Name

Last 4 digits of Student \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CSE 3320, Operating Systems

Quiz 2, Fall 2020 (hopefully easy) © DL, UTA, 2020

**Please** read this:

This is a closed book, closed notes quiz.

Either type your answers at the end of this quiz (preferred), or use a dark ink

(or pencil), print answers and then scan and create a single PDF document.

Then rename your answers (which should be in “text”, .doc, or PDF form) with

Your last name followed by “\_” followed by the last 4 digits of your student ID.

Please answer the questions in a **few keywords**, complete sentences are not necessary,

**be brief**! Unreadable answers will be counted wrong.

**Please turn in quiz promptly.**

**Thank You.**

**Please – you are on your honor, do not use any sources**

**(other than yourself), the text book and your notes.**

**Do not give “definitions”, none of these questions require**

**a “definition”, use your own words.**

**I understand and agree to the conditions of this quiz,**

**(all work is my own, no external sources**

**other than notes, text book.)**

**Please initial here**

The following is a list of processes:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Process # | Arrival Time | Memory Size | Running Time | Priority |
| 3 | 0 | 8K | 2 | 5 |
| 4 | 1 | 4K | 3 | 6 |
| 6 | 1 | 2K | 2 | 8 |
| 8 | 4 | 5K | 1 | 3 |

Where arrival time and running time are in seconds, and memory size in K Bytes.

If appropriate, the time quantum = 1 second. Higher Priority values are higher

priority. (Priority 4 is more important than priority 3.)

(When arrival time is the same, select lowest process number first, (if appropriate),

if more than one process can be selected, and there is a new process, use "most fair"

allow the next new process to run next.)

Please do not “combine” scheduling policies, unless scheduler normally does that.

1. Please show the CPU timeline (GANTT chart) for a FCFS scheduler.

2. Please show the CPU timeline (GANTT chart) for a Priority scheduler,

with no preemption.

3. Please show the CPU timeline (GANTT chart) for a SJN (SJ first) scheduler,

with no preemption.

4. From above, what is the turnaround time for process 8?

5. What is the throughput for the first 5 seconds?

a. For FCFS:

b. SJN:

6. Please show the GANTT chart for a Round Robin (RR) scheduler.

7. Please show the GANTT chart for a Priority scheduler, with preemption.

8. From above (preemptive scheduling), what is the (total) wait time for process 8?

a. For RR:\_\_\_\_\_

b. Priority:\_\_\_

9. Very briefly, what is the difference between using the “system()” call used in the first assignment and the “fork()” call you should use in the second assignment?

-- That’s All --