Operating System Quiz (20-02-2026)

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3. If a process moves from running to ready without completing, it is due to:

- a) Termination
- b) Preemption
- c) I/O completion
- d) Arrival

4. Degree of multi-programming is number of:

- a) CPUs
- b) Processes in ready queue
- c) Processes in memory

d) I/O devices

5. If response time equals waiting time, system is:

- a) Non-preemptive
- b) Preemptive
- c) Real-time
- d) Distributed

6. If burst time doubles, waiting time in FCFS generally:

- a) Decreases
- b) Increases
- c) Same
- d) Zero

7. If two processes have same priority, scheduling is decided by:

- a) Random
- b) FCFS
- c) SJF
- d) None

8. If arrival=1, completion=10, burst=5. Turnaround time?

- a) 8
- b) 9
- c) 10
- d) 11

9. In multilevel queue scheduling, if process moves between queues, it is called:

- a) Static queue
- b) Dynamic queue
- c) Multilevel feedback queue
- d) Round Robin

10. Which scheduling algorithm gives minimum average waiting time (theoretically)?

- a) FCFS
- b) SJF
- c) RR
- d) Priority

11. P1(AT=0,BT=3), P2(AT=5,BT=4). CPU idle time is:

- a) 1 ms
- b) 2 ms
- c) 3 ms
- d) 4 ms

12. In RR, time quantum is very large. It behaves like:

- a) SJF
- b) FCFS
- c) Priority
- d) SRTF

13. If response time of a process is 5 ms and arrival time is 2 ms, what is its first start time?

- a) 3 ms
- b) 5 ms
- c) 7 ms
- d) 8 ms

14. CPU utilization is 80% and idle time is 20 ms. What is total time?

- a) 80 ms
- b) 100 ms

c) 120 ms

d) 160 ms

15. Round Robin scheduling with time quantum 4 ms. Process burst time is 10 ms. How many context switches occur?

a) 1

b) 2

c) 3

d) 4

16. A process has 3 threads. If one thread crashes in user-level threading, what happens?

a) Only that thread ends

b) Entire process crashes

c) OS recovers thread

d) Nothing

17. In a many-to-one threading model, if one thread blocks on I/O, what happens?

a) Only that thread blocks

b) All threads block

c) OS creates new thread

d) Process terminates

18. In many-to-many model, 10 user threads mapped to 4 kernel threads. Maximum parallel execution possible is:

a) 4

b) 6

c) 10

d) 14

19. In user-level threads, scheduling is done by:

a) Kernel

b) Thread library

c) CPU

d) Compiler

20. If two threads access same variable without synchronization, problem is called:

a) Deadlock

b) Race condition

c) Starvation

d) Thrashing

21. In multithreading, what is shared among threads:

- a) Stack
- b) Registers
- c) Heap
- d) Program Counter
- Option 2

22. Context switching between threads is faster than between processes because:

- a) Threads use different memory
- b) Threads share address space
- c) Threads use separate CPUs
- d) Threads have no state

23. A race condition occurs when:

- a) Processes run very fast
- b) Two threads access shared data simultaneously
- c) CPU speed increases
- d) I/O devices fail

24. Which of the following is NOT shared among threads?

- a) Code section
- b) Heap
- c) Stack
- d) Data section

25. Hyperthreading mainly improves:

- a) Disk speed
- b) CPU utilization
- c) RAM capacity
- d) Network speed

26. Thread Control Block (TCB) stores:

- a) Thread state
- b) Register values
- c) Stack pointer
- d) All of the above

27. Which model allows true parallelism on multi-core systems?

- a) Many-to-one
- b) One-to-one

c) Single-threaded

d) Batch processing