1. Which process can be affected by other processes executing in the system?
a) cooperating process
b) child process
c) parent process
d) init process

2.Which one of the following is a synchronization tool?
a) thread
b) pipe
c) semaphore
d) socket

3.A semaphore is a shared integer variable _____
a) that can not drop below zero
b) that can not be more than zero
c) that can not drop below one
d) that can not be more than one

4. Mutual exclusion can be provided by the _____
a) mutex locks
b) binary semaphores
c) both mutex locks and binary semaphores
d) none of the mentioned

5.When high priority task is indirectly preempted by medium priority task effectively inverting
the relative priority of the two tasks, the scenario is called _____
a) priority inversion
b) priority removal
c) priority exchange
d) priority modification

6.Process synchronization can be done on _____
a) hardware level
b) software level
c) both hardware and software level
d) none of the mentioned

7. A monitor is a module that encapsulates _____
a) shared data structures
b) procedures that operate on shared data structure
c) synchronization between concurrent procedure invocation
d) all of the mentioned

8.The request and release of resources are _____
a) command line statements
b) interrupts
c) system calls
d) special programs

9. For Mutual exclusion to prevail in the system _____
a) at least one resource must be held in a non sharable mode
b) the processor must be a uniprocessor rather than a multiprocessor
c) there must be at least one resource in a sharable mode
d) all of the mentioned

10.Deadlock prevention is a set of methods _____
a) to ensure that at least one of the necessary conditions cannot hold
b) to ensure that all of the necessary conditions do not hold
c) to decide if the requested resources for a process have to be given or not
d) to recover from a deadlock

11.For non sharable resources like a printer, mutual exclusion _____
a) must exist
b) must not exist
c) may exist
d) none of the mentioned

12.To ensure that the hold and wait condition never occurs in the system, it must be ensured that _____
a) whenever a resource is requested by a process, it is not holding any other resources
b) each process must request and be allocated all its resources before it begins its execution
c) a process can request resources only when it has none
d) all of the mentioned

13.To ensure no preemption, if a process is holding some resources and requests another resource that cannot be immediately allocated to it _____
a) then the process waits for the resources be allocated to it
b) the process keeps sending requests until the resource is allocated to it
c) the process resumes execution without the resource being allocated to it
d) then all resources currently being held are preempted

14.The bounded buffer problem is also known as _____
a) Readers – Writers problem
b) Dining – Philosophers problem

c) Producer – Consumer problem
d) None of the mentioned

15.The dining – philosophers problem will occur in case of _____
a) 5 philosophers and 5 chopsticks
b) 4 philosophers and 5 chopsticks
c) 3 philosophers and 5 chopsticks
d) 6 philosophers and 5 chopsticks

16.TestAndSet instruction is executed _____
a) after a particular process
b) periodically
c) atomically
d) none of the mentioned

17.What are Spinlocks?
a) CPU cycles wasting locks over critical sections of programs
b) Locks that avoid time wastage in context switches
c) Locks that work better on multiprocessor systems
d) All of the mentioned

18.. What will happen if a non-recursive mutex is locked more than once?
a) Starvation
b) Deadlock
c) Aging
d) Signaling

19.What are the two kinds of semaphores?
a) mutex & counting
b) binary & counting
c) counting & decimal
d) decimal & binary

20.At a particular time of computation the value of a counting semaphore is 7.Then 20 P
operations and 15 V operations were completed on this semaphore. The resulting value of
the semaphore is? (GATE 1987)
a) 42
b) 2
c) 7
d) 12