Midterm

What is architecture
• difference from microarchitecture/organization
• 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*