



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 : $1 + 2 + 3 + 4 + \dots$ 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.



- 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.