Week 8 : Assignment 8

The due date for submitting this assignment has passed.

Due on 2021-09-22, 23:59 IST.

As per our records you have not submitted this assignment.

1) Normally, the traditional operating systems dynamically change the priority levels of tasks. The objective behind this is which of the following? *1 point*

a. To provide support for resource sharing among tasks
b. To maximize the system throughput
c. To achieve low interrupt latency time
d. To achieve low task preemption time
e. To achieve low task switching time

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

2) What is the reason for restricting the number of writes in flash memory? *1 point*

a. To increase the memory capacity
b. To reduce the area dedicated to control erasing
c. Due to wear in insulating oxide layer
d. None of these

a. b. c. d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

3) Which one of the following types of timers should be used to detect whether a task misses its deadline? *1 point*

a. Periodic timer
b. One shot timer
c. Randomized timer
d. Arbitrary timer
e. None of these

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

4) Real-time operating systems maintain either per-process timer queues or a single system-wide timer queue. Suppose there are 4 timers T1, T2, T3 and T4 with the expiration times set as 7, 1, 8, and 15 units respectively. How these timers will be arranged in the timer queue? *1 point*

a. Q1 = {15, 8, 7, 1}
b. Q2 = {7, 1, 8, 15}
c. Q3 = {1, 7, 8, 15}
d. Q4 = {8, 7, 15, 1}
e. None of these

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a
OR
c.

5) Usually, at each clock interrupt, the scheduler decrements the time slice (budget) remaining for the executing task. While updating the execution budget, what will happen if the remaining time slice (budget) for the executing task becomes zero and the task is not yet complete? *1 point*

a. The task continues its execution.
b. The task is preempted and the scheduler is invoked to select another task to run.
c. The task waits for I/O.
d. The task terminates.
e. No action is taken.

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

6) In Unix, how are the priority levels assigned to the kernel and user levels? *1 point*

a. Kernel (0-39), user (40-127)
b. Kernel (0-49), user (50-127)
c. Kernel (0-59), user (60-127)
d. Kernel (0-69), user (70-127)
e. Kernel (0-79), user (80-127)

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

7) Select the odd-one out. *1 point*

a. fork, wait, exec
b. open, read, write
c. chdir, chown, chmod
d. read, write, close

a. b. c. d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

8) In Unix, Task preemption time = *1 point*

a. time spent in kernel mode + context switch time
b. time spent in user mode + context switch time
c. time spent in kernel mode + interrupt latency time
d. time spent in user mode + interrupt latency time
e. time spent in kernel mode + response time

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

9) Which one of the following statements is false? *1 point*

a. Unix V has a non-preemptive kernel.
b. Under the Unix V operating system, computation intensive tasks dynamically gravitate to higher priorities.
c. Unix V has a worst case task response time of about one second that is primarily attributable to the non-preemptive kernel.
d. Unix dynamically recomputes task priorities in an attempt to meet task deadlines.
e. In Unix V, device drivers run in kernel mode.

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

10) In Windows NT, the process screen saver uses which of the following priority classes? *1 point*

a. Real-Time Critical
b. Real-Time Normal
c. Dynamic Critical
d. Dynamic Normal
e. Idle

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
e.

11) Which of the following are NOT shortcomings of Windows NT? *1 point*

a. Causing unbounded priority inversion
b. Weak resource access control
c. Poor support for distributed applications
d. Availability of real-time priority levels
e. Having clocks with sufficiently finer resolutions

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.
e.

12) Which of the following features are supported by Windows NT? *1 point*

a. Multithreading
b. Availability of real-time priority levels
c. Clocks with sufficiently finer resolutions
d. Timers
e. All of these

a. b. c. d. e.

No, the answer is incorrect.
Score: 0
Accepted Answers:
e.