

**TDC (CBCS) Even Semester Exam., 2019**

COMPUTER APPLICATION

( 2nd Semester )

Course No. : BCACC-201L

[ **Practical on Introduction to  
Programming (C/C++)** ]

*Full Marks : 30*

*Pass Marks : 12*

*Time : 2 hours*

*The figures in the margin indicate full marks  
for the questions*

PART—I

Perform ONE experiment from each Group : 10×2=20

GROUP—A

1. Write a program to print the sum and product of digits of an integer.
2. Write a program to reverse a number.

3. Write a program to compute the sum of the first  $n$  terms of the following series :

$$S = 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots$$

4. Write a program to compute the sum of the first  $n$  terms of the following series :

$$S = 1 + 2 + 3 + 4 + 5 + \dots$$

5. Write a function that checks whether a given string is palindrome or not. Use this function to find whether the string entered by user is palindrome or not.

6. Write a program to compute the factors of a given number.

7. Write a program to display Fibonacci series.

8. Write a program to calculate GCD of two numbers.

GROUP—B

9. Create the person class. Create some objects of this class (by taking information from the user). Inherit the class person to create two classes—Teacher and Student class. Maintain the respective information in the classes and create, display and delete objects of these two classes. (Use runtime polymorphism.)

( 3 )

10. Create a class Triangle. Include overloaded functions for calculating area. Overload assignment operator and equality operator.
11. Create a class box containing length, breadth and height. Include following methods in it :
  - (a) Calculate surface area.
  - (b) Calculate volume.
  - (c) Check if it is a cube or cuboid.Write a program which takes input from the user for length, breadth and height to test the above class.
12. Create a structure student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file.
13. Write a program to retrieve the student's information from a file created before and print it in the following format :

Roll No., Name, Marks
14. Write a program to copy the contents of one text file to another file, after removing all white spaces.

( 4 )

15. Write a function that reverses the elements of an array in place the function must accept only one pointer value and return void.
16. Write a program that will read 10 integers from user and store them in an array. Implement array using pointers. The program will print the array elements in ascending and descending orders.

PART—II

17. Practical Notebook. 5
18. Viva voce. 5

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