

Homework 6 – Data Control Circuit

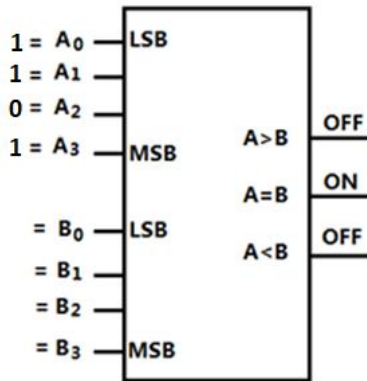
Student's Name _____

Instruction:

- Show all work to receive full credit. Box or circle the answer
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Question 1

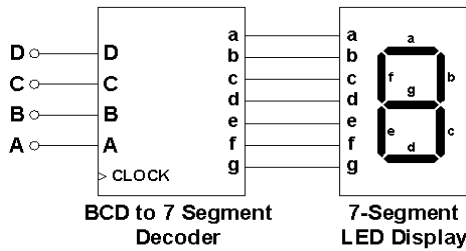
For the following inequality comparator, list all possible inputs for B



Question 2

Design a logic circuit to decode the binary string C=0001₂. Assuming that B₀ is the LSB and B₃ is the MSB, write the output equation with respect decoder

Question 3

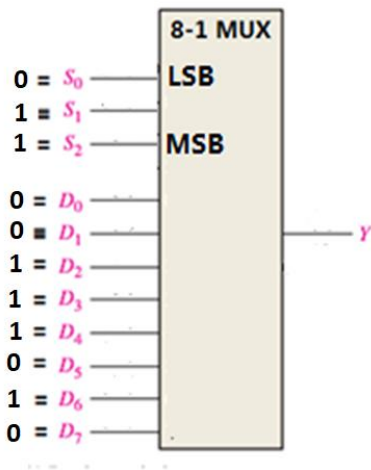


For the following BCD to 7-segment decoder circuit, if we assume that D is the least-Significant-Bit (LSB) and A the Most Significant Bit (MSB)

If we receive the following input, which segment of the 7-segment will be ON? A = 0, B = 1, C = 1, D = 1

Segment that will be ON? Write the segment in alphabetic order _____

Question 4



For the following 8-1 MUX, which Data Input is selecting the data selector? ____

What would be output Y? _____