

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

COMPUTER SCIENCE (Programming in “C”)

Compulsory Paper—1

Time : Three Hours]

[Maximum Marks : 50

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

(2) Draw neat and labelled diagrams wherever necessary.

EITHER

1. (a) Explain the following : 5
 - (a) Sequence
 - (b) Selection
 - (c) Iteration
 - (d) Modular.
- (b) Write an algorithm and draw a flowchart to decide whether a number is prime or not. 5

OR

- (c) What is a flowchart ? Explain its symbols. 5
- (d) What is pseudocode ? Write a pseudocode to decide larger of two numbers. 5

EITHER

2. (a) Explain various datatypes in C. 5
- (b) Write a program in C to decide whether a number is prime or not. 5

OR

- (c) Explain control structures in C. 5
- (d) Write a short note on break and continue statements in C. 5

EITHER

3. (a) What is an array ? Write a program to sort an array using bubble's sort. 5
- (b) Explain the following string functions : 5
 - (i) strcpy () (ii) strcmp () (iii) strrev
 - (iv)strupr () (v) strlen ()

OR

- (c) Explain storage classes in C. 5
- (d) What is recursion ? Write a recursive program to find the factorial of a number. 5

EITHER

- 4. (a) Define Structure. Write down the syntax and example for a structure. 5
- (b) What is a pointer ? Explain the use of Address operator (&) in C. Also explain different types of pointers. 5

OR

- (c) What is Pointer Arithmetic ? Explain with example. 5
 - (d) Explain command line arguments with an example. 5
5. Attempt **all** :
- (a) Define Algorithm. Explain its need. 2½
 - (b) Explain enumerated datatypes. 2½
 - (c) Differentiate between call by value and call by reference. 2½
 - (d) Explain file modes in C. 2½