

1. Illustrate the queue operation using following function calls of size = 5. Enqueue (25), Enqueue (37), Enqueue (90), Dequeue (), Enqueue (15), Enqueue (40), Enqueue (12), Dequeue (), Dequeue (), Dequeue (), Dequeue ().

Sol. To illustrate the queue operation for a queue of size 5 with the given sequence of function calls, let's through each step:

Initial Queue state:-

* The queue is empty initially

* maximum size of the queue : 5

Operations:

1. Enqueue (25):

* Queue : '[25]'

* Front = 0, Rear = 0

2. Enqueue (37);

* Queue : '[25, 37]'

* Front = 0, Rear = 1