Data Structure (CS-303) — UNIT 2 PYQ ANALYSIS 🔥

UNIT-2 IMPORTANT TOPICS

STACKS

- Stack as ADT
- Stack implementation
- Stack using array
- Stack using linked list
- Multiple stacks
- Applications of stack
- Infix to postfix conversion
- Postfix evaluation
- Recursion

QUEUES

- Queue as ADT
- Queue implementation
- Circular queue
- DQUEUE
- Priority Queue
- Queue applications

⭐ MOST REPEATED QUESTIONS

---

1. Infix to Postfix Conversion Using Stack

🔥 MOST REPEATED QUESTION

Appeared in:

- June 2024
- Dec 2025
- Nov 2022
- June 2023

Expected in Upcoming Exam

✅ 100% HIGHLY EXPECTED

Prepare:

- Algorithm
- Example conversion
- Stack working
- Precedence table

---

2. Stack Implementation Using Array

🔥 VERY IMPORTANT

Appeared in:

- Dec 2024
- June 2023
- Nov 2022

Expected

✅ HIGH chance

Prepare:

- PUSH algorithm
- POP algorithm
- Overflow
- Underflow

---

3. Circular Queue

🔥 VERY IMPORTANT

Appeared in:

- June 2024
- Dec 2025
- Dec 2024

Expected

✅ HIGHLY EXPECTED

Prepare:

- Structure

- Algorithms
- Advantages
- Memory wastage problem

---

4. Difference Between Stack and Queue

🔥 REPEATED MANY TIMES

Appeared in:

- June 2023
- June 2024
- Dec 2024

Expected

✅ HIGH chance

Prepare:

- LIFO vs FIFO
- Operations
- Applications
- Comparison table

---

5. Postfix Expression Evaluation

🔥 IMPORTANT

Appeared in:

- June 2023
- Dec 2024

Expected

✅ HIGH chance

Prepare:

- Stack method
- Algorithm
- Example

---

6. Recursion and Stack Memory

Appeared in:

- June 2024
- Dec 2025

Expected

✅ Important

Prepare:

- Recursive function
- Call stack

- Advantages/disadvantages

---

7. Queue Implementation

Appeared in:

- Dec 2025
- June 2023

Expected

✅ Important

Prepare:

- ENQUEUE
- DEQUEUE
- Array implementation

---

8. DQUEUE

Appeared in:

- Dec 2024
- June 2024

Expected

✅ Moderate to High

Prepare:

- Types
- Operations
- Applications

---

9. Priority Queue

Appeared in:

- June 2024
- Dec 2025

Expected

✅ Moderate to High

Prepare:

- Priority scheduling
- Types
- Applications

🔥 MOST EXPECTED QUESTIONS FOR UPCOMING EXAM

TOP 10 PREDICTED QUESTIONS

1.

Explain infix to postfix conversion using stack with example.

2.

Explain stack implementation with algorithms.

3.

Explain circular queue with advantages.

4.

Differentiate stack and queue in detail.

5.

Explain postfix expression evaluation using stack.

6.

Explain recursion and stack memory.

7.

Explain queue implementation using array.

8.

Explain DQUEUE with types.

9.

Explain Priority Queue with applications.

10.

Write algorithms for PUSH and POP operations.

🔥 MOST IMPORTANT 14-MARK QUESTIONS

VERY HIGH PROBABILITY

1.

Infix to postfix conversion using stack with example.

2.

Stack implementation with algorithms.

3.

Circular queue with advantages.

4.

Difference between stack and queue.

5.

Queue implementation using arrays.

🔥 MOST IMPORTANT 7-MARK QUESTIONS

1. Define stack and explain operations.
2. Explain PUSH and POP algorithms.
3. Explain postfix evaluation.
4. Define recursion.
5. Explain circular queue.
6. Explain DQUEUE.
7. Explain priority queue.
8. Differentiate stack and queue.

FINAL EXAM STRATEGY 🚀

FIRST PRIORITY

✅ Infix to postfix
✅ Stack implementation
✅ Circular queue
✅ Stack vs Queue

SECOND PRIORITY

✅ Postfix evaluation

✅ Queue implementation

✅ Recursion

THIRD PRIORITY

✅ DQUEUE

✅ Priority Queue