

5-1

*S. S. Jain Subodh college of Global Excellence*  
*Pre-University Examination-2022*

8

BCA-I

Principle Of Programming Language  
Paper-IV

Time:3 hour

MaxMarks-100

All questions are compulsory.

Part-I

Q.1. All question carries 2 marks.

[10\*2=20]

- a. What do you mean algorithm?
- b. What do you understand by the machine level language?
- c. Draw and list any 5 components used in flow chart?
- d. Define an array and declare an array to held 5 real number values?
- e. What are local variable and global variable?
- f. What is null pointer?
- g. Discuss purpose and syntax of goto statement?
- h. What is difference between formal and actual parameter?
- i. What is the file handling?
- j. What is a function prototype? What are its elements?

PART-II

[5\*4=20]

Q2. Draw a flow chart to calculate factorial of a given number.

Q3. Write a c program to check if the year entered is a leap year and not leap year defined as every 4<sup>th</sup> year, if it is non-centenary year and every 400<sup>th</sup> year otherwise.

Q4. Difference between for, while loop and do while loop.

Q5. Differentiate between call by value and call by reference.

Q6. Discuss the purpose of following function: -

- (a) putch
- (b) puts
- (c) putchar
- (d) fseek

## PART-III

Q.7. Write a pseudo code and draw flow chart to computer sum of digit of a positive integer. 12

OR

Discuss the machine level, Assembly and high level language in detail?

Q8. Explain different data type available in C?

12

OR

Write a program to input basic salary of an employee and calculate its gross salary according to the following:

Basic Salary  $\leq$  10,000; HRA=20%; DA=80%

Basic Salary  $\leq$  20,000; HRA=25%; DA=90%

Basic Salary  $>$  20,000; HRA=30%; DA=95%

Q9. Write a program to find all prime number 1 to N.

12

OR

Write a c program to find the length of a string without using built in function

Q10. Write a c program to input and sort a array of integer using linear sort.

12

OR

.What do you mean recursion? Write a recursive program in c to print all the element of an array.

Q11. What are pointer variable? Write a code in c to illustrate the use to indirection operator (\*) to access the value pointer to pointer.

12

OR

What are the structure and the Union? Explain in briefly.

## B.C.A. (Part-I) EXAMINATION - 2022

(Faculty of Science)

101796

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

**PRINCIPLES OF PROGRAMMING LANGUAGE  
(THROUGH 'C')**

Time Allowed : Three Hours

Maximum Marks : 100

Answers of **all** the questions (Short answer as well as descriptive) are to be given in the main answer-book only. Answers 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 answers 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 upto **40** words.

**PART-II:** (Short answer) consists of **5** questions of **4** marks each. Maximum limit for each question is upto **80** words.

**PART-III:** (Long answer) consists of **5** questions of **12** marks each with internal choice.

**PART - I**

1. Attempt **all** questions. Each question carries **2** marks.

**10x2=20**

- (a) What do you mean by procedural programming language ?
- (b) What is a keyword in C ?
- (c) Define global and local variable in C with example.
- (d) What is a constant variable and how they are declared and initialized ?
- (e) Define the use of goto statement with example.
- (f) What do you mean by entry-controlled loop and exit-controlled loop ?
- (g) What do you mean by pre-defined and user defined functions ?
- (h) What is pointer variable ?
- (i) What do you mean by typedef ?
- (j) What is structure ? Write its declaration syntax.



## PART - II

2. Attempt all questions. Each question carries 4 marks.

5x4=20

- (a) Define the basic structure of C program.
- (b) What is data type ? Draw the classification diagram of data types in C along with their size and range.
- (c) What is loops in C ? Write difference between while and do while with example.
- (d) Explain user defined and library functions in C with example.
- (e) What do you mean by a text file and binary file in file handling ?

## PART - III

3. Explain the history of evolution of C programming language. What is the basic concepts of C language ? 12

OR

Write difference between Algorithm, Pseudocode and Flow Chart with proper example. 12

4. Explain tokens in C language with proper example. 12

OR

Explain Decision making statement with suitable example. 12

5. What is 2-D array ? Write a code to declare and initialize a 2-D array. 12

OR

Explain string handling functions in C. 12

6. Explain formal and actual argument of a function. Write a program of call by reference in C. 12

OR

(a) What is null pointer and void pointer ? 6+6=12

(b) Explain pointer to pointer with proper example.

7. What do you understand by file handling ? Explain the methods used for file handling in C language with syntax. 12

OR

Explain the following :

3x4=12

- (a) Typedef
- (b) Union
- (c) Size of structure

