Post-lap

Experiment No. 2 - Comparators, Adders, and Subtractors

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* Date: 4/12/2023.

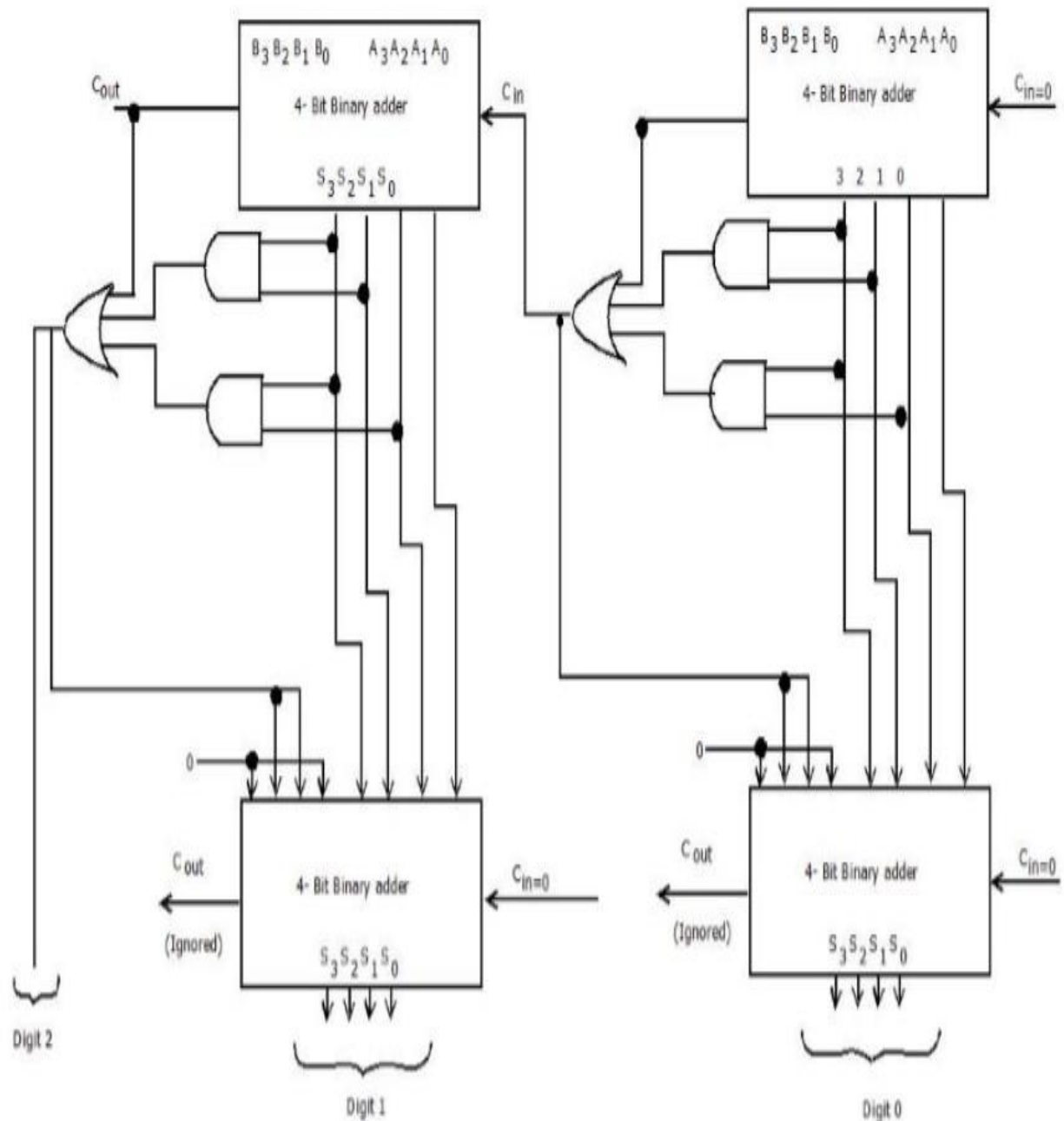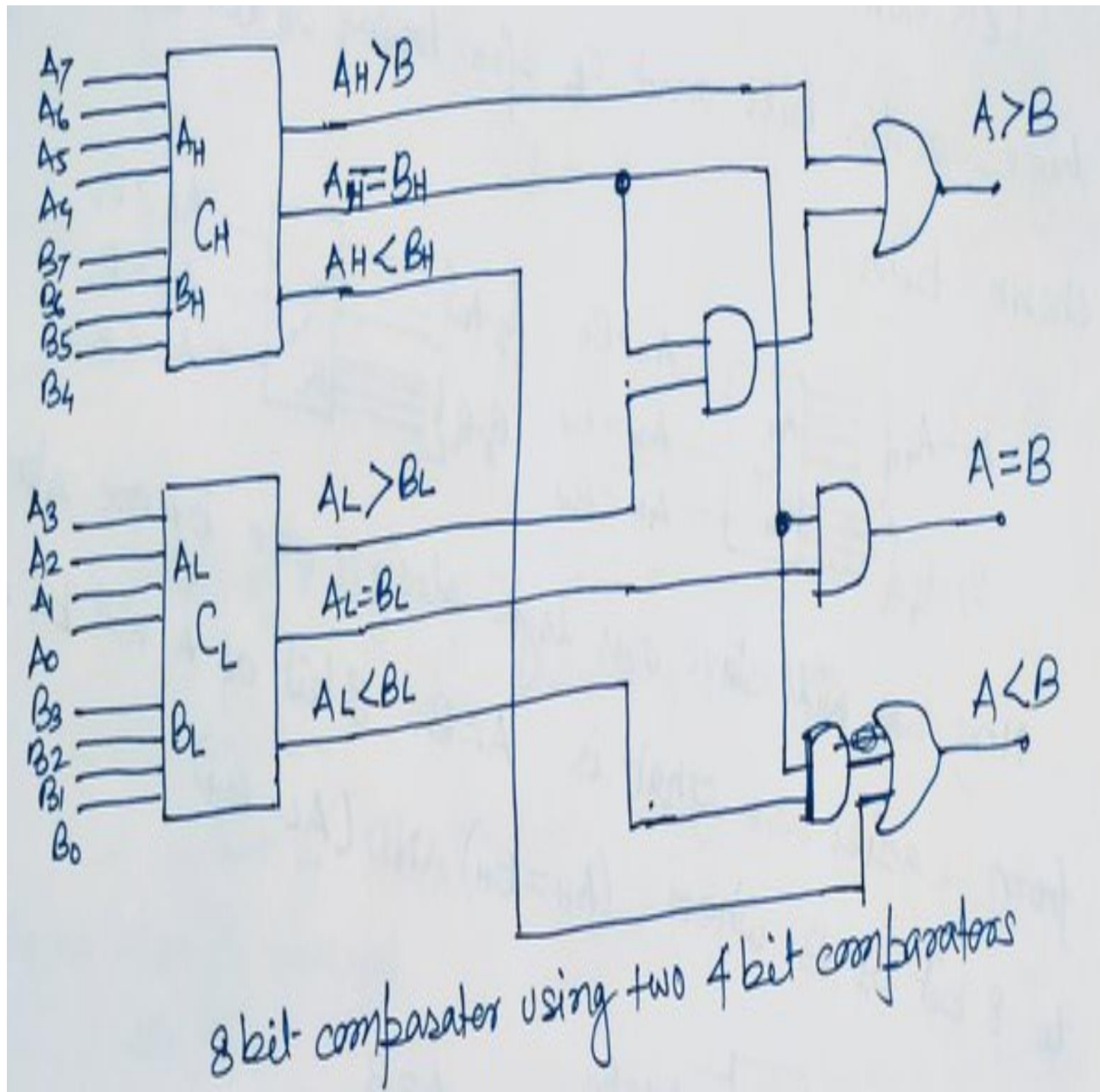* Section: 2.

Q1) Design 8-bit BCD adder.

Fig : 8 - Bit BCD Adder

Q2) Design 8-bit comparator using 2 of 4-bit comparator.

8 bit combasater using two 4 bit combasators

Q3) A 4-inputs, 3-outputs circuit that compares 2-bit unsigned numbers and outputs a '1' on one of three output lines according to whether the first number is greater than, equal to, or less than the other number. You can only use two 4×1 multiplexer.

Truth Table of 2-Bit Magnitude Comparator

INPUT				OUTPUT		
A1	**A0**	**B1**	**B0**	**A>B**	**A=B**	**A<B**
O	O	O	O	O	1	O
O	O	O	1	O	O	1
O	O	1	O	O	O	1
O	O	1	1	O	O	1
O	1	O	O	1	O	O
O	1	O	1	O	1	O
O	1	1	O	O	O	1
O	1	1	1	O	O	1
1	O	O	O	1	O	O
1	O	O	1	1	O	O
1	O	1	O	O	1	O
1	O	1	1	O	O	1
1	1	O	O	1	O	O
1	1	O	1	1	O	O
1	1	1	O	1	O	O
1	1	1	1	O	1	O