Total number of printed pages–4

52/44 (1) CIT0100204

2023

INTRODUCTION TO C-PROGRAMMING

(Common to BCA)

Paper : CIT 0100204

Full Marks : 45

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Fill in the blanks : 1×5=5

   (a) C language has been developed by ____.

   (b) ____ is the language directly understood by the computer.

   (c) A string is terminated by a _____ character.

   (d) In a two-dimensional array, the first index identifier the _____ of an element.

   (e) # include is called _____.

Contd.

2. Answer the following questions : ***(any five)*** 2×5=10

(a) What is a flowchart ? List the rules of flowchart.

(b) What is an algorithm ? Explain its needs.

(c) Define compiler and interpreter.

(d) Define high level language and low level language.

(e) Distinguish between local and global variables in C.

(f) Distinguish between $++x$ and $x++$

(g) Explain the function scanf( ) along with format conversion with example.

(h) What is pointer arithmetic ? How is it performed ?

(i) What is ternary operator ? Give example.

(j) Write a switch statement that prints 'Yes' if a variable ch is 'y', print 'No' if ch is 'n' and prints unknown response otherwise.

3. Answer the following questions : ***(any four)*** 5×4=20

(a) What is associativity ? Explain the operator precedence.

(b) Explain the logical, relational and arithmetic operators used in C.

(c) What are the loop control structures ? Discuss the three loop control structures. Briefly.

(d) Write a C program to find the sum and average of given three numbers. Also draw the flowchart.

(e) Define a structure. Explain with an example how a structure is declared and initialized.

(f) What is function ? Differentiate between formal parameters and actual parameters.

(g) Explain the concept of recursive function with example.

(h) Explain the working of the following string handling function

(i) strcat( )

(ii) strcpy( )

(iii) strcmp( )

4. Answer the following : ***(any one)*** 10×1=10

(a) What is an array ? How do we initialize an one-dimensional and two-dimensional array ? Write a program in C to generate transpose of a matrix.

(b) What are strings ? How strings are represented in main memory ? Write a program in C to count number of vowels in a string.

(c) What is pointer ? What are the major advantages of a pointer ? Write a program in C to add two numbers using pointer.

(d) What is file ? Explain the different modes in which a file can be opened. Write a program in C to copy a text file to another file.
