Bachelor of Science (B.Sc.I.T.) Semester–I (C.B.S.) Examination

PROGRAMMING METHODOLOGY IN "C"

Paper—II

Time : Three Hours]   [Full Marks : 50

N.B. :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) Draw flow chart to find out the roots of quadratic equation $ax^2 + bx + c = 0$.   5

(b) Write algorithm to find sum of first seven natural numbers divisible by 7.   5

OR

(c) Define algorithm. Explain any three characteristics of algorithm.   5

(d) Compare flow chart and algorithm.   5

EITHER

2. (a) Using switch statement write a program to print name of the month by entering month number otherwise print proper message for wrong entry.   5

(b) Draw flow chart and give syntax for entry control loop and exit control loop.   5

OR

(c) What are different types of operators used in C programming ? Explain ternary operator with example.   5

(d) Write a program to find out the sum of the following series till the last term $\leq \cdot 001$

$$x + \frac{1 \cdot x}{2!} + \frac{3 \cdot x}{3!} + \frac{4 \cdot x}{4!} + \cdots \cdots$$ 5

EITHER

3. (a) Write a recursive program to find out multiplication of two numbers using addition.   5

(b) What do you mean by array ? Explain two dimensional array with example.   5

OR

(c) Write a program to find out sum of rows and coloums of two dimensional array.   5

(d) What is storage class ? Explain with example.   5

EITHER

4. (a) Write a simple program to accept following record and store it in a file : 5

Student – Record

Student – Roll No

Student – Name

Student – Gender

Student – Class.

(b) Explain the following concept with example : 5

(i) Pointer Variable

(ii) Void Pointer

(iii) Pointer to pointer.

OR

(c) Explain command line argument. How is it used for copying the contents of one file to another?

5

(d) Explain the following file type in C-programming with syntax of opening it : 5

(i) Sequential file

(ii) Random Access file.

5. Attempt **All** :

(a) What do you mean by problem solving ? Explain in brief 2½

(b) Define variable and constant. Explain. 2½

(c) Write a program to enter 50 values in an array. Find number of elements below average, above average and equal to average of all elements. 2½

(d) Explain different modes of opening the file. 2½