**2016年10月 C 语言程序设计月考**

1. 填空题 (每题3 分， 共 45 分)
   * + 1. After execution of the following code, what is the value of angle?\_\_\_\_\_\_\_\_\_\_**15**

int angle = 0;

if (angle > 5)

angle = angle + 5;

else if (angle > 2)

angle = angle + 10;

else

angle = angle + 15;

* + - 1. What is the value of variable **firstInt** in the following code fragment? (finished is a bool variable, and firstInt and secondInt are of type int.) \_\_\_\_\_\_\_\_\_\_\_ **7**

finished = false; firstInt = 3; secondInt = 20;

while (firstInt <= secondInt && !finished)

if (secondInt / firstInt <= 2)

finished = true;

else

firstInt++;

* + - 1. Although the expression

15+ 'A' - 22.84

is not likely to be used by a programmer, it is valid in C. What is the data type of the expression? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ double

* + - 1. The result of expression 7+31%4 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_10
      2. Please write all of relational operator in c\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **> >= < <= == !=**
      3. Please write logical expression to determine whether the value of beta lies between 0 and 150 (0,150). **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 0 < beta && beta < 150**
      4. Write the output of the code. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

alpha = 1;

beta = 2;

if (alpha < 2)

if (beta > 3)

printf("Hello");

else printf( "There"); output: **there**

* + - 1. After execute the following code, the value of variable alpha is\_\_\_\_\_\_\_\_\_\_17

int num;

int alpha = 10;

num = 6;

switch (num)

{

case 3 : alpha++;

case 4 : alpha = alpha + 2;

case 6 : alpha = alpha + 3;

default : alpha = alpha + 4;

}

* + - 1. Please define a constant named MARK with type char and value ‘$’. **const char MARK=’S’;**
      2. The function islower(char ch) is included in the head file\_\_\_\_\_\_\_\_\_\_\_\_.< ctype.h>
      3. What are values of expressions 7^2?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**5**
      4. What does postfix(suffix) F in literal 3.14F mean?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**3.14为float类型**
      5. What is the output of the following code fragment? (beta is of type int.) LOOX

int beta = 5;

do

{

switch (beta)

{

case 1 : printf("R");

break;

case 2 :

case 4 : printf("O");

break;

case 5 : printf("L");

}

beta--;

} while (beta > 1);

printf("X");

* + - 1. What is the result of x?\_\_\_\_\_\_\_\_ int x, num=9; x = num / 4 + 3.0; **5**
      2. （判断）Assuming x and y are variables of type float, the expression

sqrt(fabs(3.8 \* x + 9.4 \* y))

is a valid use of the sqrt and fabs library functions. TRUE

1. 程序题（第1题 15 分，第2，3题 20分 共 55 分）
2. Write a program that inputs a sequence of integers from keyboard. The first integer means the total number of inputs and the second integer means the lower limit of the value. Please count the numbers that not less than the lower limit and output the value.

e.g. input 6 12

10 11 12 13 14 15

Output：4

**#include<stdio.h>**

**int main(void)**

**{**

**int nums, tmp, lower;**

**int i=0,total = 0;**

**scanf(" %d %d",&nums,&lower);**

**while (i<nums){**

**i++;**

**scanf("%d",&tmp);**

**if(tmp >= lower)**

**total++;**

**}**

**printf("The numbers >=%d is %d",lower,total);**

**return 0;**

**}**

1. Write a program that outputs the Fibonacci numbers that are less than m=100000.

**Hint**: Each Fibonacci number is the sum of its two predecessors. The first two Fibonacci numbers are **1** and **1**. Thus, the sequence begins with:

**1, 1, 2, 3, 5, 8, 13, 21, 34, …**

**main(){**

**int first=1, second=1, next;**

**int m = 100000;**

**printf("%d\n%d\n",first,second);**

**while (first+second < m)**

**{**

**next = first +second;**

**first = second;**

**second = next;**

**printf("%d\n",second);**

**}**

**}**

1. Write a program that asks the user to enter their weight and the simple name of planet. The program then outputs how much the user would weigh on that planet. The program should output an error message if the user doesn’t type a correct planet name.

The following table gives the factor by which the weight must be multiplied for each planet.

M (Moon 月亮) 0.166

V (Venus 金星) 0.8975

E (Earth 地球) 1.0

J (Jupiter 木星) 2.5374

S (Saturn 土星) 1.0677

**int main(void)**

**{**

**double weight;**

**char planet;**

**double factor = 1.0;**

**printf("please input your weight and planet name :");**

**scanf("%lf %c",&weight,&planet);**

**//printf("%lf %c",weight,planet);**

**if (planet == 'M')**

**factor = 0.166;**

**else if(planet == 'V')**

**factor = 0.8975;**

**else if(planet == 'E')**

**factor = 1;**

**else if(planet == 'J')**

**factor = 2.5374;**

**else if(planet == 'S')**

**factor = 1.0677;**

**else**

**factor = -1;**

**if (factor > 0)**

**printf("Your weight on earth is %.2lf and on the planet %c is %.2lf.", weight, planet, weight\*factor);**

**else**

**printf("Please input the correct planet name.");**

**}**