# COMP3500: Project 4 Part 4 - Managing Process State (cont.)

**Exercise 1:** How to deal with an error in sys\_fork()?

int sys\_fork(struct trapframe \*tf, pid\_t \*retval) {

Create a new trap\_frame called new\_tf;

Copy tf to new\_tf;

/\* Call thread\_fork( ) \*/

result = thread\_fork(curthread->t\_name, ntf, 0,

child\_thread, retval);)

if (result != 0) { /\* failed in thread\_fork \*/

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;

return result;

}

return 0;

}

**Exercise 2 (Wheeldecide):** What are the two items to be copied from curthread to newguy in the thread\_fork() function?

# COMP3500: CPU Scheduling

**Exercise 1 (Plickers):** The system objectives of processor scheduling include the following ones except:

1. Reduce response time,
2. Improve throughput
3. Minimize context switch overhead
4. Optimize processor efficiency

**Exercise 2:** What are reasons forrunning jobs (processes) to cease using a CPU? (Write down one or two reasons)

**Exercise 3 (Plickers):** What one of the following statements is an advantage of FCFS?

1. Easy to implement
2. Consider service time
3. A great performer
4. Reduce average wait time

**Exercise 4 (Plickers):** The shortest job next scheduling algorithm schedules the following five jobs.

(4.1) What is the average turn around time?

i (pi)

0 350

1 125

2 475

3 250

4 75

A. 315 B. 600 C. 560 D. 480

(4.2) What is the average waiting time?

A. 285 B. 320 C. 410 D. 305

**Exercise 5 (Plickers):** Which one of the following statements about the shortest-job-next (SJN) policy is incorrect?

1. SJN minimizes wait time
2. SJN may starve large jobs
3. SJN is easier implemented than FIFO
4. SJN must know service times