



SN – 669

15

I Semester B.C.A. Degree Examination, November/December 2017  
(Y2K8 Scheme) (Repeaters)

BCA 105 : PROGRAMMING CONCEPTS USING C

Time : 3 Hours

Max. Marks : 60/70

- 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 10** questions : (10×1=10)

- 1) What is a constant ?
- 2) Write an algorithm for finding GCD of two numbers.
- 3) Write any two keywords in C.
- 4) List any two operators in C.
- 5) Why is function used ?
- 6) What is the difference between pre-increment and post-increment ?
- 7) What is one-dimensional array ?
- 8) What is macro ?
- 9) Write any two advantages of union.
- 10) Write the syntax of conditional operator.
- 11) What is the use of enum ?
- 12) Define pointers.

SECTION – B

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

- 13) Brief on various flowchart symbolic notations.
- 14) What are formatted and un-formatted I/O functions in C ?
- 15) Write a program to find largest of three numbers in C.
- 16) Write the structure of C program.
- 17) Brief on any three functions used in strings in C.

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- 18) Differentiate union and structures.
- 19) Explain about function prototype.
- 20) What is nesting of 'if' statement ? Support with an example.

## SECTION – C

III. Answer **any five** questions :

(5×7=35)

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| 21) a) Explain relational and logical operators in C.                                    | 4 |
| b) What is format specifier ?  | 3 |
| 22) What is a array ? How to initialize a 2 dimensional array ? Explain with example.    | 7 |
| 23) a) Write a program to find the roots of quadratic equation.                          | 4 |
| b) Draw a flowchart for while loop condition.  | 3 |
| 24) a) Explain the different ways of reading string with example.                        | 4 |
| b) What is type casting ? Give an example.   | 3 |
| 25) a) Write a program to check whether a number is a palindrome or not.                 | 4 |
| b) Write a program to find the factorial of a given number.                              | 3 |
| 26) a) What is recursive function ? Explain it with the help of a program.               | 4 |
| b) Why is algorithm used ?   | 3 |
| 27) Explain the concept of call by value and call by reference with the help of program. | 7 |
| 28) a) How to access structure member ?  | 3 |
| b) Write a program to compare the size of structure and union.                           | 4 |

## SECTION – D

(Only for 2011-12 and onwards)

IV. Answer **any one** question. **Each** question carries **ten** marks. (1×10=10)

- 29) a) Write a program to reverse a word without using string in built function.
- b) Explain various data types using C.
- 30) a) Write a program to fund if the number is prime or not.
- b) Write a C program to implement matrix addition of a n × n matrix.