Q.1: RQ: P_1, P_2, P_3, P_4, P_5, P_6, P_7, P_8, P_9, P_10, P_11

I/O Q: P_1, P_2, P_3, P_4, P_5

RQ: P_2, P_6, P_2, P_3

Page Table

<table>
<thead>
<tr>
<th>#</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>P_1</td>
<td>P_2</td>
<td>P_3</td>
<td>P_4</td>
<td>P_5</td>
</tr>
</tbody>
</table>

Note: A process cannot request any resource if it currently is waiting for a resource.

Q.2:

No deadlock.

RAG

Wait-for Graph
Q3: 

P1: {4, 5, 6, 5, 6, 3}  
P2: {4, 4, 5, 5, 6}  
P3/P4/P5: {4, 4, 5}  

TQ = 3, I/O needs 3, FCFS.

RQ: P1 P2 P3 P4 P5 P6 P7 P8 P9 P10

I/O Q: P1 P2 P3 P4 P5 P7 P8 (33) (53) (13) (15) (19) (34)

BQ: P5 P2 P6

Waiting time:  
P1: (25 - 5) - 5 = 20  
P2: (26 - 5) - 5 = 21  
P3: (22 - 5) - 3 = 19  
P4: (15 - 9) - 3 = 3  
P5: (18 - 10) - 3 = 5  
P6: (21 - 11) - 3 = 7  
P7: (35 - 23) - 3 = 9