

BCA-02/DIT-06**Introduction to Computer Programming
Using C**

Bachelor of Computer Application (BCA-
11/16/17)/Diploma in Information Technology
(DIT-17)

First/Second Semester, Examination, 2018

Time : 3 Hours

Max. Marks : 80

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to attempt the questions contained in these Sections according to the detailed instructions given therein.

Section-A**(Long Answer Type Questions)**

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. Describe the following with the help of an example :
4.75 each
 - (i) Dynamic Memory Allocation
 - (ii) Call by value
 - (iii) Call by reference
 - (iv) Nested If-else

2. Answer the following questions :
- (i) Write a C language program using recursion to calculate factorial of given number. 7
 - (ii) Explain the following using examples of each : 4 each
 - (a) while
 - (b) do-while
 - (c) for
3. Answer the following questions : 9.5 each
- (i) What are palindrome numbers ? Write a C language program to check whether the string is palindrome or not.
 - (ii) Explain switch statement with its syntax and example. What is the role played by the break statement within the switch statement ? Explain with example.
4. Answer the following questions : 9.5 each
- (i) What is looping in C ? What are the advantages of looping ? Explain with example.
 - (ii) What is an array and how does array variable differs from ordinary variable ? Explain with the help of an example.

Section–B

(Short Answer Type Questions)

Note : Section ‘B’ contains eight (08) short answer type questions of eight (08) marks each. Learners are required to answer *four* (04) questions only.

1. What is the purpose of main() function ?

2. Differentiate between static memory allocation and dynamic memory allocation.
3. What are the differences between structures and arrays ?
4. Differentiate between pass by reference and pass by value.
5. Write a C Program to print all numbers between 1 to n divisible by 7.
6. Write a C program to print square of all numbers 1 to 20 and print sum squares.
7. Explain two-dimensional array with an example.
8. Explain the following C operators with example :
 - (i) Arithmetic operators
 - (ii) Relation operators
 - (iii) Logical operators
 - (iv) Conditional operators

Section–C

(Objective Type Questions)

Note : Section ‘C’ contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

1. The words if, else, auto, float etc. have predefined meaning and users cannot use them as variables. These words are called :
 - (a) Constant
 - (b) Identifier
 - (c) Data Types
 - (d) Keywords

2. When applied to a variable, what does the unary “&” operator yield ?
 - (a) The variable’s address
 - (b) The variable’s right value
 - (c) The variable’s binary form
 - (d) The variable’s value
3. The size of a character variable in C is :
 - (a) 8 bytes
 - (b) 4 bytes
 - (c) 2 bytes
 - (d) 1 byte
4. Which is the correct sequence statements that swaps values of two statements ?
 - (a) $a = a + b; a = a - b; b = a - b;$
 - (b) $a = a + b, b = a - b; a = a - b;$
 - (c) $a = a - b; a = a + b; b = b - a;$
 - (d) None of these
5. Who is the father of C Language ?
 - (a) Bjarne Stroustrup
 - (b) James A. Gosling
 - (c) Dennis Ritchie
 - (d) Dr. E. F. Codd
6. C programs are converted into machine language with the help of :
 - (a) An editor
 - (b) A compiler
 - (c) An operating system
 - (d) None of these

7. Step by step instructions written to solve any problem is called :
- (a) Pseudocode
 - (b) Algorithm
 - (c) Assembler
 - (d) Class
8. Procedural programming method is followed in :
- (a) C Language
 - (b) Cobol
 - (c) Cobra
 - (d) All of the above
9. Set of consecutive memory locations is called as _____.
- (a) Function
 - (b) Loop
 - (c) Array
 - (d) Pointer
10. Smallest element of an array is called as _____.
- (a) Lower Bound
 - (b) Range
 - (c) Middle Bound
 - (d) Upper Bound

