

1. No. if the access is read for both threads, then concurrency error will not occur.
2. b) , c) and d) are true

**Correct solution**

c) and d) are true

**Notes**

**Question** What does it mean when mutex is held by this thread?

**Question** What I do know is that `pthread_cond_wait` puts thread to sleep. My question here is, how come the mutex is not held when thread is in a blocked state/sleep?

3. a) Only b) causes starvation.
- b) Conditional variable is a queue that allows threads to be put themselves on to sleep (in blocked state) when thread it is not desired using `pthread_cond_wait` function.

Since there are no threads inside `cv1`, there is nothing to awake using `pthread_cond_signal`.

So, nothing will occur.

- c) System call is a subset of interrupt caused by user application to switch from user mode to kernel mode to perform privileged operations for the application.

Interrupt is a signal sent by hardware (e.g keyboard, mouse, hard drive) or software.

It tells the cpu to stop its activities and execute appropriate part of the operating system.