KA-7421

# Integrated M.C.A. (Sem-I) Examination, December-2024

## IMCA - 101T

## Programming Fundamentals Using C

Time allowed : **Three Hours**

Maximum Marks : **70**
Minimum Marks : **28**

***Note :*** *This question paper contains* ***two*** *sections as under:*



***Section-A*** ***Max. Marks-20***

*This section will have* ***10*** *questions, having* ***02*** *questions from each unit with no internal choice. Answer in about* ***20*** *words. All questions will have equal marks. (10×02=20)*

***Section-B*** ***Max. Marks-50***

*This section will have* ***10*** *questions, having* ***02*** *questions from each unit, one question to be attempted from each unit. Word limit approximately* ***400-500*** *words. Questions may have sub divisions. All questions will have equal marks. (10×05=50)*



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## SECTION - A

1 (i) How do you take user input in C'?

(ii) What is the difference between – and – – in C'?

(iii) What is a pseudocode'?

(iv) What is a keyword'? Give two examples.

(v) What is the syntax of a For loop'?

(vi) What is an infinite loop'?

(vii) What is the difference between one dimensional and a two - dimensional array'?

(viii) What is a NULL pointer'?

(ix) What is the purpose of # include in C'?

(x) How do you declare a 'structure' in C'?

## SECTION - B

### UNIT-I

2 (a) Explain the structure of a 'C' program with an example.

(b) What is an algorithm'? Explain its characteristics and importance in 'C' programming.

**OR**

(a) Draw a flowchart to check if given number is EVEN or ODD.

(b) What are the various data types available in 'C' language? Give their importance.



### UNIT-II

3 (a) Write a program to implement a calculator in C language, using SWITCH-CASE statement and different operators.

(b) What do you understand by operator precedence in 'C' language? Explain its utility with suitable example.

**OR**

(a) Explain the different operators available in 'C' programming. Also, give their significance.

(b) Write a 'C' program to find the maximum of two numbers using the 'ternary(?:)' operator.

### UNIT-III

4 (a) Write a 'C' program to print the fibonacci series using a loop.



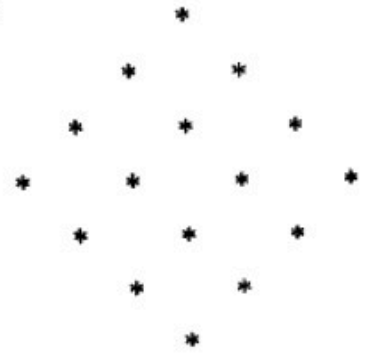
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(b) Give comparisons between FOR loop, WHILE loop and DO-WHILE loop with suitable examples.

**OR**

(a) Explain the purpose of break and continue statements in 'C' programming, with examples.

(b) Write a 'C' program to print the following:



## UNIT-IV

5 (a) Explain the differences between global and local variables used in functions in C programming. Give suitable examples.

(b) What do you understand by pointers? Give their significance in memory management.

**OR**



(a) Write a C program to illustrate sorting using arrays.

(b) What do you understand by arrays? Explain the different types of arrays with examples.

## UNIT-V

6 Write short notes on:

(a) Nested structure

(b) Array of structure

(c) Enum

**OR**

Write short notes on:

(a) Arrays within structures

(b) Union

(c) Differentiate structure and union



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