

- A thread pool uses an existing thread – rather than creating a new one – to complete a task
- In indirect communication between processes P and Q, there is a mailbox to help communication between P and Q
- In UNIX, the return value for the fork system call is zero for the child process and a nonzero integer for the parent process.
- The purpose of time sharing is to improve resource utilization – False
- The single benefit of a thread pool is to control the number of threads – False
- Application programmers typically use an API rather than directly involving system call – True
- It is possible to create a thread library without any kernel-level support = True
- It is possible to have concurrency without parallelism – True
- Components of a computer system; Computer hardware, operating system, system and application programs, users
- Which of the following would lead you to believe that a given system is an SMP metric multiprocessing-type system?
  - Each processor performs all task within the operating system
- The tendency of execution to involve a number of memory location that are with addresses that are close together in termed as spatial locality
- When an external device as event that requires the attention of the system, it sends an interrupt to the processor
- Which of the following is used to contain temporary data in a process's memory layout?
  - Stack
- Which of the following is true about process?
  - Context of a process is represented in the Process Control Block (PCB)
- Which of the flowing system calls is used to let the parent process create a child process fork()
- A message-passing model is easier to implement than a shared memory model for inter-computer communication
- System call in executed in Kernel mode
- A microkernel is a kernel that is stripped of all nonessential components
- A process that has terminated, but whose parent has not yet called wait(), is known as a zombie
- Which of the following is true about producer-consumer problem where the shared buffer is implemented as a circular array with two logical pointers in and out and the variable in points to the next free position in the buffer out points to the first full position in the buffer?
  - The buffer is empty when  $in == out$ ; the buffer is full when  $((in + 1) \% BUFFERSIZE) == out$ .
- Register storage medium is faster in speed
- User interfaces are; command line, graphics User Interface, Batch
- OS services runs inside the kernel
- System calls: it can replace the system programs as using it can fulfill all the necessary functionalities
- To let the parent process wait for termination od a child process wait()

- Each thread has a program counter
- In a zero-capacity temporary queue, the sender must always block until the recipient receives the message
- A system call is triggered by the hardware – False
- Many operating system merge I/O devices and files into a combined file because of the similarity of system calls for each – True
- The single benefit of a thread pool is to control the number of threads – False
- Application programmers typically used an API rather than directly invoking system calls – True
- It is possible to create a thread library without any kernel-level support – True
- It is possible to have concurrency without parallelism - True