

Name:

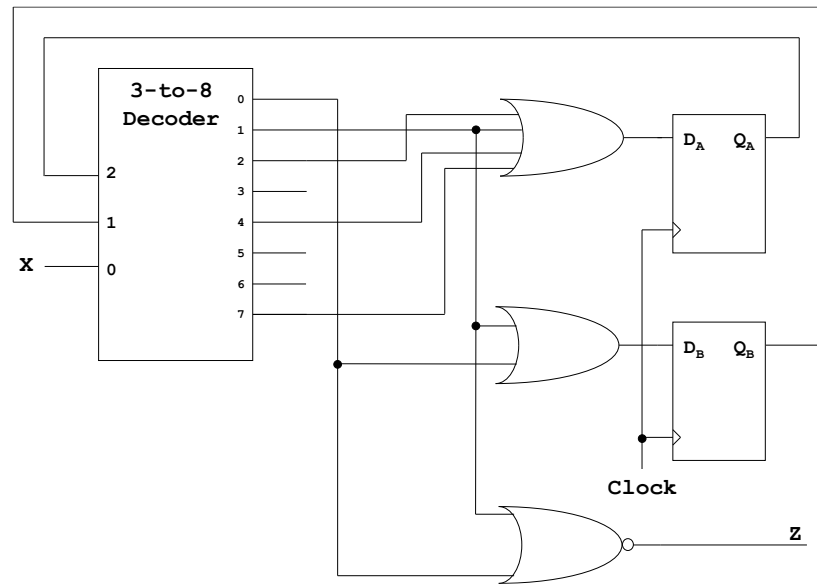
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COE 202, Term 162
Fundamentals of Computer Engineering

Quiz# 5

Date: Tuesday, May 16

Q1. Consider the following sequential circuit:



- (i) Provide a state table for the given circuit showing the Present State, the input **X**, the Next State, and the output **Z**.
- (ii) Is the circuit type Mealy or Moore? Justify your answer.

Q2. Consider the following state table. Assume that the initial state of the circuit implementation of the given state table is ($Q_A Q_B = 10$). Draw the waveforms of Q_A , Q_B , and Z for the given 2 clock cycles in response to the shown applied input X . *Ignore propagation delays, setup times, and hold times. Assume that the circuit uses rising edge-triggered D-FF(s).*

Present State		X	Next State		Z
Q_A	Q_B		D_A	D_B	
0	0	0	0	1	1
0	0	1	1	1	0
0	1	0	1	0	0
0	1	1	0	0	0
1	0	0	1	0	0
1	0	1	0	0	1
1	1	0	0	0	1
1	1	1	1	0	1

