Conceptual Questions:

1) pthread_create() : create a new thread with attributes specified by attr within a process.
   pthread_join() : suspend execution of the calling thread until the target thread terminates, unless the target thread has already terminated.
   pthread_wait : block on a condition variable.
2) A thread shares the memory space of its parent process while each process has its own memory space. All threads can share same set of open files, child processes. It can access the memory of other threads.
3) Multithreading means running a process with multiple threads while multiprocessing means using two or more CPU within a single system. The advantages of multithreading are: responsiveness, resource sharing, economy and scalability. The disadvantages of multithreading are: difficulty of debugging and testing. The advantages of multiprocessing are: better performance and reliability. The disadvantages of multiprocessing are: the speed will be affected if one processor fails, expensive, required large memory.
4) Mutual exclusion prevents access to a shared resource simultaneously. Critical section is a part of a program that may not be executed by different processes concurrently.
5) In C, we will use pthread_mutex_lock() and pthread_mutex_unlock().
   pthread_mutex_lock(&mutex) : locks the mutex object referenced by mutex.
   pthread_mutex_unlock(&mutex) : unlocks the mutex.