

**2018****BCA 1st Semester Examination****C PROGRAMMING LAB.****PAPER—1196 (Set-I)****(Practical)****Full Marks : 100****Time : 3 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.*

*Illustrate the answers wherever necessary.*

Answer any *two* questions through lottery basis.

**2×25**

1. Write a program in C to find the factorial of a given number using recursion.
2. Write a program in C to get the substring of a string using a function.
3. Write a program in C to search a number from a sorted array using binary search.
4. Write a program in C to convert a given decimal number to its binary equivalent.
5. Write a program in C to sort a given set of numbers using insertion sort.
6. Write a program in C to find the largest word in a given line.
7. Write a program in C to multiply two matrices taken as an input from the user.
8. Write a program in C to calculate the sum of the following series :  
$$1^2 + 2^2 + 3^2 + 4^2 + \dots + n^2$$

*(Turn Over)*

9. Write a program in C to print the following triangle :

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1
1 1
1 1 1

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10. Write a program in C to check whether a given number is a palindrome or not.

11. Write a program in C to display the reverse of a given number and the difference between them.

12. Write a program in C to print the number of occurrences of characters in a given string.

13. Write a program to extract each digit from a number and calculate their sum.

14. Write a program to find the 2nd highest number from a set of numbers using array.

15. Write a program to find the GCD and LCM of two numbers.

16. Write a program to compute the sum of the following series upto desired accuracy :

$$\text{Sin } x = x - \frac{x^3}{3} + \frac{x^5}{5} - \frac{x^7}{7} + \dots \infty.$$

17. Write a program to check a matrix is symmetric or not.

Viva — 15

PNB — 05

Internal Assessment — 30