1. What kinds of defects does round-trip testing reveal? Note: you are essentially establishing the fault model for state model testing.
   1. Round-trip testing reveals incorrect or missing event/action pairs and incorrect or invalid states.
2. Does state model testing replace combination-based testing? Explain.
   1. No, State Model Testing does not replace Combination-Based Testing. If we replaced Combination-based testing with State Model Testing we would miss out on a great testing criteria, the logically impossible cases and don’t care entries. Also, State Model Testing doesn’t necessarily focus on the logic behind getting to that state. Whereas Combination-Based Testing focuses on hunting down bugs in the combinational logic. They may seem similar because in both we identify which actions should be produced in response to particular combination of conditions. While in one we use States and the other we use a Decision table to demonstrate expected outputs.
3. Does state model testing replace unit testing? Explain.
   1. State Model Testing does not replace unit testing because unit testing usually refers to testing a specific functions outputs but with State Model Testing we focus on the applications different states. These can be initiated by more than one functions output. For example a valid state could be initiated by a check on multiple functions. Also, when addressing unit testing we focus on a function and a state model test can be more generalized.