

Assignment 7

516030910259 **Xinpeng Liu**

7.2 Mutual exclusion: A chopstick can only be held by one philosopher at one time.
Hold and wait: When a philosopher holds a chopstick, it will keep waiting for the other.
No preemption: The philosophers are equal. No one can grab chopsticks from others.
Circular wait: P_0 waits for the chopstick held by P_1 , P_1 waits for the chopstick held by P_2 , ..., P_4 wait for the chopstick held by P_1 .
The condition of ‘No Preemption’ can be avoided by giving the philosophers different priorities, and the philosopher with higher priority can grab chopstick from someone with lower priority

7.3 . Containment doesn’t need additional order definition, while circular-wait scheme needs.

Under containment, there is actually only one thread can execute at one time, while multiple threads can run at the same time under circular-wait scheme.
Circular-wait scheme can be more efficient than containment, but containment is easier.

7.5 The changes of b ., d . and f . can be made safely whenever they happen.