I Semester B.C.A. Degree Examination, Nov./Dec. 2017
(CBCS) (F+R)
BCA – 103T : PROBLEM SOLVING TECHNIQUES USING C
(2014-15 and Onwards)

Time: 3 Hours  Max. Marks: 70

Instruction: Answer all Sections.

SECTION – A

I. Answer any 10 questions: (10×2=20)
1) What is an algorithm? Write its features.
2) Why is ‘C’ called a middle level language? Justify.
3) What are the rules for declaring variables in ‘C’?
4) Differentiate between while and do...while loops.
5) What is function prototype? Give the syntax of a function prototype.
6) How are the elements in an array stored in the memory?
7) What is string? What is the length of the string computer?
8) Define pointer with example.
9) Differentiate call by value and call by reference.
10) How does Structure differ from an Union?
11) Write any four file functions.
12) What is macro? List the types of macros.

SECTION – B

II. Answer any five questions: (5×10=50)
13) a) Explain the structure of ‘C’ program with suitable programming example. 6
    b) Write an algorithm for largest of three numbers. 4
14) a) Explain the different data types supported by ‘C’. 5
    b) Explain formatted I/O functions in ‘C’. 5

P.T.O.
15) a) Explain the working of if and if-else statements with example.  
   b) Write a ‘C’ program to generate a range of prime numbers using function.
16) a) Write a ‘C’ program to print product of two matrices.
   b) What is typedef? Explain with an example.
17) a) Write a program to define a structure of an employee with id, name and basic pay, read the print the information.
   b) Explain static and dynamic memory allocation.
18) a) Explain function with arguments and with return values with an example.
   b) Write a ‘C’ program to find length of a given string using pointers.
19) a) Write a ‘C’ program to copy contents from one file to another.
   b) What are command line arguments? Explain with example.
20) a) Explain file access methods in ‘C’.
   b) What is recursion? Write a program to find factorial of a number using recursion.