

## **SECOND ASSIGNMENT JUNE SEMESTER 2021**

---

### **BACHELOR OF COMPUTER SCIENCE (HONS.) (IN COLLABORATION WITH IUKL)**

---

### **DATA STRUCTURE AND ALGORITHM (CSC 2516)**

---

**LECTURER'S NAME : PRAKASH CHANDRA**

#### **GENERAL INSTRUCTIONS**

1. This question booklet consists of 2 pages including this page.
2. There is one **SECTION** in this question booklet.
3. Please submit assignment solution in **SOFT COPY (PDF FORMAT)**.



**SECTION A**

**(30 Marks)**

**This section consists of THREE (3) questions. Answer all question.**

1.

- a) Explain the concept of Linked List and advantages of Linked list over arrays.

(2 marks)

- b) Write C program to implement: Insert, delete, search and display operations in singly linked list.

(8 marks)

2. Using STACK, convert the following infix expression into postfix expression:

- a)  $(A+B)*C-(D-E)*(F+G)$

NOTE: use tables with proper heading and descriptions.

(5 marks)

3.

- a) List real world applications of doubly linked lists.

(5 marks)

- b) Write a C program to implement queue data structure using linked lists.

(10 marks)

**\*\*\*END OF QUESTIONS\*\*\***