷后要进行复核，发现漏评、漏记或总分统计错误应及时更正；对评定分数或统分记录进行修改时，修改人必须签名。**

**特别提醒：学生必须遵守课程考核纪律，违规者将受到严肃处理。**

## 一. Multiple Choice (20 Points)

1. In C language, the operator _____ must be placed between two integer variables or constants.
   A. /　　B. *　　C. %　　D. =

2. Assuming a = 100, determine which result of the following logical expressions is true?_____
   A. a = = 100 && a>100 && !a　　B. a = = 100 || a > 100 || !a
   C. a = = 100 && a >100 || !a　　D. !a

3. Supposing the input statement: scanf("a=%d,b=%d,c=%d",&a,&b,&c); , which input format can assign 1, 3, 2 to the variables of a, b, c, respectively. _____
   A. 132↙　　B. 1,3,2↙　　C. a=1 b=3 c=2↙　　D. a=1,b=3,c=2↙

4. Given these declarations and initializations:
   char aa, bb[10], cc[15], *dd;
   aa='C'; strcpy(bb, "Apple"); strcpy(cc, "many words");
   _____ is true in the following statements.
   A. puts(aa);　　B. fputs(bb);　　C. dd=bb[0];　　D. dd=cc;

5. Given the following program segment:
   int k=2;
   while (k=0) {printf("%d",k);k--;}
   The correct description is_____ .
   A. The while loop is executed 10 times.　　B. The while loop is infinite.

C. The loop body is not executed.　　D. The loop body is executed only once.

6. _____ can not initialize a 2-D array correctly.

A. int a[2][3]={0} ;　　B. int a[][3]={{1,2},{0}} ;

C. int a[2][3]={{1,2},{3,4},{5,6}} ;　　D. int a[][3]={1,2,3,4,5,6} ;

7. Given these definitions and declarations for a structure:

struct Xxx{ int aa; double bb;};

struct Xxx mm, *pp;

Assuming the variable pp has been initialized, _____ is true in the following statements.

A. pp =mm;　　B. mm->bb=54.2;　　C. (*mm).bb=45,8;　　D. pp->aa=6;

8. Supposing a function definition as follows:

double fun(int x, double y)

{ …… }

The correct function prototype is_____.

A. double fun (int ,double );　　B. fun (int x,double y)

C. double fun (int x,double y)　　D. fun(x,y) ;

9. The following codes (The numbers in front of each line are line numbers.)

```
1 void main(void);
2{
3     int i, a[3]={0};
4     for(i=0;i<3;i++) scanf("%d",&a[i]);
5     for(i=1;i<4;i++) a[0]=a[0]+a[i];
6     printf("%d\n",a[0]);
7}
```

Which choice is correct?_____

A. No error　　B. error in line 3　　C. error in line 4　　D. error in line 5

10. Judging whether string a and b are equal or not , we should use the statement_____.

A. if (strcmp(a,b))　　B. if (strcpy(a,b))　　C. if (a=b)　　D. if (a==b)

## 二. True or false (10 Points)

1. In general, C statements are case sensitive.
2. The escape sequence \n represents two characters.
3. The format specification %6.3f is legal for a float type variable.
4. We use the fscanf( ) function to write output to a file and use fprintf( ) function to read

input from a file.
5. A switch statement must contain a default case section.
6. A programmer-defined function may be written within the main( ) function.
7. The arguments for an int type function need not conform to the number, order and type agreement requirement.
8. Only double type pointer variable can be used to store the address of a double type variable.
9. All elements of a given array are placed randomly in computer memory.
10. We can use the dot(.) operator to access structure members.

## 三. Write the output of following programs (30 Points)

1. (6 points)

```
#define TRUE 1
#define FALSE 0
void main(void){
    int hour, am=FALSE;
    printf ("Enter current hour (0 - 23): ");
    scanf ("%d", &hour);
    if (hour < 12)
        am = TRUE;
    else if (hour > 12)
        hour -= 12;
    printf ("Hour in 12-hour format is %d ", hour);
    if (am)
        printf ("am\n");
    else
        printf ("pm\n");
}
```

(1) When input is 5? (2) When input is 16?

2. (6 points)

```
void main (void){
   int k=0,m=0,i,j;

   for (i=0; i<2; i++) {
       for (j=0; j<3; j++)
          k++ ;
       k-=j ;
    }
    m = i + j ;
```

```
 printf("k=%d,m=%d",k,m) ;
}

3. (6 points)
void main (void){
      int i=0;
  char a[ ]="abm", b[ ]="aqid", c[10];
       while (a[i]!='\0' && b[i]!='\0') {
          if (a[i]>=b[i])    c[i]=a[i]-32 ;
         else    c[i]=b[i]-32 ;
         i++;
       }
      c[i]='\0';
      puts(c);
}

4．(6 points)
#define N 10
int search(int a[ ],int m){
    int front =0, rear = N-1, mid ;
    while (front<=rear) {
        mid = (front+rear)/2;
        if (m<a[mid])
           rear = mid-1;
        else
           if (m>a[mid])    front = mid +1;
          else    return (mid) ;
    }
   return (-1) ;
}

void main(void){
    int a[N]={1,3,5,7,9,11,13,15,17,19},m,yn;
    scanf("%d",&m);
    yn = search(a,m);
    if(yn == -1)       printf("Not found!\n");
    else         printf("index=%d.\n",yn+1);
}
```

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(1) When input is 13? (2) When input is -13?

5. (6 points)

```
void fun(int s, int *a, int *b){
    int m;
    *a=0; *b=0;
    while(s) {
        m=s%10;
        *a=*a+m;
        *b=*b+m*m;
        s=s/10;
    }
}
void main(void){
    int x,a,b;
    scanf("%d",&x);
    fun(x,&a,&b);
    printf("a=%d,b=%d\n",a,b);
}
```

When input is 2198?

## 四．Programming (40 Points)

1. Write a program to calculate the value of π using the following formula. (10 points)

1-1/3+1/5-1/7+……=π/4

2. The number of cars crossing a bridge from Monday through Sunday in a given week are 986,818, 638, 763, 992, 534 and 683. Use these numbers to initialize an array and write a program to generate the following outputs.

(1) The daily average number of cars crossing the bridge. (5 points)

(2) The maximum number of cars crossing the bridge in a day and what day it is occurred. (10 points)

3. Input a string from the keyboard and write a program to generate the following outputs

(1) Construct a function to calculate both the number of uppercase letters and lowercase letters. Please output the results in the main function. (8 points)

(2) Sort the string from the minimum character to maximum character. (7 points)

# Answer Sheet

**一、Choose the right answer（20 points）**

| | |
|---|---|
| **1-5** | |
| **6-10** | |

**二、True or false（10 points）**

| | |
|---|---|
| **1-5** | |
| **6-10** | |

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**三、Write output of the following programs（30 points）**

**1. (1)**

封 **(2)**

**2.**

**3.**

线 **4. (1)**

**(2)**

**5.**

**四、Programming （40 points）**

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