

# Data Structure (CS-303) — UNIT 5 PYQ

## ANALYSIS

Maine tumhare uploaded PYQs analyze kiye.

Unit-5 mainly:

Sorting and Searching

topics se related hai.

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## UNIT-5 IMPORTANT TOPICS

### SORTING

- Bubble Sort
  - Selection Sort
  - Insertion Sort
  - Quick Sort
  - Merge Sort
  - Heap Sort
  - Shell Sort
  - Radix Sort
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### SEARCHING

- Sequential Search
  - Binary Search
-

# HASHING & INDEXING

- Hash function
  - Collision
  - Indexing methods
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# APPLICATIONS

- Data structures in OS
  - DBMS applications
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# MOST REPEATED QUESTIONS

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## 1. Quick Sort

### MOST REPEATED QUESTION

Appeared in:

- June 2024
  - Dec 2025
  - June 2023
  - Dec 2024
- 

## Expected in Upcoming Exam

 100% HIGHLY EXPECTED

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## Prepare:

- Pivot selection
  - Partitioning
  - Recursive sorting
  - Example
- 

## 2. Merge Sort

 VERY IMPORTANT

Appeared in:

- June 2024
  - Dec 2024
  - June 2023
- 

## Expected

 HIGH chance

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## Prepare:

- Divide and conquer
  - Merging process
  - Advantages
- 

## 3. Heap Sort

 VERY IMPORTANT

Appeared in:

- Dec 2025
  - June 2024
- 

## Expected

 HIGHLY EXPECTED

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## Prepare:

- Max heap
  - Heapify
  - Heap tree
- 

## 4. Bubble Sort

 REPEATED MANY TIMES

Appeared in:

- June 2023
  - Dec 2024
  - Dec 2025
- 

## Expected

 HIGH chance

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# 5. Binary Search

 VERY IMPORTANT

Appeared in:

- June 2024
  - June 2023
  - Dec 2024
- 

## Expected

 HIGHLY EXPECTED

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## Prepare:

- Sorted array
  - Middle element logic
  - Example
- 

# 6. Sequential Search

Appeared in:

- June 2023
  - Dec 2025
- 

## Expected

 Important

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## Prepare:

- Linear traversal
  - Comparison with binary search
- 

## 7. Difference Between Searching Methods

 IMPORTANT

Appeared in:

- June 2024
  - Dec 2024
- 

## Expected

 HIGH chance

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## 8. Hashing

 VERY IMPORTANT

Appeared in:

- June 2023
  - Dec 2025
-

# Expected

✓ HIGHLY EXPECTED

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## Prepare:

- Hash function
  - Collision
  - Advantages
- 

## 9. Comparison of Sorting Techniques

🔥 VERY IMPORTANT

Appeared in:

- June 2024
  - Dec 2025
- 

# Expected

✓ HIGH chance

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## Prepare:

- Time complexity
  - Stability
  - Advantages/disadvantages
-



# **MOST EXPECTED QUESTIONS FOR UPCOMING EXAM**

## **TOP 10 PREDICTED QUESTIONS**

**1.**

Explain Quick sort with example.

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**2.**

Explain Merge sort with example.

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**3.**

Explain Heap sort with heapify.

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**4.**

Explain Bubble sort.

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**5.**

Explain Binary search with example.

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**6.**

Differentiate Sequential and Binary search.

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7.

Explain hashing with example.

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8.

Compare different sorting techniques.

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9.

Explain insertion sort.

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10.

Explain selection sort.

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## FINAL EXAM STRATEGY

### FIRST PRIORITY

- Quick Sort
  - Merge Sort
  - Binary Search
  - Heap Sort
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### SECOND PRIORITY

- ✓ Hashing
  - ✓ Sorting comparison
  - ✓ Bubble sort
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## **THIRD PRIORITY**

- ✓ Selection sort
- ✓ Insertion sort
- ✓ Sequential search