Midterm

What is architecture
- difference from organization/implementation
- its design principles (and think about their practice*)

ISAs
- instruction classes
- encoding*
- addressing modes
- pseudoinstructions*

Procedure calls
- calling conventions
- stack usage*

Other architectures
- how architectures have changed over time
- RISC philosophy & characteristics
- CISC philosophy & characteristics

Performance metrics
- what they should/should not be used for
- actually putting them into practice*

Implementation
- execution cycle
- datapath
- control
  - what signals are needed & why
  - how they are generated
- can you design an implementation?*
- single vs. multiple cycle implementations
  - why have the latter
  - what changes it requires in the single-cycle implementation
- finite state machines
  - what are they
  - how they work*
- microprogramming
  - what it is
  - how it works*