**20186039**

Suppose that a client performs an intermixed sequence of (queue) enqueue and dequeue operations. The enqueue operations put the integers 0 through 9 in order onto the queue; the dequeue operations print out the return value. Which of the following sequence(s) could not occur?  
(a) 0 1 2 3 4 5 6 7 8 9  
(b) 4 6 8 7 5 3 2 9 0 1   
(c) 2 5 6 7 4 8 9 3 1 0  
(d) 4 3 2 1 0 5 6 7 8 9

1. 0 1 2 3 4 5 6 7 8 9

|  |  |  |
| --- | --- | --- |
| **enqueue** | **dequeue** | **output** |
| Enqueue 0 |  |  |
| Enqueue 1 |  |  |
| Enqueue 2 |  |  |
| Enqueue 3 |  |  |
| Enqueue 4 |  |  |
| Enqueue 5 |  |  |
| Enqueue 6 |  |  |
| Enqueue 7 |  |  |
| Enqueue 8 |  |  |
| Enqueue 9 |  |  |
|  | Dequeue | 0 |
|  | Dequeue | 0 1 |
|  | Dequeue | 0 1 2 |
|  | Dequeue | 0 1 2 3 |
|  | Dequeue | 0 1 2 3 4 |
|  | Dequeue | 0 1 2 3 4 5 |
|  | Dequeue | 0 1 2 3 4 5 6 |
|  | Dequeue | 0 1 2 3 4 5 6 7 |
|  | Dequeue | 0 1 2 3 4 5 6 7 8 |
|  | Dequeue | 0 1 2 3 4 5 6 7 8 9 |
|  |  |  |
|  |  |  |
|  | OCCUR | 0 1 2 3 4 5 6 7 8 9 |

Note : Solution occur

**In the same case the b, c, d will not occur.**