Preparation guidelines for CSCI549 Automata Theory for Comprehensive Exam

1. Student should be able to build recursive definitions for any class of languages.
2. Student should be able to build regular expressions, transition graphs, and finite automata and interpret them to identify languages defined by them.
3. Student should be able to convert Mealy Machine to Moore Machine or vice versa.
4. Student should be able to prove or disprove non-regular languages using Pumping Lemma.
5. Student should be able to understand and build regular grammar, context free grammar, and Chomsky Normal Form grammar to define a language. They should also be able to understand what language each grammar can define, given a grammar.
6. Student should be able to convert any context free grammar into Chomsky Normal Form grammar. Student should be able to prove a context free grammar is ambiguous or not.
7. Student should be able to interpret push down automata and Turing Machines, and build them to define a language.