

COSC 335 – Operating Systems
Exam Review #2
Spring 2009

- 1.) What are the goals for a CPU scheduler? Fully describe each of these goals.
- 2.) What are deadlocks? What four conditions must hold for there to exist a deadlock in a system?
- 3.) Fully describe two different ways of **implementing** a directory structure (not two ways that directories are structured).
- 4.) Fully describe two different ways of accessing the information stored in a file.
- 5.) What are two different approaches to opening and closing files? What are the pros and cons of each?
- 6.) Identify and describe the levels in a layered file system.
- 7.) List five different file operations that the OS manages.
- 8.) What are the differences between protection and reliability and how can the OS ensure that data has both?
- 9.) Given the following jobs and assuming that they arrive in the order in which they appear, what are the average waiting time and average completion time for both FCFS and RR CPU (with a quantum of 25) scheduling techniques:

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| P1 – 25 | P2 – 35 | P3 – 15 | P4 – 65 |
| P5 – 40 | P6 – 30 | P7 – 10 | P8 – 55 |
- 10.) In the Linux VFS architecture, what are the four main object types? What do they represent?