Module 9: Advanced Synchronous Sequential Circuits

Class 40: Analysis of Syn. Sequential Circuits

iRAT

(2 questions)

1. For a synchronous sequential circuit with n flip-flops, what is the maximum number of unique states for the state diagram representing the behavior of the circuit?
   A. n
   B. 2^n
   C. log_2^n
   D. It cannot be decided.

2. Which of the following statements is incorrect?
   A. One objective in analyzing the behavior of a synchronous sequential circuit is to identify the state diagram of the circuit, so that the behavior of the circuit can be analyzed (e.g., in terms of its input-output relation).
   B. The circuits of Figures 6.75, 6.77, and 6.79 perform the same function in terms of generating the same output signal for a same input.
   C. The state diagrams of the circuits that use the same types of flip-flops can be the same.
   D. The state diagrams of the circuits that use different types of flip-flops cannot be the same.