Unit-3.

1. A minimum of 2 variable(s) is/are required to be shared between processes to solve the critical section problem.

2. If the kernel is single threaded, then any user level thread performing a blocking system call will cause the entire process to block even if the other threads are available to run.

3. A thread is also called as Light weight Process (LWP)

4. A monitor is a type of high level synchronisation construct

5. To ensure difficulties do not arise in the readers-Writers problem writers are given exclusive access to the shared object.

6. The segment of code in which the process may change common variables, update tables, write into file is known as critical section.

7. Multithreading on a multi-CPU machine increases concurrency.

8. Mutual exclusion implies that if a process is executing in its critical section, then no other process must be executing in their critical sections.

9. The register context and stack of a thread are deallocated when the ~~ther~~ thread?
terminates

10. The dining-philosophers problem will occur in case of
5 philosphers and 5 chopsticks.

11. What are the two of semaphores?
binary & counting

12. If process share a semaphore variable mutex, initialized to 1. Each process must execute wait(mutex) before entering the critical section and signal(mutex) afterward. Suppose a process executes in the following manner.

signal(mutex);
...
critical section
...
wait(mutex)

In this situation:
Several processes maybe executing in their critical section.

13. In the many to one model, if a thread makes a blocking system call _____ the entire process will be blocked.

14. Thread synchronization is required because
(a) all thread of a process share the same global variables
(b) all threads of a process can share the same files.
(c) all threads of a process share the same address space
(d) all the above.

15. Concurrent access to shared data may result it _____
data inconsistency.

16 If one thread opens a file with read privileges then
other threads in the same process can also read from that file.

17. A situation where several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which access takes place is called
race condition.

18. Which of the following is false?
(a) Related kernel level threads can be scheduled on different processors in a multiprocessor system
(b) User level threads do not need any hardware support
(c) Context switch time is longer for kernel level threads than for user level threads.
(d) Blocking one kernel level thread blocks all other related threads.

19. The model in which one kernel thread is mapped to many user-level threads is called
_____
many to one model.

20. The bounded buffer problem is also known as
producer-consumer problem.