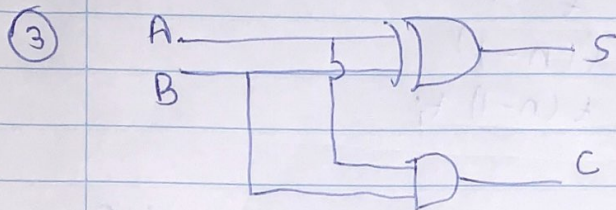


## Computer architecture

①

A	B	S	C
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

②  $S = A \oplus B$   
 $C = AB$



④

A	B	Cin	S	Cout
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

⑤

	AB	AB'	A'B'	A'B
S	1	0	1	0
C'	0	1	0	1

$$\begin{aligned}
 S &= ABC + A'B'C + AB'C' + A'BC' \\
 &= (AB + A'B')C + (AB' + A'B)C' \\
 &= (A \oplus B)'C + (A \oplus B)C' \\
 &= (A \oplus B) \oplus C
 \end{aligned}$$

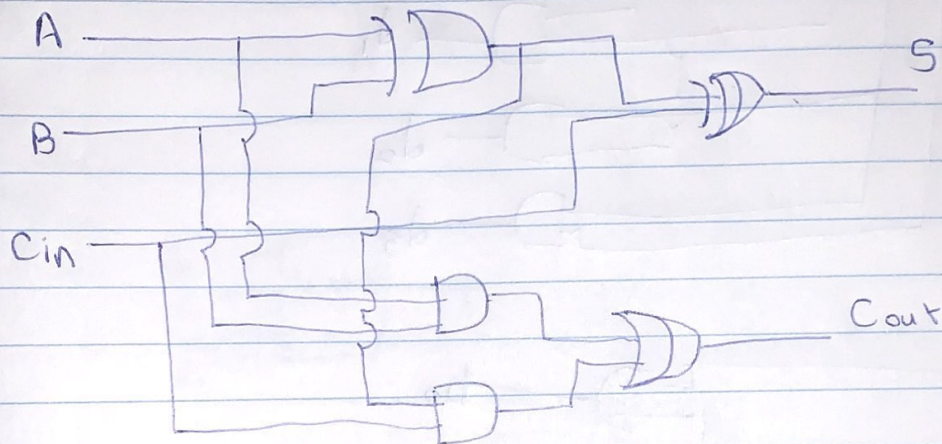


④

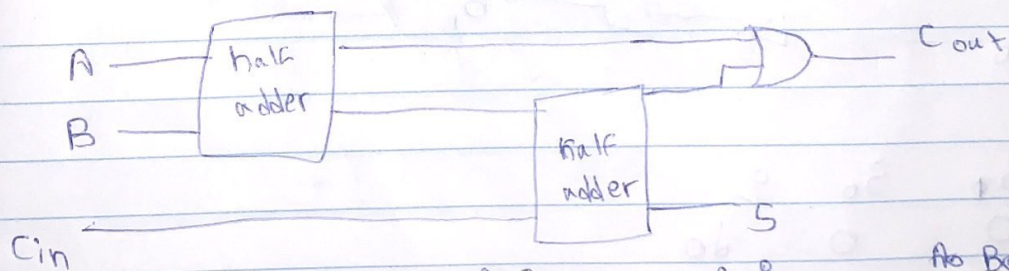
