1 CPU Scheduling
From which queue does the OS select the next process to be executed? (ready or waiting)

Ready Queue

2 CPU Scheduling
If a process has a CPU-burst of 53 milliseconds and the OS executes the Round Robin Algorithm with Quantum = 25 ms, how many times will the process be found in the CPU?

3 times

3 Synchronization
Can we synchronize the execution of threads that belong to different processes using semaphores? Why?

No, we cannot, because these threads do not share any memory, which is needed to share the semaphores.

4 Synchronization
We have 3 threads, which execute the corresponding code-snippets below:

<table>
<thead>
<tr>
<th>wait(S)</th>
<th>wait(S)</th>
<th>wait(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>print('*')</td>
<td>print('$')</td>
<td>print('#')</td>
</tr>
<tr>
<td>print('*')</td>
<td>print('$')</td>
<td>print('#')</td>
</tr>
<tr>
<td>signal(S)</td>
<td>signal(S)</td>
<td>signal(S)</td>
</tr>
</tbody>
</table>

If the $S$ is initialized to 1, can the program produce the output below?

1. **$$## ? Yes
2. $$**## ? Yes
3. *$*$## ? No
4. #*$#*$ ? No

If the $S$ is initialized to 2, can the program produce the output below?

1. ##$$** ? Yes
2. *$*$## ? Yes
3. *##*$$ ? Yes
4. *$#*$# ? No