

MCA–03/PGDCA–03/M.Sc.IT–03

Computer Programming Using ‘C’ Language

Master of Computer Application/P. G. Diploma in
Computer Application/Master of Science in
Information Technology (MCA–16/MCA–
11/PGDCA–16/PGDCA–11/
M.Sc.IT–16/M.Sc.IT–12)

First Semester, Examination, 2017

Time : 3 Hours

Max. Marks : 70

Note : This paper is of **seventy (70)** marks containing **three (3)** 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 fifteen (15) marks each. Learners are required to answer *two* (02) questions only.

1. (a) What is the use of loop ? Describe the syntax and purpose of while, do while and for loop using examples.
(b) What is meant by array of structures ? Explain.
2. What do you mean by dynamic memory allocation ? Write down the syntax for malloc() and calloc() function ?

3. What is recursion ? Write a C program to find out the factorial of a number by using recursion. Also draw the flow chart of this program.
4. What is the difference between an array and a string ? Write a program for concatenation and comparing of two strings input by keyboard.

Section-B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of five (05) marks each. Learners are required to answer *six* (06) questions only.

1. What is function ? Explain with suitable example.
2. Write an algorithm to find the factorial of a number.
3. Differentiate between structure and union with example.
4. What is pointer ? Explain pointer to a function with example.
5. Write and explain control statement used in C program.
6. Write a C program for generating the Fibonacci sequence upto 20.
7. What are the different types of operators available in 'C' ?
8. What are the elementary data types of C language ? Explain.

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 function used in start of 'C' program is :
(a) Sub()

- (b) Procedure()
 - (c) Main()
 - (d) Header())
2. Main is a :
- (a) User defined function
 - (b) Pre defined function
 - (c) Library function
 - (d) None of these
3. The number of times Infinite recursion is printed by the following C program is :
- ```
main()
{ printf("Infinite recursion/n");
 main(); }
```
- (a) Infinite number of times
  - (b) 32767 times
  - (c) Till the run time
  - (d) 65535 times
4. Which one is an example of derived data type ?
- (a) Array type
  - (b) Pointer type
  - (c) Function type
  - (d) All of the above
5. C is a/an :
- (a) Assembly level language
  - (b) High level language
  - (c) Machine level language
  - (d) None of these

6. In the C language, pointer is :
  - (a) Address of a variable
  - (b) A variable for storing address
  - (c) Constant operator
  - (d) None of these
7. Array index in C language starts from :
  - (a) 1
  - (b) 0
  - (c) Any integer value
  - (d) None of these
8. Comma operator is a/an :
  - (a) Unary operator
  - (b) Binary operator
  - (c) Ternary operator
  - (d) Assignment operator
9. By default the return type of function is :
  - (a) char
  - (b) int
  - (c) float
  - (d) void
10. Array are used to store the element of :
  - (a) The same type
  - (b) Multiple types
  - (c) Different types
  - (d) None of these