BCA

I SEMESTER

C PROGRAMMING LAB

PART A

1. Write a C Program to find area and circumference of circle.

```
#include<stdio.h>
#include<conio.h>
#define Pi 3.147
void main()
{
    float r,area=0,cir=0;
    clrscr();
    printf("enter the radius\n");
    scanf("%f",&r);
    area=Pi*r*r;
    cir=2*Pi*r;
    printf("the area of circle is %f\n",area);
    printf("the circumference of the circle is %f\n",cir);
getch();
     }
```

2. Write a C Program to find greatest in 3 numbers.

```
#include <stdio.h>
#include<conio.h>
void main()
{
    int A, B, C;
    clrscr();
    printf("Enter three numbers: ");
    scanf("%d %d %d", &A, &B, &C);

    if (A>=B && A >=C )
       printf("The largest number is %d\n", A);
    else if (B >= A && B >= C)
      printf("The largest number is %d\n", B);
    else
      printf("The largest number is %d\n", C);

getch();
}
```

3. Write a C program to check whether the number is prime or not.

```
#include <stdio.h>
#include<conio.h>
#include <math.h>
```

```
void main()
{
   int n, i, c = 0;
   clrscr();
   printf("Enter any number: ");
   scanf("%d", &n);
    if (n <= 1)
    {
   printf("%d is not a Prime number.\n", n);
   getch();
   exit(0);
    }
   else
   {
    for (i = 2; i <= n/2; i++)
   {
     if (n % i == 0)
     {
        c++;
        break;
     }
   }
   }
   if (c == 0)
    printf("%d is a Prime number.\n", n);
   else
    printf("%d is not a Prime number.\n", n);

   getch();
    }
```

4. To read a number, reverse the number and check it for palindrome

```
  #include<stdio.h>
#include<conio.h>
void main()
{
   int num, org , rev= 0, rem;
   clrscr();
   printf("Enter a number: ");
   scanf("%d", &num);
   org = num;                    // Store the original number
   while (num != 0)              // Reverse the number
  {
      rem = num % 10;          // Get the last digit
      rev = rev * 10 + rem;    // Build the reversed number
      num = num / 10;          // Remove the last digit
   }
   if (org == rev)
```

```
        printf("%d is a palindrome",org);
    else
       printf("%d is not a palindrome",org);

   getch();
}
```

5. To read two numbers and perform GCD

```
#include<stdio.h>
#include<conio.h>

void main()
{
  int a,b,rem;
  printf("enter any two numbers:");
  scanf("%d%d",&a,&b);
  while(b!=0)
  {
    rem=a % b;
    a=b;
    b=rem;
  }
  printf("GCD of two numbers is:%d",a);
  getch();
    }
```

6. To find Sum of 'N' natural numbers

```
 #include<stdio.h>
#include<conio.h>
void main()
{
   int num, i, sum = 0;
   printf(" Enter a positive number: ");
   scanf("%d", &num);

   for (i = 0; i <= num; i++)
   {
      sum = sum + i;
   }

   // display the sum of natural number
   printf("\n Sum is %d",sum);
   getch();
}
```

7. To read percentage of marks and to display appropriate message (Demonstration of else-if ladder.

```
#include<stdio.h>
#include<conio.h>
void main()
```

```
{
   float percent;
   printf("Enter the percentage of marks: ");
   scanf("%f", &percent);

   // Validate the input and determine the grade
   if (percent < 0 || percent > 100)
         printf("Please enter a percentage between 0 and 100.\n");
  else if (percent >= 75)
        printf("DISTINCTION\n");
  else if (percent >= 60)
       printf("FIRST CLASS\n");
  else if (percent >= 50)
       printf("SECOND CLASS\n");
  else if (percent >= 40)
       printf("PASS CLASS\n");
  else
       printf("Fail\n");


 getch();
}
```