

2019

BCA

4th Semester Examination

C++ Lab

Paper – 2296

(Practical)

(Set – I)

Full Marks – 100

Time : 3 Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers in their  
own words as far as practicable.*

**GROUP – A**

Answer any **one** question : (on lottery basis)  
25×1

1. Write a C++ program to display all the prime numbers between 1 and 150.
2. Write a C++ program to compute GCD of three numbers. *Display your output.*

3. Write a C++ program to compute  ${}^n C_r$  where 'n' and 'r' are user inputs.
4. Write a C++ program to display all the Fibonacci number between 1 and 100.
5. Write a C++ program to check if a string is palindrome or not.
6. Write a C++ program to display the following triangle :

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

You should give number of lines to display as input.

7. Write a C++ program to display the following triangle :

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

The no. of lines to be displayed is to be read from key board.

8. Write a C++ program to read a text file and display the content of this file in monitor.
9. Write a C++ program to read two matrices from keyboard and display the result of their multiplication if they are multiplication compatible.
10. Write a C++ program to read a set of number from keyboard and sort them in descending order.

### **Group - B**

Answer any **one** question : (on lottery basis)

25×1

11. Write a C++ program to overload - operator to subtract two matrices of same order.
12. Write a C++ program to overload \* operator that multiplies two matrices that are compatible for multiplication.
13. Write a C++ program to overload ~ operator that reverses a string.
14. Define a class to represent time (Hour :Minute : Second) in 24 Hour format . Write a C++ program to read two times and add them.
15. Write a C++ program to define a date (Date, month, year) class with constructor. Initialize two dates using constructor and check if they belong to same year .

16. Write a C++ program that uses inline function to count no. of vowels in a string.
17. Write a C++ program that uses copy constructor to initialize matrix, and then compute transpose of this matrix.
18. Write a C++ program to demonstrate single inheritance that uses protected access specifier.
19. Write a C++ program to demonstrate multiple inheritance that uses both public and private access specifier.
20. Write a C++ program to demonstrate hybrid inheritance that uses both public and protected access specifier.

PNB → 05 Marks

Viva → 15 Marks

[Internal Assessment – 30 marks]