

1. The following segments are part of a C program. Write down the output in the space. [18]

```
a. int i;
   for(i=4; i-- >=1; i--)
   {
       printf("i=%d\n",i);
   }
   printf("i=%d\n",i);
```

```
b. int a=4,b=5,c;
   c = a/b%a+b%a*a;
   while(a+b < 10)
   {
       a +=2;
       b /=2;
   }
   printf("a=%d b=%d c=%d\n",a,b,c);
```

```
c. int i,s=0;
   for(i=1; i<10; i+=3)
   {
       if(i%2 == 0)
       {
           continue;
       }
       s +=i;
   }

   printf("i=%d s=%d\n",i,s);
```

2. Consider the following geometric series:

$$3 + 9 + 27 + 81 + \dots .$$

The program given below calculates the sum s of the first n terms of the series, where n is a positive number. Complete the program by inserting suitable statements after the comments. You may declare other variables as needed. [12]

```
#include <stdio.h>
int main()
{
    int n,s;
    //Declare variables if needed

    //Read n from the keyboard

    //If n is invalid, terminate the program with appropriate message

    // Use a while loop or for loop to calculate the first n terms of the series

    //Print the sum s

    return 0;
}
```