

Question Paper Code : 6303

BCA (Semester-I) Examination, 2019

(New Course)

COMPUTER FUNDAMENTALS AND PROGRAMMING IN C

[Fourth Paper]

[BCA-104]

Time : Three Hours]

[Maximum Marks : 70

Note : Answer five questions in all. Question No. 1 is compulsory. Besides this, attempt one question from each unit.

1. Attempt all parts :

[10x3=30]

- Define Linker and Loader.
- Differentiate between Compiler and Interpreter.
- What are various services provided by operating system ?
- Differentiate between 'while' and 'do while' loop.

6303/900

(1)

[P.T.O.]

- Discuss array of Pointer and Pointer to the array.
- What are various tokens used in C programming?
- Discuss the process of defining and calling Macros.
- Define Recursive function with example.
- Define the basic structure of C program.
- Discuss enumerated data type with example.

UNIT-I

- Explain various types of Computer languages in detail. [5]
- Draw the block diagram of digital computer and also explain its functional units. [5]
- Explain Memory Hierarchy in detail. [5]
- Convert the following : [5]

(i) $(ABC.3D)_{16} = ()_2$

(ii) $(37.68)_{10} = ()_8$

(iii) $(1011.10111)_2 = ()_{16}$
(2)

6303/900

- (iv) $(67.51)_8 = ()_{16}$
 (v) $(101.11)_{16} = ()_2$

UNIT-II

4. (a) Explain fundamental datatypes with its size, range and format specifier in C. [5]
 (b) Write a program in C to find reverse of an integer. [5]
5. (a) Differentiate between implicit and explicit type conversion with suitable example. [5]
 (b) Write a program to check whether a given number is prime or not. [5]

UNIT-III

6. (a) Explain the concept of call by value and call by reference with example. [5]
 (b) Explain function calling and function prototype with suitable example. [5]
7. (a) Explain Storage class and its types with suitable example. [5]

6303/900

(3)

- (b) Write a program in C to find factorial of a number using Recursion. [5]

UNIT-IV

- 8 (a) Differentiate between Structure and Union with suitable example. [5]
 (b) Write a program in C to find maximum element from an array. [5]
9. (a) Write a program in C to find Sum of diagonal element of NxN matrix. [5]
 (b) What is pointer ? Write a program to swap two numbers using pointer. [5]

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6303/900

(4)