OSG_2

Question #1 (1 point)

Which of the following process state transitions is legal?

- Ready -> Blocked (waiting)
- Running -> ready
- Blocked (waiting) -> running
- None of the other choices

Question #2 (1 point)

OS Win32 use system call_____, while OS Unix use system call_____ to create a new process

- CreateProcess; fork
- fork, CreateProcess
- copy, CreateProcess
- CreateProcess; copy

Question #3 (1 point)

A _____ is a portion of a process that can run independently

- thread
- program
- Mini-process
- subprocess

Question #4 (1 point)

Which of the following conditions that causes the processes to be terminated, when processes have done their work?

- Normal exit (voluntary)
- Error exit (voluntary)
- Fatal error (involuntary)

- Killed by another process (involuntary)

Question #5 (1 point)

How many percent of the CPU time is wasted, when a computer system has enough room to hold two programs and these programs are idle waiting for I/O 10% of the time?

- 90%
- 99%
- 1%
- None of the other choices

Question #6 (1 point)

Which of the following process state transitions is correct, when the external event for which a process was waiting happens?

- Running -> Blocked (waiting)
- Running -> ready
- Blocked (waiting) -> ready
- Ready -> running

Question #7 (1 point)

A computer has 2GB RAM of which the operating system occupies 1GB. The processes are all 450 MB and have the same characteristics. How many percent of the CPU time is wasted, when these programs are idle waiting for I/O 20% of the time?

- 90%
- 96%
- 4%
- None of the other choices

Question #8 (1 point)

OS Windows use system call_____, while OS Unix use system call_____ to terminate processes normally

- exit; ExitProcess
- ExitProcess; exit
- (•) ExitProcess; terminate
- terminate; ExitProcess

Question #9 (1 point)

What is Software proposal in the solution of Mutual exclusion with Busy waiting?

- Lock Variables
- Strict Alternation
- Peterson's Solution
- (•) All of the other choices

Question #10 (1 point)

_____ is the act of allowing only one process to have access to a dedicated resource

- No preemption
- Circular wait
- Resource holding
- (•) Mutual exclusion

Question #11 (1 point)

What is the purpose of process synchronization?

- Let different users run different processes independently
- (•) Avoid race condition
- Avoid deadlock
- None of the other choices

Question #12 (1 point)

Which conditions of mutual exclusion does the Strict Alternation (Software

proposal) violate

- No two processes simultaneously in critical region
- No assumptions made about speeds or numbers of CPUs
- No process running outside its critical region may block another process
- (•) No process must wait forever to enter its critical region

Question #13 (1 point)

An arrival message causes the system to create a new thread to handle this message. This new thread is call_____

- (•) Pop-up
- Upcall
- Activator
- Distributed

Question #14 (1 point)

Which of the following conditions must be held to provide good solution for mutual exclusion?

- (•) No two processes simultaneously in critical region
- No assumptions made about speeds or numbers of CPUs
- No process running outside its critical region may block another process
- No process must wait forever to enter its critical region
- All of the other choices

Question #15 (1 point)

Which of the events that causes the processes to be created, when the operation system creates a new process and runs the next job from the input queue?

- System initialization
- Execution of a process creation system call
- User request to create a new process

- [x] Initiation of a batch job

Question #16 (1 point)

The following requirement must be met by any facility or capability that is to provide support for mutual exclusion:

- [ ] Only one process at a time can be allowed into a critical section
- [ ] A process remains in its critical region for a finite time only
- [ ] No assumption can be made about relative process speeds
- [x] All of the other choices

Question #17 (1 point)

Which of the following process state transitions is correct, when the scheduler picks a process from the ready queue to run?

- [ ] Running -> Blocked (waiting)
- [ ] Running -> ready
- [ ] Blocked (waiting) -> ready
- [x] Ready -> running

Question #18 (1 point)

What is the “sequential processes” concept?

- [ ] There are both many CPU and many PC
- [ ] All process is executed in concurrency
- [x] No concurrency inside a process; everything happens sequentially
- [ ] None of the other choices

Question #19 (1 point)

How many percent of the CPU time is wasted, when a computer system has enough room to hold two program and these programs are idle waiting for I/O half the time?

- [ ] 50%
- [x] 25%

- 75%
- None of the other choices

Question #20 (1 point)

How many ways is Thread implemented?

