



SN – 656

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

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- 15) a) Explain the working of if and if-else statements with example. 5  
b) Write a 'C' program to generate a range of prime numbers using function. 5
- 16) a) Write a 'C' program to print product of two matrices. 7  
b) What is typedef ? Explain with an example. 3
- 17) a) Write a program to define a structure of an employee with id, name and basic pay, read the print the information. 5  
b) Explain static and dynamic memory allocation. 5
- 18) a) Explain function with arguments and with return values with an example. 5  
b) Write a 'C' program to find length of a given string using pointers. 5
- 19) a) Write a 'C' program to copy contents from one file to another. 5  
b) What are command line arguments ? Explain with example. 5
- 20) a) Explain file access methods in 'C'. 5  
b) What is recursion ? Write a program to find factorial of a number using recursion. 5