



16

I Semester B.C.A. Examination, April/May 2021
(Repeaters) (Y2K8 Scheme)
COMPUTER SCIENCE
BCA 105 : Programming Concepts Using 'C'

Time : 3 Hours

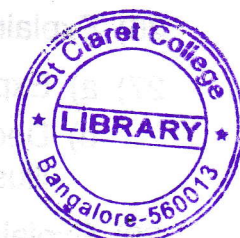
Max. Marks : 70/60

- Instructions :** 1) Answer **all** questions.
2) Section **D** is applicable to students who have taken admission in **2011 – 12** and onwards **only**.

SECTION – A

I. Answer **any ten** questions. **Each** question carries **one** mark. **(10×1=10)**

- 1) What is an algorithm ?
- 2) Define a constant.
- 3) What are the modifiers for char data type ?
- 4) What is sizeof() operator ?
- 5) What is the difference between pre-increment and post increment operators ?
- 6) What is the difference between break and continue ?
- 7) Write the general syntax of switch statement.
- 8) Mention the categories of functions.
- 9) How strings are initialized ?
- 10) Give an example of declaring and initializing pointer.
- 11) What is the difference between array and structure ?
- 12) What is the difference between structure and union ?



SECTION – B

II. Answer **any five** questions. **(5×3=15)**

- 13) Write an algorithm to find the sum of n natural numbers.
- 14) Write the general syntax of the following :
a) if-else b) switch c) for loop
- 15) Draw a flowchart to find the largest of three numbers.
- 16) What is the difference between getch() and getchar() functions ?
- 17) What is recursion ? Write a program to find the factorial of a number using recursion.
- 18) What are the advantages of functions ?
- 19) Write a program to find a number is prime or not.
- 20) Give any three differences between structure and union.

P.T.O.



SECTION – C

III. Answer any five questions. Each question carries seven marks. (5×7=35)

- 21) Write a C program to compute the sum of even numbers and odd numbers using functions. 3
- 22) a) Explain relational and logical operators with an example. 3
b) List out built in mathematical functions. 4
- 23) a) Explain the following for 1-D and 2-D array.
i) Storage representation 3
ii) Declaration syntax. 3
b) What is the difference between if-else and switch statement ? Explain with an example. 4
- 24) What is a function ? Explain different categories of functions. 3
- 25) a) Write a C program to check whether it is alphabet or digit or special symbol. 4
b) Write a C program to find the length of string using strlen(). 3
- 26) Explain looping control statements with suitable examples. 3
- 27) a) Explain array of structures with an example. 3
b) Declare a union with three members of type integer, char, string and illustrate the use of union. 4
- 28) Explain with example how the structure is
a) Initialised. 4
b) Differentiate between local and global variables. 3

SECTION – D

(Only for 2011 – 12 and Onwards)

IV. Answer any one question. Each question carries ten marks.

- 29) Write a C program to perform addition and subtraction of two matrices.
- 30) a) Write a program to implement bubble sort.
b) Explain any two string functions with syntax and example.