Question 1

```c
//wap to generate the output 10,20 and 19
// generate 19 after using decrement operator on 20

# include <stdio.h>

int main(){
    int num;
    printf("enter the number which you want to decrement \n");
    scanf("%d",&num);
    const int n1=10;
    printf("%d %d %d",n1,num,num--);

    return 0;

}
```

Question 2

```c
# include <stdio.h>

int main(){
    float radius;
    printf("enter the radius of the sphere for which you want the volume\n");
    scanf("%f",&radius);

    float volume=(4*22*radius*radius*radius)/21;

    printf("%f",volume);
}
```

Question 3

```c
# include <stdio.h>

int main(){
    int side1,side2,side3;
printf("enter the first number\n");
scanf("%d",&side1);
printf("enter the second number\n");
scanf("%d",&side2);
printf("enter the third number\n");
scanf("%d",&side3);

if(side1+side2>side3 && side2+side3>side1 && side1+side3>side2){
    printf("yes the triangle can be formed\n");

    if(side1==side2 && side2==side3 ){
        printf("traingle is equilateral\n");
    }
    else if(side1==side2 || side2==side3 || side3==side1){
        printf("the triangle is isosceles\n");
    }
    else{
        printf("triangle is scalene\n");
    }

}
else{
    printf("triangle cannot be formed");
}


}
```

Question 4

```c
# include <stdio.h>

int main(){
    int num;
    printf("enter the number which you want to check for the sign\n");
    scanf("%d",&num);
    if(num>=0){
        printf("The number is positive\n");
        if(num%2==0){
            printf("Number is even also\n");
        }
        else{
            printf("Number is odd\n");
        }
    }
    else {
        printf("The number is negative");
    }


    return 0;
}
```

Question 5

```c
// 5. Write a program to read a character in upper case and then print it in lower case
# include <stdio.h>

int main(){
    char ch;
    printf("please enter the character which you want to make in lowercase\n");
    scanf("%c",&ch);
    printf("the lower case character is %c ",ch+32);

    return 0;
}
```

Question 6

```c
// 6. Write a program, which takes two integer numbers as input and it shows their
// exchanged value. (Don't use third variable)

# include <stdio.h>

int main(){
    int num1,num2;
    printf("enter the two integer numbers which you want to change the values\n");
    scanf("%d %d",&num1,&num2);

    printf("%d %d before swapping \n",num1,num2);
    num1=num1+num2;
    num2=num1-num2;
    num1=num1-num2;
    printf("%d %d after swapping \n",num1,num2);

    return 0;
}
```

Question 7

```c
// 7. Write a menu driven program in which use can take choice as.
// Addition Subtraction Multiplication Divide Modulo
// After taking the choice from user it should do the desired operation. In case of
// division of dividend is zero, program should display a warning that cannot divide.

# include <stdio.h>

int menu(int num1, int num2, int choice) {
    switch(choice) {
        case 1: // Addition
            return num1 + num2;

        case 2: // Subtraction
            return num1 - num2;

        case 3: // Multiplication
            return num1 * num2;

        case 4: // Division
            if (num2 != 0) {
                return num1 / num2;
            } else {
                printf("Division by zero not possible\n");
                return 0;
            }

        case 5: // Modulo
            if (num2 != 0) {
                return num1 % num2;
            } else {
                printf("Modulo by zero not possible\n");
                return 0;
            }

        default:
            printf("Invalid choice\n");
            return 0;
    }
}

int main() {
    int num1, num2, choice;

    while (1) {   // infinite loop until user exits
        printf("\n---- Menu ----\n");
        printf("1. Addition\n");
        printf("2. Subtraction\n");
        printf("3. Multiplication\n");
        printf("4. Division\n");
        printf("5. Modulo\n");
        printf("6. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        if (choice == 6) {   // Exit condition
            printf("Exiting program...\n");
            break;
        }

        printf("Enter the first number: ");
        scanf("%d", &num1);

        printf("Enter the second number: ");
        scanf("%d", &num2);

        int result = menu(num1, num2, choice);

        printf("The result is: %d\n", result);
    }

    return 0;
}
```

Question 8

```c
// 8. Write a program, which will find out the largest of three inputs given by the user ,
// only use if and else if ladder .
# include <stdio.h>

int main(){
    printf("enter the three numbers which you want to compare\n");
    int a,b,c;
    scanf("%d%d%d",&a,&b,&c);

    if(a>b){
        if(a>=c){
            printf("%d is the largest of three ",a);
        }
        else if(a<=c){
            printf("%d is the largest",c);

        }
    }
    else{
        if(b>=c){
            printf("%d is the largest of three",b);
        }
        if(c>=b){
            printf("%d is the largest",c);

        }
    }

    return 0;
}
```

Question 9

```c
// 9. Write a program to print the ASCII value of a character.

# include <stdio.h>

int main(){
    char ch;
    printf("enter the character for which you want to print the ascii value\n");
    scanf("%c",&ch);

    printf("%d",(int)ch);

    return 0;
}
```

Question 10

```c
// 10. Write a program which take three inputs one as principal and second rate, third as
// time and calculate the simple interest.

#include <stdio.h>

int main() {
    float principal, rate, time, simpleInterest;

    // Taking inputs
    printf("Enter Principal amount: ");
    scanf("%f", &principal);

    printf("Enter Rate of interest: ");
    scanf("%f", &rate);

    printf("Enter Time (in years): ");
    scanf("%f", &time);

    // Calculating Simple Interest
    simpleInterest = (principal * rate * time) / 100;

    // Printing result
    printf("Simple Interest = %f\n", simpleInterest);

    return 0;
}
```