

Principal Areas for Final Exam Questions

1. The FINAL EXAM is cumulative; that is, you are responsible for everything for which you had been responsible for the Mid-Term. ADDITIONAL topics will also be covered, for example:
2. Instruction Formats
 - (a) Number of operands
 - (b) Stack Architecture
 - (c) Accumulator Architecture
 - (d) General Purpose Register (GPR) Architecture
 - (e) Instruction Length: Fixed or Variable
3. Big-Endian vs. Little-Endian
4. Addressing Modes
 - (a) Implied Mode
 - (b) Immediate Mode
 - (c) Direct Mode
 - (d) Register-Direct Mode
 - (e) Indirect Mode
 - (f) Register-Indirect Mode
 - (g) Indexed Mode
 - (h) Autoincrement Mode
 - (i) Autodecrement Mode
5. Pipelining and Speedup
6. Cache Memory
 - (a) Fully-Associative
 - (b) Directly Mapped
 - (c) Set-Associative
 - (d) Write-Through vs. Write-Back
 - (e) Calculation of Effective Access Time
 - (f) Levels of cache
 - (g) Tag Fields
7. Virtual Memory
8. Input/Output
 - (a) Programmed
 - (b) Interrupt-Driven
 - (c) Direct Memory Access (DMA)
 - (d) Channel I/O
 - (e) Null & Lobur sections 7.1, 7.2, and 7.3

9. Magnetic Disk Drive:
 - (a) structure & function
 - (b) Access Times
 - (c) Null & Lobur section 7.4

10. Term Project presentations in class – your own as well as those of your fellow students

11. Please note that EVERYTHING included in the assigned reading could appear on the final exam, regardless of whether or not it was also covered in the classroom. Also EVERYTHING that was covered in the classroom could appear on the final exam, regardless of whether or not it was also covered in the assigned reading.

12. Be sure to review all Quizzes, in conjunction with the answer sheets that were distributed for them.