- 1
- 2
- 3
- None of the other choices

Question #21 (1 point)

In order to implement mutual exclusion on a critical resource for competing processes, only one program at a time should be allowed:

- In the critical region of the program
- To perform message passing
- To exhibit cooperation
- None of the other choices

Question #22 (1 point)

Which of the following conditions that causes the processes to be terminated, when the processes have a program bug?

- Normal exit (voluntary)
- Error exit (voluntary)
- Fatal error (involuntary)
- Killed by another process (involuntary)

Question #23 (1 point)

Which of the following is appropriate to release page table and pages?

- Process creation
- Process execution

- Page fault time
- Process termination time

Question #24 (1 point)

Operating system abstraction supports the ability to have _____ operation even when there is only one CPU available

- pseudoparallelism
- parallel
- multiple
- None of the other choices

Question #25 (1 point)

Which of the following conditions that causes the processes to be terminated, when the processes executes a system call tell the OS to finish some other process?

- Normal exit (voluntary)
- Error exit (voluntary)
- Fatal error (involuntary)
- Killed by another process (involuntary)

Question #26 (1 point)

Which of the events that causes the processes to be created, when a running process creates one or more new process to help it to do its job?

- System initialization
- Execution of a process creation system call
- User request to create a new process
- Initiation of a batch job

Question #27 (1 point)

A entry of the Process table is called:

- Process management block
- (•) Process control block
- Process check block
- All of the other choices

Question #28 (1 point)

Which of the following process state transitions is illegal?

- Running -> Blocked (waiting)
- Running -> ready
- Blocked (waiting) -> ready
- (•) Ready -> Blocked (waiting)

Question #29 (1 point)

Which of the following process state transitions is correct, when the operating system discovers that process cannot continue right now because of is not enough resource?

- Running -> Blocked (waiting)
- (•) Running -> ready
- Blocked (waiting) -> ready
- Ready -> running

Question #30 (1 point)

A process where no concurrency inside process; everything happens sequentially is called :

- Random access process
- (•) Sequential process
- Sequential access process
- None of the other choices

Question #31 (1 point)

Which statement about disadvantage of Disabling interrupts, (the hardware solution to the critical region problem) is correct?

- If process is locked in Critical Section: System Halt
- Permit process to use command privileges: Danger!
- Don't ensure Mutual Exclusion for the system with N CPUs
- All of the other choices

Question #32 (1 point)

Critical Region (Section) concept used in interprocess communication is:

- None of the other choices
- A part of the program where the shared memory is accessed
- A part of shared data
- A part of shared memory

Question #33 (1 point)

Sometimes it happens that a thread wants to give another thread a chance to run. It can establish this goal by calling_____

- thread_create
- thread_exit
- thread_wait
- thread_yield

Question #34 (1 point)

Which of the following cannot be shared among different threads of a process?

- Process code
- File handles
- Process data
- Stack

Question #35 (1 point)

In some thread systems, a thread want be blocked until an other thread has exited. It can establish this goal by calling_____

- thread_create
- thread_exit
- thread_wait
- thread_yield

Question #36 (1 point)

Which of the events that causes the processes to be created, when an operation system is booted?

- System initialization
- Execution of a process creation system call
- User request to create a new process
- Initiation of a batch job

Question #37 (1 point)

Which conditions of mutual exclusion does the Lock Variables (Software proposal) violate?

- No two processes simultaneously in critical region
- No assumptions made about speeds or numbers of CPUs
- No process running outside its critical region may block another process
- No process must wait forever to enter its critical region

Question #38 (1 point)

Which of the following statements is a hardware solution to the critical region problem?

- TSL
- Shared memory
- Semaphore
- None of the other choices

Question #39 (1 point)

Which statement about disabling interrupts to resolve race conditions is wrong?

- In theory, a program can disable interrupts when it enters a critical section, and re-enable interrupts when finished with a critical section, to eliminate race conditions.
- Disabling/enabling interrupts may negatively affect the I/O system.
- Programs with infinite loops in their critical sections are a significant problem with the interrupt-based approach.
- (•) User-mode programs are the best place to invoke disableInterrupt().

Question #40 (1 point)

In a single processor system, mutual exclusion can be guaranteed by:

- Overlapping processes
- Interleaving processes
- (•) Disabling interrupts
- All of the other choices