

**2018**  
**CBCS**  
**1st Semester**  
**COMPUTER SCIENCE**  
**(Honours)**  
**PAPER—C1P**  
**(Practical)**

*Full Marks : 20*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

***Programming Fundamentals using C/C++***

**Set-1**

Answer any *one* question (Lottery basis).

1. Write a program in C to determine if an integer is palindrome or not.
2. Write a program in C to check if a year is Leap Year or not.
3. Write a program in C to find the sum of first n natural numbers.
4. Write a program in C to compute  ${}^n C_r$  where the values of n and r should be provided at runtime.

*(Turn Over)*

5. Write a program in C to swap the values of two integer variables by the method of 'Call by reference'.
6. Write a program in C++ to demonstrate function overloading.
7. Write a program in C++ to overload increment operator.
8. Write a C/C++ program to compute the sum of first 10 digit of the following series,

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots$$

9. Write a program in C/C++ to print a triangle of stars as follows (take number of rows from the user as an input),

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

10. Write a C program to calculate GCD of two numbers using recursion.

Laboratory Note Book — 2

Viva-voce — 3

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***Programming Fundamentals using C/C++***

**Set-2**

Answer any *one* question (Lottery basis).

1. Write a program in C to calculate the factorial of an integer.
2. Write a program in C to reverse in integer.
3. Write a program in C to find the factors of an integer.
4. Write a program in C to swap the values of two integers using pointers.

5. Write a program in C++ to demonstrate multilevel inheritance.
6. Write a program in C++ to reverse a string.
7. Write a program in C++ to compute  $nP_r$ .
8. Write a C/C++ program to compute the sum of first 10 terms of the following series,  
$$1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots$$
9. Write a C/C++ program to check whether a given 5 digit number is Palindrome or not.
10. Write a C program to find the maximum of two given numbers, using Macro.

Laboratory Note Book — 2

Viva-voce — 3

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