## Chapter 1

- 1. An operating system must provide the users with an extended machine, and it must manage the I/O devices and other system resources. To some extent, these are different functions.
- 3. In a timesharing system, multiple users can access and perform computations on a computing system simultaneously using their own terminals. Multiprogramming systems allow a user to run multiple programs simultaneously. All timesharing systems are multiprogramming systems but not all multiprogramming systems are timesharing systems since a multiprogramming system may run on a PC with only one user.