This question paper contains **2** printed pages]

PA—313—2024

FACULTY OF SCIENCE AND TECHNOLOGY

B.Sc. (Second Semester) EXAMINATION

APRIL/MAY, 2024

(CBCS/New Pattern)

COMPUTER SCIENCE

Paper–III

(Introduction to Data Structure)

(Saturday, 04-05-2024)   **Time : 10.00 a.m. to 12.00 noon**

Time—2 Hours   *Maximum Marks—40*

N.B. :— (*i*) Attempt *all* questions.

(*ii*) Draw neat labelled diagram wherever necessary.

1.   What is linked list ? Explain representation of linked list in memory also write

an algorithm for inserting an element at the beginning of a linked list.   15

Or

(*a*)   What is data structure ? Explain various data structure operation in

detail.   8

(*b*)   Explain control structures in detail.   7

P.T.O.

2.   What is 'Queue' ? Explain memory representation of 'queue' ? Write and explain

the algorithm for inserting an element in 'queue'. 15

Or

(*a*)   What is 'Graph' ? Explain memory representation of graphs.   8

(*b*)   Explain "Threaded Binary tree".   7

3.   Write short notes on (any *two) :*   10

(*a*)   Algorithmic notation

(*b*)   Traversing and Searching

(*c*)   Memory represenation of stack

(*d*)   Over flow and under flow