**UNIT IV – CONCURRENCY**

**MCQ’s**

1. A race condition occurs when multiple processes or threads read and write

1. Input
2. Information
3. Data Items
4. Programs

Answer: 3

2. For a single processor system, implementation of semaphores is possible to inhibited through

1. Deadlock
2. Interrupts
3. Lock Step
4. Paging

Answer: 2

3. In message passing a process receives information by executing the

1. Send
2. Send Primitive
3. Receive
4. Receive Primitive

Answer: 4

4. In a uniprocessor system concurrent processes cannot have overlapped

1. Access
2. Termination
3. Completion
4. Execution

Answer: 4

5. In addressing, a many to one relationship is useful for

1. Client Interaction
2. Client/Server Interaction
3. Server Interaction
4. Master/Slave interaction

Answer: 2

6. The exit from the critical section of a process is controlled by which of the following methods?

1. V()
2. P()
3. Z()
4. S()

Answer: V()

7. ………………. when a process leaves a critical section and more than one process is waiting, the selection of a waiting process is arbitrary.

1. Busy waiting is employed  
2. Starvation is possible  
3. Deadlock is possible  
4. All of the above

Answer: 2

8.   ……………………. techniques can be use to resolve conflicts, such as competition for resources, and synchronize processes so that they can co-operate.

1. Mutual Exclusion
2. Synchronization
3. Deadlock
4. Starvation

Answer: 1

9. For semaphores and binary semaphores, a ………………….. is used to hold processes waiting on the semaphore.

1. Stack
2. Queue
3. Tree
4. Graph

Answer: 2

10. ………………… are used for signalling among processes and can be readily used to enforce a mutual exclusion discipline.

1. Semaphores
2. Messages
3. Monitors
4. Addressing

Answer: 1

11. With ………………. the send primitive includes a specific identifier of the destination processes.

1. direct addressing
2. indirect addressing
3. one-to-one-addressing
4. one-to-many addressing

Answer: 1

12. In ……………….. messages are not send directly from sender to receiver but rather are sent to a shared data structure consisting queues that can temporarily hold messages.

1. direct addressing
2. indirect addressing
3. one-to-one-addressing
4. one-to-many addressing

Answer: 2

13.   ……………………… are useful for the enforcement of mutual exclusion and also provide an effective means of inter-process communication.

1. Semaphores
2. Messages
3. Monitors
4. Addressing

Answer: 2

14. Which of the following is/are the disadvantages of machine instruction approach to enforce mutual exclusion.  
i) Busy waiting employees ii) hard to verify iii) starvation is possible iv) Deadlock is possible

1. i, ii and iii only
2. ii, iii and iv only
3. i, iii and iv only
4. All i, ii, iii and iv

Answer: 3

15. Conditions needed to solve the critical section problem are:

1. Mutual Exclusion

2. Progress

3. Bounded Waiting

4. All of the above

Answers: 4

16. Solution to starvation is that:

1. the number of resources must be included in resource pre-emption
2. resource preemption be done instead
3. the number of rollbacks must be included in the cost factor
4. All of these

Answer: 3

17. Producer-Consumer problem can be solved by using \_\_\_\_\_\_\_\_\_\_?

1. Semaphores
2. Monitors
3. Event Counters
4. All of these

Answer: 4

18. Which one of the following is not shared by threads?

1. Program counter
2. Stack
3. Both program counter and stack
4. none of the mentioned

Answer: 3

19. If one thread opens a file with read privileges then

1. Other threads in the another process can also read from that file
2. Other threads in the same process can also read from that file
3. Any other thread cannot read from that file
4. All of the mentioned

Answer: 2

20. The register context and stacks of a thread are deallocated when the thread?

1. Terminates
2. Blocks
3. Unblocks
4. Spawns

Answer: 1

21. Thread synchronization is required because

1. All threads of a process share the same address space
2. All threads of a process share the same global variables
3. All threads of a process can share the same files
4. All of the mentioned

Answer: 4

22. Thread shares with other threads belonging to same process its

1. Thread ID
2. Program counter
3. Register set and a stack
4. Code section and data section

Answer: 4

23. The bounded buffer problem is also known as:

1. Producer –Consumer problem
2. Readers – Writers problem
3. Dining – Philosopher Problems
4. Dining – Readers problem

Answer: 1

24. The Dining Philosophers problem solution is :

1. Starvation free solution
2. Deadlock free solution
3. Page fault free solution
4. All of the above

Answer: 2

25. The term mutex is short form for

1. Mutual exception
2. Mutual exclusion
3. Mutual examination
4. Mutual excluded

Answer: 2

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