(T-1269) Roll No. .....

ID—220-CU-111631/111631-B2

B. Tech. EXAMINATION, 2023

(First Semester)

COMPUTER SCIENCE AND ENGINEERING

(CYBER SECURITY)

Programming for Problem Solving Using C

Time : 3 Hours *Maximum Marks : 70*

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Section I is compulsory. Attempt *Five* questions in all, selecting *four* questions from Section II. All questions carry equal marks.

Section I

1. (a) What do you understand by strings ?
   (b) Give an example of 'for' loop.
   (c) Explain various data types used in C.
   (d) What do you mean by storage classes ?
   (e) Define Structures.
   (f) What is function prototype ?
   (g) Differentiate between Algorithm and Flow charts. 7×2=14

Section II

2. (a) What do you understand by loops ? Discuss 'for' loop and its syntax with example. 7
   (b) Write a program that reads a number and determines if the number is zero, positive or negative. 7

3. (a) Differentiate between 'while' and 'do while' loop with example. 7
   (b) Write a program to print the days of a week by using switch statement. 7

4. (a) Define Array. How is it declared and initialised ? Explain using an example. 7

(b) What are recursive functions ? Write a program to find the factorial of a number using recursion. 7

5. (a) Explain Call by Reference with an example. 7

(b) Write a program to generate Fibonacci series. 7

6. Define Pointers. Explain use of pointers in Self-Referential structures. 14

7. Explain different types of Operators used in 'C'. 14