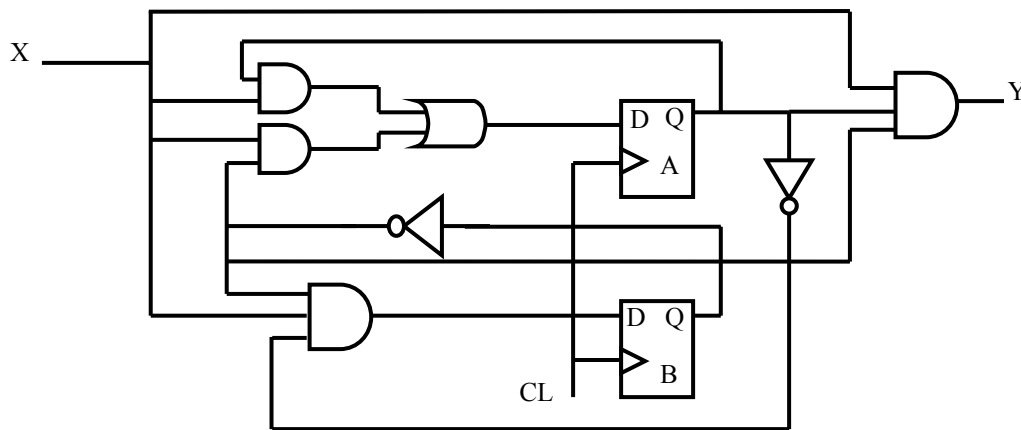**Do the following problems from the text book:** 4.11-31, 4.33-36
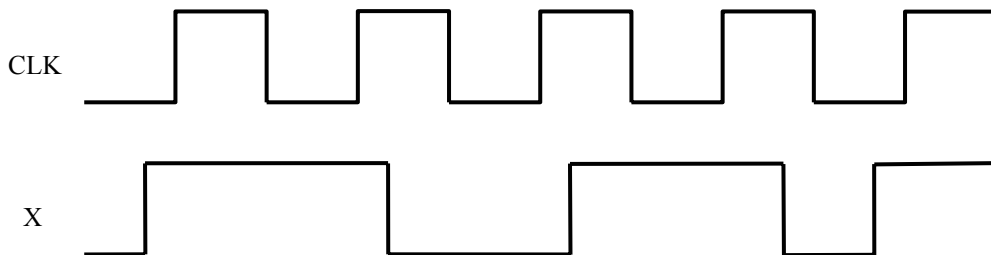
Memory Elements Design & Operation

Q.1. Analyze the sequential circuit below and determine the following:

(i) The inputs, Outputs, Present state, and next state signals

(ii) Is this a Mealy or Moore machine?

(iii) Obtain the state table, are there any unused states?

Complete the timing diagram below by drawing the waveforms for A, B and Y:

Q.2. Show how you can divide the frequency of a clock signal by 50 using 4-bit synchronous counters.

Q.3. Show the implementation of a synchronous modulo-60 counter using 4-bit counters with Load and Enable inputs.