

**Professional Course (Odd) Examination, 2024**

( CBCS )

( 3rd Semester )

**BACHELOR OF COMPUTER APPLICATIONS**

**( Data Structure using C Lab )**

*Full Marks : 75*

*Time : 3 hours*

*The figures in the margin indicate full marks for the questions*

PART—A

**A.** Answer any *two* from the following : 15×2=30

1. Write a C program using merge sort.
2. Write a C program to implement linear search.
3. Write a C program using quick sort.

PART—B

**B.** Answer any *two* from the following : 10×2=20

1. Write a C program to construct a stack of integers and to perform the following operations on it :
  - (a) Push
  - (b) Pop
  - (c) Display

The program should print appropriate messages for stack overflow, stack underflow and stack empty.

2. Write a C program to construct doubly linked list and perform the following operations :
  - (a) Insert(first,middle,lastposition)
  - (b) Delete(first,middle,lastposition)
  - (c) Display
3. Write a C program to construct circular linked list for the following operations :
  - (a) Insert
  - (b) Delete
  - (c) Display

<b>C.</b> Practical record book.	10
<b>D.</b> Viva voce.	15

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