

1. Thread-specific data is data that (D).

- A) is not associated with any process
- B) has been modified by the thread, but not yet updated to the parent process
- C) is generated by the thread independent of the thread's process
- D) is copied and not shared with the parent process

2. LWP is (C). **Lightweight processes**

- A) short for lightweight processor
- B) placed between system and kernel threads
- C) placed between user and kernel threads
- D) common in systems implementing one-to-one multithreading models

3. A (C) provides an API for creating and managing threads.

- A) set of system calls
- B) multicore system
- C) thread library
- D) multithreading model

4. The (C) model maps each user-level thread to one kernel thread.

- A) many-to-many
- B) two-level
- C) one-to-one
- D) many-to-one

5. The (C) scheduling algorithm is designed especially for time-sharing systems.

- A) SJF
- B) FCFS
- C) RR
- D) Multilevel queue

6. (B) is not considered a challenge when designing applications for multicore systems.
- A) Deciding which activities can be run in parallel
 - B) Ensuring (确保) there is a sufficient number of cores
 - C) Determining if data can be separated so that it is accessed on separate cores
 - D) Identifying data dependencies between tasks.
7. Which of the following is true of **cooperative scheduling**? (B)
- A) It requires a timer.
 - B) A process keeps the CPU until it releases the CPU either by terminating or by switching to the waiting state.
 - C) It incurs a cost associated with access to shared data.
 - D) A process switches from the running state to the ready state when an interrupt occurs.
8. (D) is the number of processes that are completed per time unit.
- A) CPU utilization B) Response time C) Turnaround time D) Throughput
9. Which of the following scheduling algorithms must be nonpreemptive? (C)
- A) SJF B) RR C) FCFS D) priority algorithms

10. (A) allows a thread to run on only one processor.

A) Processor affinity B) Processor set C) NUMA D) Load balancing
NUMA, *Non Uniform Memory Access Architecture*, 非统一内存访问体系结构

11. The (C) occurs in first-come-first-served scheduling when a process with a long CPU burst occupies the CPU.

A) dispatch latency(调度等待)

B) waiting time (等待时间)

C) convoy effect(护航效应) D) system-contention scope(系统争用范围)

12. (T) Each thread has its own register set and stack.

13. (T) It is possible to create a thread library without any kernel-level support.

14. In RR scheduling, the time quantum should be small with respect to the context-switch time. (F)

15. Load balancing is typically only necessary on systems with a common run queue. (F)

16. SMP systems that use multicore processors typically run faster than SMP systems that place each processor on separate cores. (T)

17. RR scheduling degenerates to first-come-first-served (FCFS) scheduling if the time quantum is too long. (T)

18. Load balancing algorithms have no impact on the benefits of processor affinity. (F)

19. A multicore system allows two (or more) threads that are in compute cycles to execute at the same time. (T)