BIRZEIT UNIVERSITY

Assignment 2 - Digital Electronics and Computer Organization Laboratory- ENCS2110

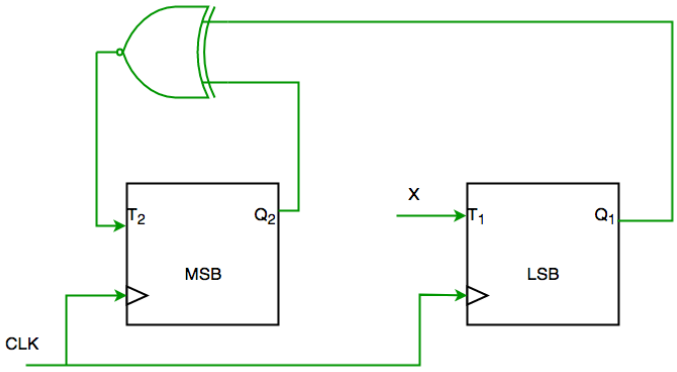
Q1) Implement the following Boolean expression using Mux 4*1 and other gates if needed. (2 points)

a) F = A`+BC`+A`C

Q2) Implement the following Boolean expression using Decoder 3*8. (2 points)

a) F = A'C' + AC + BD + B'D

Q3) What is the output for the first five cycles of the following circuit if the input X is initially 1. (2 points)



Q4) Design a 3-bit synchronous counter circuit via using JK flip flop. (2 points)

Q5) Draw the four possible scenarios for the 3-bit shift register. For each scenario, determine the number of clock cycles required for both reading and writing. (2 points)

Good Luck