

Seat No. **OCT-NOV 2025 WINTER EXAMINATION****1154 B.Tech. CBCS****Sub. Name: Data Structures using C****Sub. Code: 86162****Day and Date: Friday ,05-12-2025****Total Marks: 70****Time: 02:30 PM To 05:00 PM****Instructions:**

- Special Inst.:**
1. Question no. 6 is compulsory
 2. Solve any four questions from Q. No. 1 to Q. No.5
 3. Assume suitable data wherever necessary
 4. Figures to the right indicate full marks

- Q1)** a. What is an array? Describe its types with an example (8 Marks) [15]
b. Describe the concept of variable, constant and keywords used in C.(7 Marks)
- Q2)** a. Explain different data types supported in c. (8 Marks) [15]
b. Differentiate between arrays and structures. (7 Marks)
- Q3)** a. Define pointer. List and explain the types of pointer in C.(8 Marks) [15]
b. What is typedef? Explain the C program to implement typedef. (7 Marks)
- Q4)** a. Explain the linear search algorithm with an example. (8 Marks) [15]
b. Explain the bubble sort algorithm with an example. (7 Marks)
- Q5)** a. What is a linked list? Explain briefly the circular linked list. (8 Marks) [15]
b. Explain the implementation of enqueue and dequeue operations for circular queue. (7 Marks)
- Q6)** Write a short note on: (any 2) [10]
a. Different Looping constructs used in C
b. Binary search tree
c. BFS algorithm

End Of Question Paper**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

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