Engr354 Exam #2 Review Sheet

This will be a closed book test. One sheet of private reference and writing instruments are allowed, nothing else.

I. Sequential Circuits
- A. Latches
  - 1. Basic Cell
    - a. Set Dominant
    - b. Reset Dominant
    - c. Combined Form
    - d. Function Table
    - e. Excitation Table
  - 2. Latch Types
    - a. D
    - b. Toggle
    - c. JK
  - 3. Latch Design
- B. Flip-Flops
  - 1. Clock types
    - a. Level-sensitive
    - b. Edge-triggered
  - 2. Types
    - a. D
    - b. JK
    - c. Toggle
- C. Synchronous Machines
  - 1. State Diagram
  - 2. Timing Diagram
  - 3. Models
    - a. Moore Model
    - b. Mealy Model (allows conditional outputs)
- D. State Machine Design
  - 1. D Flip-flops
  - 2. Alternative Architectures
    - a. State Decoder
    - b. Direct-addressed Multiplexer
    - c. Indirect-addressed Multiplexer
- E. Counters and Shift Registers

II. Circuit Construction and Debugging