

1704

**B.C.A. (Part-I) Examination – 2024**

(Faculty of Science)

(Three-Year Scheme of 10+2+3 Pattern)

**104-Principles of Programming Language Through 'C'**

Time Allowed: Three Hours

Maximum Marks: 100

Answer of all the questions (short answer as well as descriptive) are to be given in the main answer-book only. Answer of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book. One complete question should not be answered at different places in the answer-book.

Write your roll number on question paper before start writing answer of questions.

Question paper consists of three parts.

All three parts are compulsory.

**Part –I: (Very Short Answer)** consists of 10 questions of 2 marks each. Maximum limit for each question is up to 40 words.

**Part –II: (Short Answer)** consists of 5 questions of 4 marks each. Maximum limit for each question is up to 80 words.

**Part –III: (Long Answer)** consists of 5 questions of 12 marks each with one question from each unit with internal choice.

**PART-I**

1. Give very short answer to the following -

[10×2=20]

- (a) What is an Assembler?
- (b) What is Pseudo-code?
- (c) What is C?
- (d) What is comments?
- (e) What is role of 'continue' keyword?
- (f) What is string?
- (g) What do you mean by function calls?
- (h) What are main uses of pointers?
- (i) How do you initialize a structure?
- (j) Write any two un-formatted I/O functions name.

## PART-II

2. Short answer type questions. Attempt all.

[5×4=20]

- What are some common symbols used in flowcharts?
- Write a C program to read radius of a circle and to find area and circumference.
- What is the difference between a do-while loop and a while loop?
- What do you mean by recursion function? Explain with example.
- Explain the following functions with syntax -
  - fscanf( )

(ii) fprint( )

## PART-III

- What are the language evaluation criteria? Explain. [6]
  - Differentiate between low-level and high-level programming language. [6]

OR

What is an algorithm? What are the characteristics of an algorithm? Write an algorithm to display first 10 terms of Fibonacci series. [3+4+5=12]

- Explain the basic structure of C-program with example. [12]

OR

Explain the switch statement with syntax and example. [12]

- What is nested loops? When we use nested loops? Write a C program to display 10 to 20 multiplication tables using nested loops. [12]

OR

~~How to declaration and initialization of one-dimensional and two-dimensional arrays? Explain with examples.~~ [12]

- Explain the following - [3×4=12]
  - Library function
  - Function definition
  - Function prototype
  - Parameters or Arguments

OR

What is the difference between call by value and call by address? Explain each with example. [6+6=12]

- What is structure? How to use nested structure? Explain nested structure with example. [3+4+5=12]

OR

What do you mean by file handling? Explain various file handling functions with example. [4+8=12]