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MCS-401/DCA-101

Introduction to Programming using C

(MSCIT/PGDCA/DCA)

1st Semester Examination, 2023 (June)

Time : 2 Hours] **Max. Marks : 70**

Note : This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION–A
(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

(2×19=38)

1. Write a program using recursive function to find factorial of given number.

2. Write a program to check whether given number is Armstrong number or not.

3. Write a program to display the following pattern :

1 2 3 4

1 2 3

1 2

1

4. Explain the basic data types in 'C'.

5. What is row major and column major representation of two dimensional arrays and state how address of any element is calculated in each, explain with suitable 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 any Four (04) questions only. (4×8=32)

1. What are Library functions in C?

2. What is the difference between printf() and scanf()?

3. 'Function can return multiple values'. Comment.

4. Give the difference between "while loop' and 'do while loop' with example.

5. What is the output of the following program?

```
main()
{
char *P = "abed";
printf("%c", *p++);
printf("%c\\", *p);
}
```

6. What are command line arguments? How those are declared? What are the advantages of command line arguments?

7. Differentiate between pass by value and pass by reference.

8. Write a program to copy one string to another without using standard library function. Use dynamic memory allocation to accept string.