1. Consider the interprocess-communication scheme where mailboxes are used.
   a. Suppose a process P wants to wait for two messages, one from mailbox A and one from mailbox B. What sequence of send and receive should it execute?
   b. What sequence of send and receive should P execute if P wants to wait for one message from mailbox A or from mailbox B (or from both)
   c. A receive operation makes a process wait until the mailbox is nonempty. Devise a scheme that allows a process to wait until a mailbox is empty, or explain why such a scheme cannot exist.

2. What are the benefits and the detriments of each of the following? Consider both the systems and the programmers’ levels.
   a. Direct and indirect communication
   b. Symmetric and asymmetric communication
   c. Send by copy and send by references

3. What resources are used when a thread is created? How do they differ from those used when a process is created?

4. A CPU-scheduling algorithm determines an order for the execution of its scheduled processes. Given n processes to be scheduled on one processor, how many different schedules are possible? Give a formula in terms of n.