**COMSATS** **University Islamabad, Lahore Campus**

**Block–C, Department of Computer Science**

**COMSATS University Islamabad, Lahore Campus, 1.5KM Defence Road, Off Raiwind Road, Lahore**

**S1 LAB Exam – SPRING 2021**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Course Title: | Programming Fundamentals | | | | Course Code: | | CSC103 | Credit Hours: | 4(3,1) |
| Course Instructor/s: | Tahir Muhammad | | | | Programme Name: | | BSE | | |
| Semester: | 1st | Batch: | Sp21 | Section: | c | | Date: | 4/7/2021 | |
| **Time Allowed:** | **1 Hour** | | | | **Maximum Marks:** | | | **10** | |
| Student’s Name: | **Muhammad Talha Shafiq Choudhary** | | | | Reg. No. | Sp21-BSE-008 | | | |
| **Important Instructions / Guidelines:**   * Use proper C Language syntax for coding questions. * Add your code to this word file and submit it on MS Forms * Check your system before starting your lab Exam. * Save your programs on a secure Drive on your system.  |  |  |  |  | | --- | --- | --- | --- | | **Question No.** | **CLO/PLO** | **Max. Marks** | **Obtained Marks** | | **1** | CLO1 (PLO2) C2 | 10 |  | | **Total** |  | 10 |  | | | | | | | | | | |

**Q1: Write a C program to find sum of following series:**

**1 + 3^2/3^3 + 5^2/5^3 + 7^2/7^3 + 11^2/9^3 +13^2/11^3 +17^2/13^3 + 19^2/15^3 +23^2/17^3 +... till N terms**

|  |
| --- |
| #include<stdio.h>  #include<math.h>  int main() {  int n,i,sum=0;  printf("Enter the value of number in series:");  scanf("%d",&n);  sum = pow(((n \* (n + 1) ) / 2),2);  printf("Sum of the series : ");  for (i =1;i<=n;i++) {  if (i != n)  printf("3+%d ^ ",i); else  printf("%3+%d \n\nThe sum is equal to %d ",i,sum);  }  return 0;  }    #include<stdio.h>  #include<conio.h>  #include<math.h>  int main()  {  int p[100],o[100],i,j,n,a=1,b=0;  double sum=0.00;    printf("nEnter value of n to find sum of series (1-100): ");  scanf("%d",&n);  p[0]=1; //according to condition first number in series is 1  for(i=3;a<n;i++) //find prime (2 is excluded)  {  for(j=2;j<=i;j++) //exclude non-prime  if(i%j==0) //if rem=0, i is not prime  break;  if(i==j)  {  p[a]=i; //storing prime num in array  a++; //here 'a' tells how many prime num needed  }  }  for(i=1;b<n;i=i+2) //find odd  {  o[b]=i;  b++;  }  for(i=0;i<n;i++)  sum=sum+pow(p[i],2)/(o[i],3); //calculate sum  printf("\nSum of given series upto '%d' terms is: %lf", n, sum);  printf("\n\nSeries is:\n= 1");  for(i=1;i<n;i++)  printf("+(%d^2)/(%d^3)",p[i],o[i]);  return 0;  } |