032CSC011 – S – 23 – 2291

SECOND SEMESTER B.SC. (NEP) DEGREE EXAMINATION, AUG./SEPT. 2023

COMPUTER SCIENCE (DSC – 1)

Data Structures

Time : 2 Hours] [Max. Marks : 60

Instruction : *Answer **all** the questions as per the **internal** choices.*

PART – A

I. Answer **any five** of the following. **2** marks **each**.

1) What do you mean by structure ? How do you declare it ?
2) Define sequential search. Give one example.
3) Define : stack, queue.
4) Mention the array representation of stack.
5) Define : linked list. State its type.
6) Draw a neat diagram of singly linked list.

PART – B

II. Answer **any four** of the following. **5** marks **each**.

7) Explain the classification of Data Structure.
8) Write a note on pointers.
9) Explain sequential search.
10) Explain the conversion from infix to prefix with an example.
11) Explain the advantages and disadvantages of linked list.

PART – C

III. Answer **any three** of the following. **10** marks **each**.

12) Write a 'C' program to create, initialize and access a pointer variable.
13) Apply quick sort algorithm to sort the following elements.
    5, 3, 8, 1, 4, 6, 2, 7.
14) Explain binary search algorithm with example.
15) Explain structure with syntax and example.
