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Subject: DLD

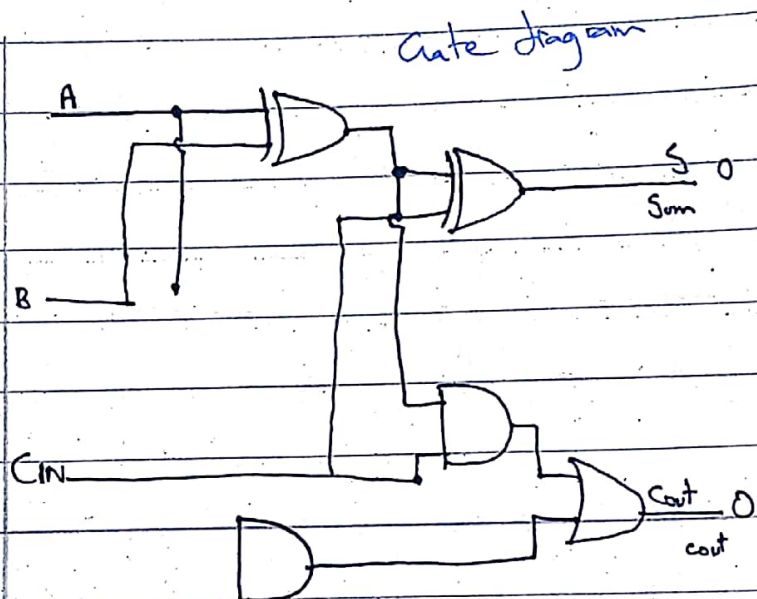
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Q1) Design a full adder show the truth table, gate level diagram & wave forms?

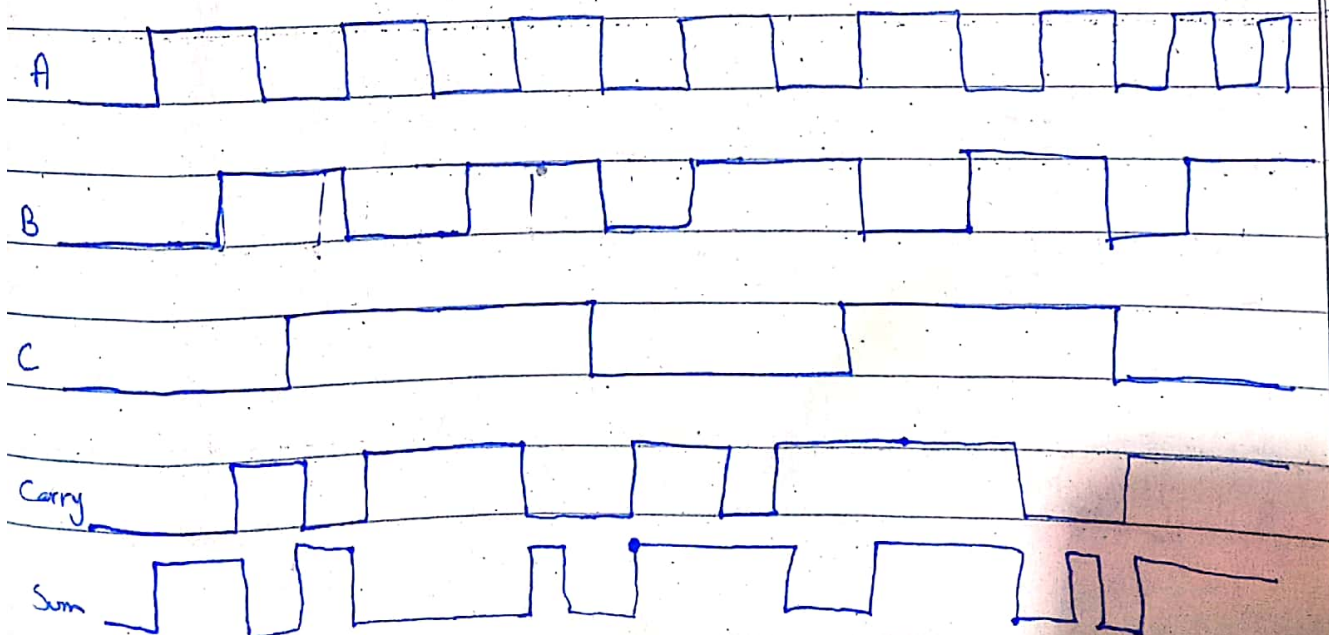
FULL-ADDER:

