NS – 605

I Semester B.C.A. Degree Examination, Nov./Dec. 2016
(CBCS) (F+R) (2014-15 and Onwards)
COMPUTER SCIENCE
BCA 103 : Problem Solving Techniques Using C

Time : 3 Hours Max. Marks : 70

Instruction : *Answer* ***all*** *Sections.*

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks. **(10×2=20)**

1) What is software ? Mention the classification of software.
2) Mention the different datatypes supported in C language.
3) What is type casting ? Give an example.
4) Mention the classification of I/O functions with example.
5) Explain the break and continue statements.
6) Give the advantages of function.
7) Explain the classification of arrays.
8) Mention any four string functions.
9) Give the difference between structure and union.
10) Explain any two memory related functions.
11) Mention different file opening modes.
12) What is preprocessor directive ? Give an example.

SECTION – B

II. Answer **any five** questions. **Each** question carries **ten** marks. **(5×10=50)**

13) a) Write the algorithm to find the sum of the series : 1 + 2 + 3 + 4 +... upto n terms.
    b) Explain the tokens of C language.
14) a) Explain the types of operators.
    b) Write a C program to demonstrate bitwise operators.

P.T.O.

15) a) Write a C program to print the following format.

```
1
1  2
1  2  3
1  2  3  4
```

b) What is control statement ? Explain different control statements.

16) a) Explain the function definition and function prototyping.

b) Write a C program to find GCD of two numbers using recursive function.

17) a) Explain linear search algorithm to search an element in an array with program.

b) Explain different storage classes in C language.

18) a) Write a C program to find the product of two matrices.

b) Explain string operations.

19) a) Explain definition, declaration and initialization of structure.

b) Explain call by value and call by reference with example.

20) a) Explain the writing and reading the information with file.

b) What is macro ? Explain the macro definition with example.