I Semester B.C.A. Degree Examination, November/December 2015
(Y2K14 Scheme) (CBCS)
COMPUTER SCIENCE
BCA 103T : Problem Solving Techniques Using 'C'

Time : 3 Hours Max. Marks : 70

Instruction: Answer all Sections.

SECTION – A

I. Answer any ten questions:

1) Define algorithm.
2) Define system software.
3) What is header file?
4) What are the rules for declaring variables in C?
5) Give the syntax and example for If-Else statement.
6) What is the difference between break and continue?
7) How to declare and initialize two dimensional array?
8) Difference between Strcmp() and Strcmpi().
9) What is Mallac() and Calloc()?
10) Give the difference between * and & in C pointer.
11) What is file pointer?
12) What are command line arguments?

SECTION – B

II. Answer any five of the following:

13) a) Explain the structure of a C program.
    b) Write an algorithm and flowchart to find largest of 3 numbers.
14) a) Explain formatted input-output function in C.
    b) Explain binary operators in C with examples.
15) Write a menu driven C program using switch-case to find:
   a) Sum of the digits of a number
   b) Factorial of N.

16) Explain different types of user-defined functions with examples.

17) a) Write a C program to arrange the given set of numbers in ascending order.
    b) Write a program to find the product of matrices of order $m \times n$.

18) a) Explain call by value and call by reference with examples.
    b) Explain array of structures with an example.

19) a) Explain different modes of opening a file.
    b) Write a C program to copy contents of one file to another.

20) Write short notes on:
   a) Local variable and global variable.
   b) While loop and Do-while loop.