	AB	AB'	A'B'	A'B
C'	1	1	0	1
C	1	0	0	0

$$C = AC + AB + BC + AB$$

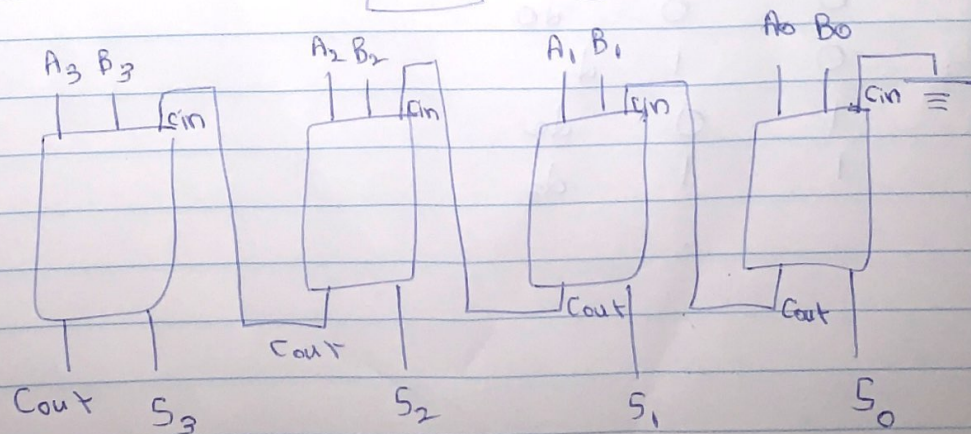
$$C = AB + (A \oplus B)C_{in} ?$$



⑤



⑦





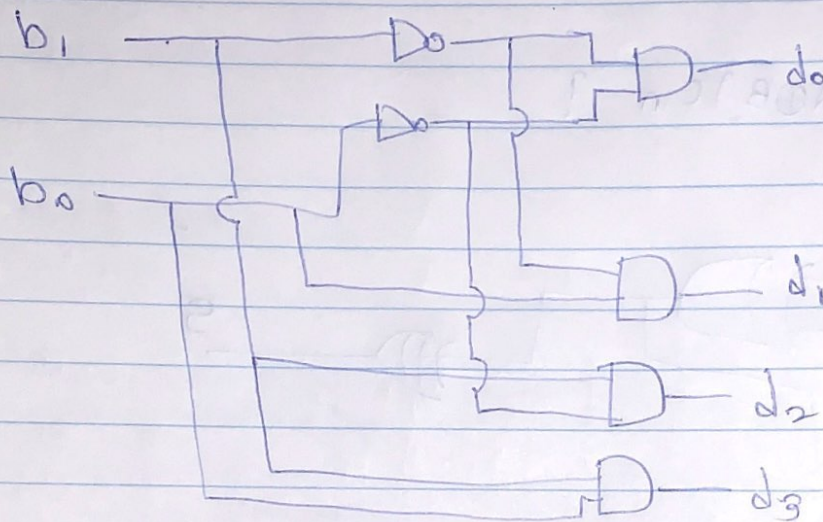
No: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

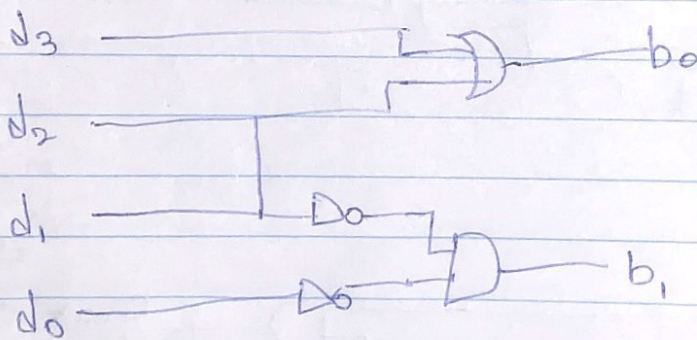
(8)

$b_1$	$b_0$	$d_3$	$d_2$	$d_1$	$d_0$
0	0	0	0	0	1
0	1	0	0	1	0
1	0	0	1	0	0
1	1	1	0	0	0

(9)



(10)

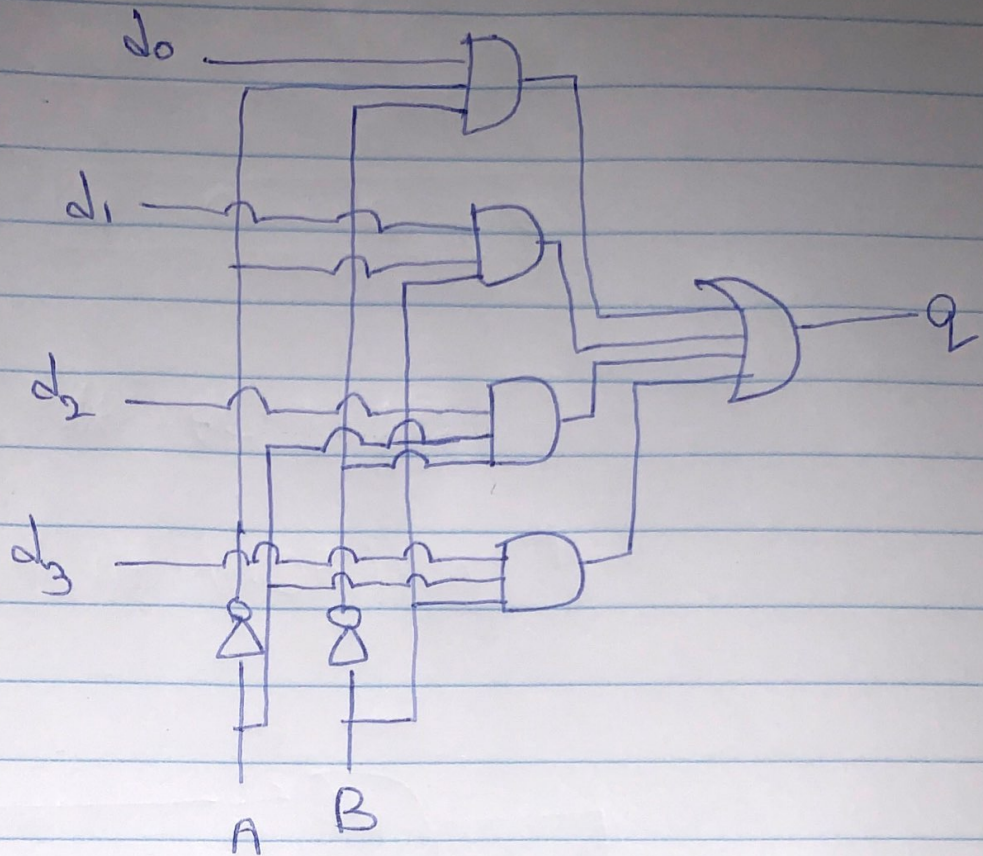


(11)

$S_1$	$S_0$	$q$
0	0	$d_0$
0	1	$d_1$
1	0	$d_2$
1	1	$d_3$



(12)



(13)

