



SN – 448

**First Semester B.C.A. Degree Examination, November/December 2014
(Y2K14 Scheme) (CBCS)
COMPUTER SCIENCE**

BCA 103 T : Problem Solving Techniques using C

Time : 3 Hours

Max. Marks : 70

Instruction : Answer all Sections.

SECTION – A

I. Answer **any ten** questions :

(10×2 = 20)

- 1) What is structured programming ?
- 2) What are enumeration variables ? How are they declared ?
- 3) What are the different data types in C ?
- 4) Write the syntax of conditional operator and give example.
- 5) What happens when an array with a specified size is assigned ?
 - a) with values fewer than the specified size.
 - b) with values more than the specified size.
- 6) What are preprocessor directives ?
- 7) What is function prototype ? Why is it necessary ?
- 8) How does structure differ from an union ?
- 9) What are the advantages of using recursive functions ?
- 10) What is pointer ? How is a pointer initialized ?
- 11) How does an append mode differ from a write mode in files ?
- 12) How does an EOF differ from feof ?

P.T.O.



SECTION – B

II. Answer **any five** of the following :

(5×10=50)

- 13) a) What are various symbols used in designing a flowchart ? Explain by taking an example.
b) Describe in detail the syntax errors, logic errors and run time errors.
- 14) a) Explain the different unary operators available in C.
b) Write a algorithm to find the roots of the quadratic equation.
- 15) a) What is switch statement ? What are the advantages of switch statement compared to nested if statement ?
b) Compare in terms of their functions, the following pairs of statements
 - i) while and do... while.
 - ii) break and continue.
- 16) a) Differentiate between call by value and call by reference function.
b) Define the term scope of a variable. What are the different types of scopes used in C ? Explain in detail.
- 17) a) In what way does an array differ from an ordinary variable ? Explain the characteristics of array in C.
b) Write a program to find the largest element in the list of n elements.
- 18) a) How does structure differ from an array ? Explain.
b) Describe various string library functions used in C.
- 19) a) Explain the relationship between a pointer and the name of the array.
b) Explain the arithmetic operators that are permitted to pointers.
- 20) Write a short note on :
 - a) Bit fields.
 - b) Formal and actual arguments.
 - c) Dynamic memory allocation.
 - d) Command line arguments.