Truth table:

Input			Output	
A	B	Cin	Cout	Σ
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

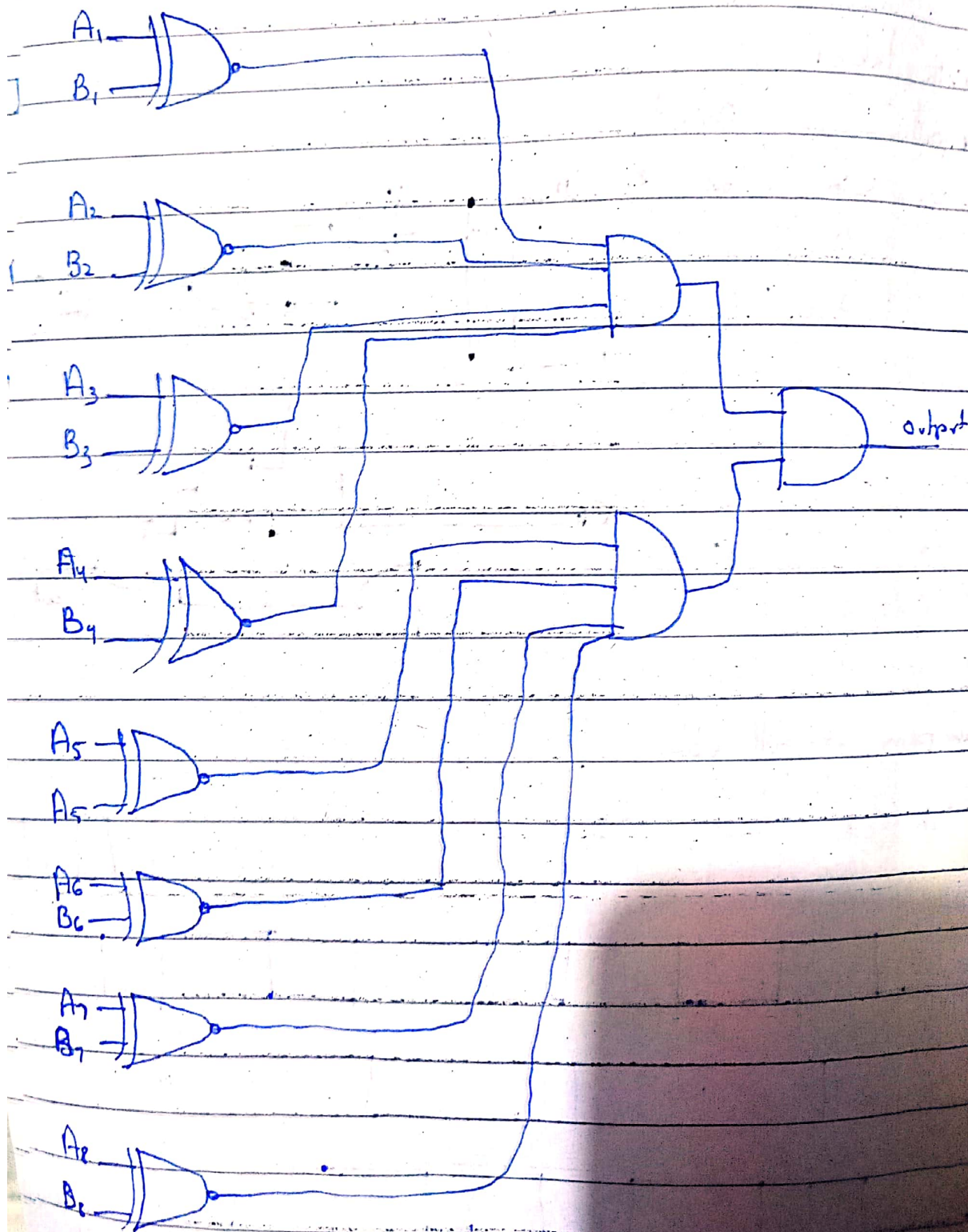


Waveform of full adder



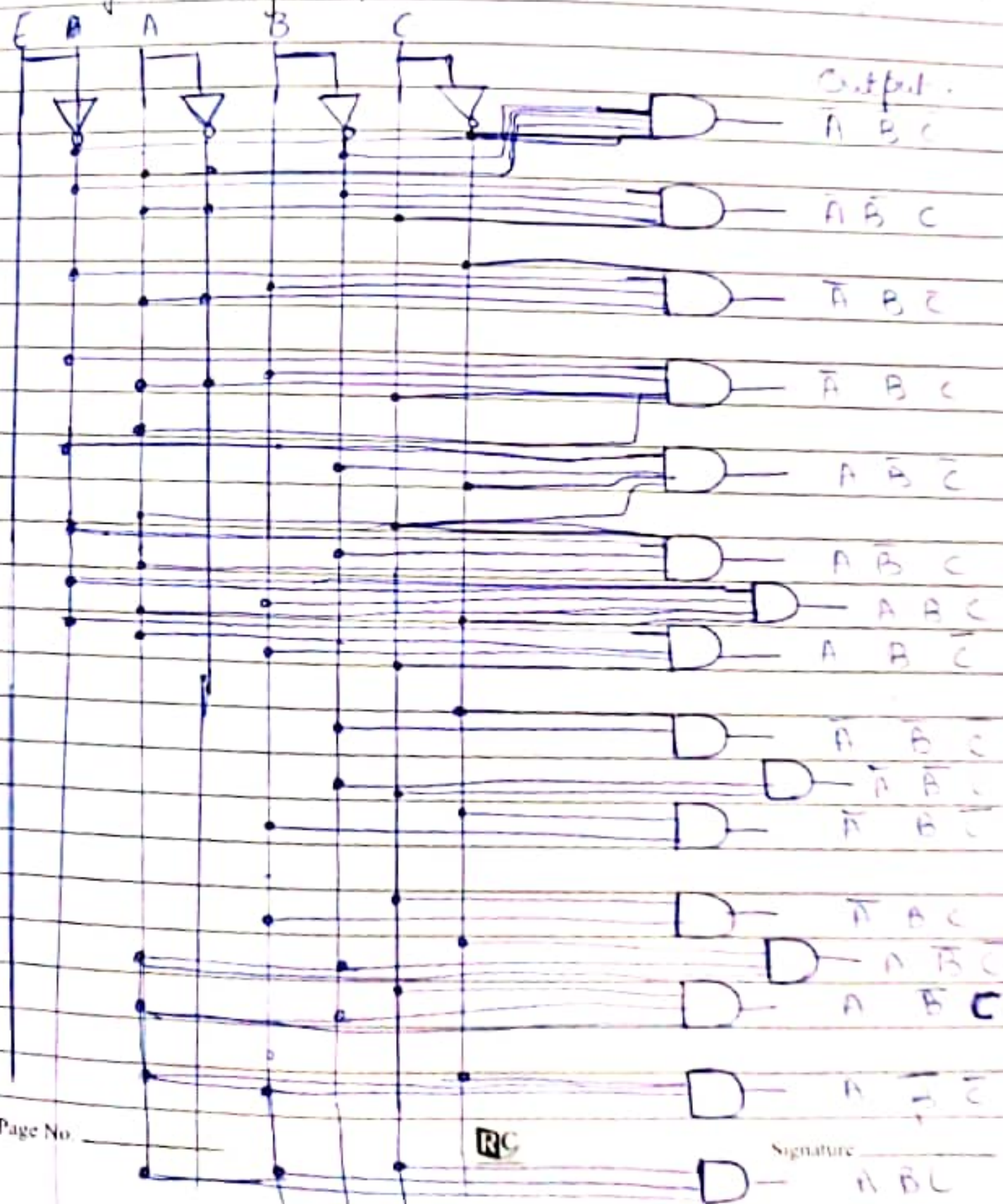
Q<sup>1</sup> Design a full adder show

Q<sup>2</sup> Design a comparator to compare two number of eight bits (gate level diagram)?





Q3. How to design 3 to 16 decoder with the help of gate diagram?



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Q4) What is the difference b/w 3 to 8 & 1 of 8 Decoder?

There is no difference b/w them in 3 to 8 3 bit to provide eight outputs, corresponding to eight different combinations of the input code. This is also called a 1 of 8 decoder since only one of eight output lines is high for a particular input combination.

Q<sup>5</sup>/ Is there any difference of full adder or half adder?

The difference b/w half adder & full adder is that half adder only adds the current inputs as 1-bit numbers & does not ignore previous inputs. In the other side, full adder can carry the current inputs as well as the output from the previous additions.