

## Sample Final

1. How does the working-set model relate process scheduling and memory management?
2. What is an access control matrix?
3. What is the difference between deadlock and starvation?
4. Three procedures, A, B, and C, are to be linked together into one process and loaded into memory. The length of each procedure is 600 words. Consider the following memory management schemes:
  - a. Paging: page size is 1000 words, page tables occupy 1 page each.
  - b. Segmentation: segment table size is 1000 words.
  - c. Paged segmentation: page size is 1000 words, page tables occupy 1 page each, segment table size is 1000 words.Assume that all procedures and all tables are in memory. For each of the three systems, what is the total occupied memory space (i.e., the space that cannot be used by another process)? This includes the space occupied by the procedures and the various tables, as well as space wasted due to the fixed page size.
5. Consider a system where free space is kept in a free space list.
  - a. Suppose that the pointer to the free space list is lost. Can the system reconstruct the free space list?!
  - b. Suggest a scheme to maximize the chances that the pointer is never lost as a result of memory failure.