Q1. Write a C program that checks if a number entered by the user is positive, negative, or zero.

Code:

```
#include<stdio.h>
int main(){
   int number;
   printf("Please enter a number: ");
   scanf("%d", &number);
   if(number > 0){
      printf("The number is positive\n");
   }
   else if(number < 0){
      printf("The number is negative\n");
   }
   else{
      printf("The number is zero\n");
   }
   return 0;
}
```

Q2. Write a C program to check if a person is eligible to vote. The user should input the person's age, and the program should display "Eligible to vote" if the age is 18 or above, and "Not eligible" otherwise.

Code:

```
#include<stdio.h>
int main(){
   int age;
   printf("Please enter your age: ");
```

```
    scanf("%d", &age);
    if(age >= 18){
        printf("Eligible to vote\n");
    }
    else{
        printf("Not eligible\n");
    }
    return 0;
}
```

Q3. Write a C program that takes three numbers as input and prints the largest of the three numbers using if and else if.

Code:

```
#include<stdio.h>
int main(){
    int num1, num2, num3;
    printf("Please enter three numbers: ");
    scanf("%d %d %d", &num1, &num2, &num3);
    if(num1 >= num2 && num1 >= num3){
        printf("The largest number is %d\n", num1);
    }
    else if(num2 >= num1 && num2 >= num3){
        printf("The largest number is %d\n", num2);
    }
    else{
        printf("The largest number is %d\n", num3);
    }
    return 0;
```

```
}
```

Q.4 Write a C program to check if a given number is divisible by both 3 and 5. If it is divisible by both, print "Divisible by 3 and 5". If it is divisible by only one of them, print "Divisible by 3" or "Divisible by 5". Otherwise, print "Not divisible by 3 or 5".

Code:

```
#include<stdio.h>

int main(){
   int number;
   printf("Please enter a number: ");
   scanf("%d", &number);
   if(number % 3 == 0 && number % 5 == 0){
      printf("Divisible by 3 and 5\n");
   }
   else if(number % 3 == 0){
      printf("Divisible by 3\n");
   }
   else if(number % 5 == 0){
      printf("Divisible by 5\n");
   }
   else{
      printf("Not divisible by 3 or 5\n");
   }
   return 0;
}
```

Q5. Write a C program to categorize a student's grade based on their marks. The user should input the marks, and the program should print the grade as

follows: • Marks >= 90: Grade A • Marks >= 80 and < 90: Grade B • Marks >= 70 and < 80: Grade C • Marks < 70: Grade D

Code:

```
#include<stdio.h>
int main(){
   int marks;
   printf("Please enter your marks: ");
   scanf("%d", &marks);
   if(marks >= 90){
      printf("Grade A\n");
   }
   else if(marks >= 80 && marks < 90){
      printf("Grade B\n");
   }
   else if(marks >= 70 && marks < 80){
      printf("Grade C\n");
   }
   else if(marks < 70){
      printf("Grade D\n");
   }
   else{
      printf("Invalid marks\n");
   }
   return 0;
}
```