

**Chapter 4. Queue**

1. A queue works on which principle?

- a) LIFO
- b) FIFO
- c) FILO
- d) Random

Answer: b) FIFO

2. The front end of a queue is used for:

- a) Insertion
- b) Deletion
- c) Both
- d) None

Answer: b) Deletion

3. The rear end of a queue is used for:

- a) Insertion
- b) Deletion
- c) Both
- d) None

Answer: a) Insertion

4. Another name for FRONT in a queue is:

- a) Head
- b) Tail
- c) Rear
- d) End

Answer: a) Head

5. Another name for REAR in a queue is:

- a) Head
- b) Tail
- c) Front
- d) Start

Answer: b) Tail

6. The process of adding an element to a queue is called:

- a) Push
- b) Enqueue
- c) Insert
- d) Append

Answer: b) Enqueue

7. The process of removing an element from a queue is called:

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- a) Pop
  - b) Delete
  - c) Dequeue
  - d) Remove
- Answer: c) Dequeue

8. Trying to remove from an empty queue leads to:

- a) Overflow
- b) Underflow
- c) Deadlock
- d) Error only

Answer: b) Underflow

9. Trying to insert into a full queue leads to:

- a) Overflow
- b) Underflow
- c) Deadlock
- d) Exception

Answer: a) Overflow

10. Queue is also known as:

- a) First Come Last Served (FCLS)
- b) First Come First Served (FCFS)
- c) Last In First Out (LIFO)
- d) Random Service

Answer: b) FCFS

11. In railway reservation waiting list, tickets are managed using:

- a) Stack
- b) Queue
- c) Tree
- d) Graph

Answer: b) Queue

12. In customer care IVRS, calls are handled using:

- a) Queue
- b) Stack
- c) Linked List
- d) Array

Answer: a) Queue

13. CPU job scheduling in OS uses:

- a) Queue
- b) Stack
- c) Tree

d) Graph

Answer: a) Queue

14. Printing multiple documents on a shared printer uses:

a) Queue

b) Tree

c) Stack

d) Heap

Answer: a) Queue

15. Highway toll tax booth vehicles follow:

a) FIFO

b) LIFO

c) Random

d) Binary Search

Answer: a) FIFO

16. Which operation checks if the queue is empty?

a) isEmpty()

b) isFull()

c) Peek()

d) Size()

Answer: a) isEmpty()

17. Which operation checks if queue is full?

a) isEmpty()

b) isFull()

c) Peek()

d) Size()

Answer: b) isFull()

18. Which operation returns the front element without removing it?

a) Pop

b) Peek

c) Enqueue

d) Insert

Answer: b) Peek

19. Which operation tells the number of elements in the queue?

a) isEmpty()

b) size()

c) count()

d) length()

Answer: b) size()

20. In Python, enqueue operation is usually implemented with:

- a) insert()
- b) append()
- c) pop()
- d) remove()

Answer: b) append()

21. In Python, dequeue operation is usually implemented with:

- a) pop()
- b) remove()
- c) pop(0)
- d) del()

Answer: c) pop(0)

22. Which function will return None if queue is empty?

- a) dequeue()
- b) peek()
- c) size()
- d) isEmpty()

Answer: b) peek()

23. Overflow situation in Python queue cannot occur because:

- a) Python lists are static
- b) Python lists are dynamic
- c) Python throws errors
- d) None

Answer: b) Python lists are dynamic

24. Deletion in a queue always happens from:

- a) Rear
- b) Front
- c) Middle
- d) Both ends

Answer: b) Front

25. In a queue with elements A,B,C,D (A at front), after one dequeue, which is removed?

- a) A
- b) D
- c) B
- d) C

Answer: a) A

26. A deque allows insertion and deletion from:

- a) Front only
- b) Rear only

c) Both ends

d) Middle only

Answer: c) Both ends

27. Another name for deque is:

a) Double Queue

b) Double ended queue

c) Two-way stack

d) Bidirectional array

Answer: b) Double ended queue

28. If insertion and deletion are performed at the same end in deque, it behaves as:

a) Queue

b) Stack

c) List

d) Tree

Answer: b) Stack

29. If insertion and deletion are performed at opposite ends in deque, it behaves as:

a) Queue

b) Stack

c) Graph

d) List

Answer: a) Queue

30. Which of the following is NOT a deque operation?

a) insertFront()

b) insertRear()

c) deleteMiddle()

d) deleteRear()

Answer: c) deleteMiddle()

31. Browser history (Ctrl+Shift+T reopen tab) is managed using:

a) Queue

b) Deque

c) Array

d) Graph

Answer: b) Deque

32. Undo/Redo operation in text editors uses:

a) Stack

b) Queue

c) Deque

d) Tree

Answer: c) Deque

33. Palindrome checking using deletion from both ends is implemented with:

- a) Stack
- b) Queue
- c) Deque
- d) Heap

Answer: c) Deque

34. In highway tollbooth with multiple lanes merging, which structure is useful?

- a) Queue
- b) Stack
- c) Deque
- d) Tree

Answer: c) Deque

35. At a ticket counter, if a person rejoins from the front after buying a ticket, which DS is suitable?

- a) Queue
- b) Deque
- c) Stack
- d) Linked list

Answer: b) Deque

36. In deque, inserting at front is called:

- a) insertFront()
- b) enqueue()
- c) push()
- d) addFront()

Answer: a) insertFront()

37. In deque, inserting at rear is called:

- a) insertRear()
- b) enqueue()
- c) push()
- d) addRear()

Answer: a) insertRear()

38. In deque, removing from front is called:

- a) deleteFront()
- b) dequeue()
- c) popFront()
- d) removeFront()

Answer: a) deleteFront()

39. In deque, removing from rear is called:

- a) deleteRear()
- b) dequeue()
- c) popRear()
- d) removeRear()

Answer: a) deleteRear()

40. In Python, insertFront() can be implemented with:

- a) append()
- b) insert(0,element)
- c) pop()
- d) remove()

Answer: b) insert(0,element)

41. deletionRear() in deque is implemented with:

- a) pop()
- b) pop(0)
- c) remove()
- d) del()

Answer: a) pop()

42. deletionFront() in deque is implemented with:

- a) pop()
- b) pop(0)
- c) remove()
- d) del()

Answer: b) pop(0)

43. getFront() in deque returns:

- a) Last element
- b) First element
- c) Middle element
- d) None

Answer: b) First element

44. getRear() in deque returns:

- a) First element
- b) Last element
- c) Middle element
- d) Random element

Answer: b) Last element

45. Which data structure can implement both stack and queue?

- a) Queue
- b) Deque

- c) Array
- d) Linked list

Answer: b) Deque

46. Queue is a \_\_\_\_\_ linear data structure.

- a) Ordered
- b) Unordered
- c) Random
- d) Non-linear

Answer: a) Ordered

47. In bank counter queue example, when first person is served, it is an example of:

- a) Enqueue
- b) Dequeue
- c) Overflow
- d) Peek

Answer: b) Dequeue

48. Which structure is best to check palindromes efficiently?

- a) Queue
- b) Deque
- c) Stack
- d) Array

Answer: b) Deque

49. Enqueue followed by dequeue results in:

- a) Removal of last element
- b) Removal of first element
- c) Queue remains unchanged
- d) Overflow

Answer: b) Removal of first element

50. Which operation causes underflow in a queue?

- a) Inserting in full queue
- b) Deleting from empty queue
- c) Viewing element
- d) Adding at rear

Answer: b) Deleting from empty queue