

Muhammed Rohan.

Sessional # 1.

DLD - lab

Qno. 11-

(b).

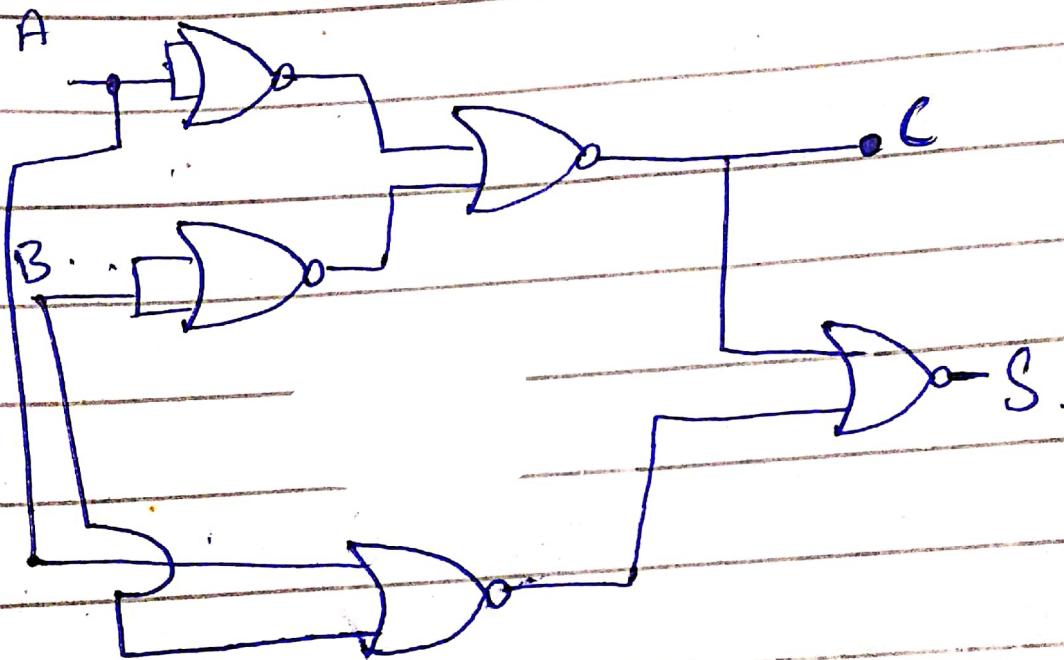
Truth table of half adder, -

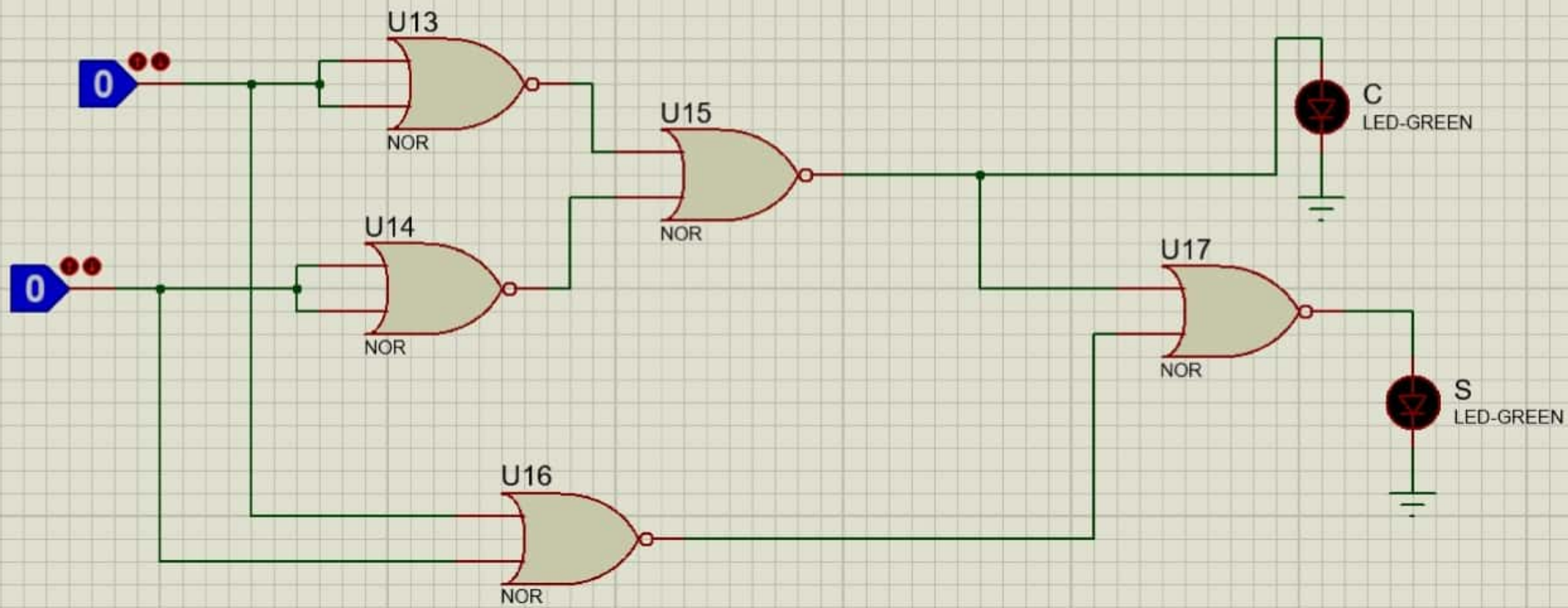
A	B	S	C
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

$$S = A \oplus B$$

$$C = A \cdot B$$

Implementation by NOR

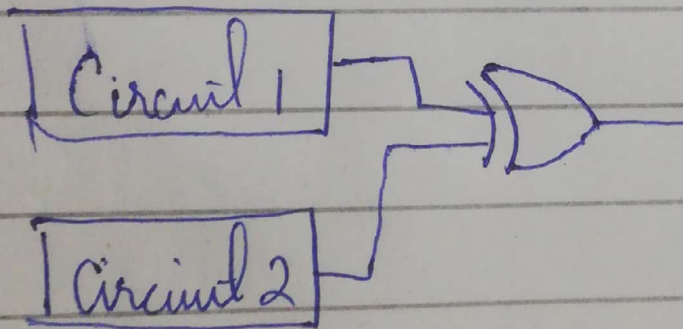




Qno 1, (i)

We may use an XOR (\oplus) gate to make a device to detect failure because when both circuits will have different outputs it will stay off and when the failure occurs one of the outputs will change and the device will turn on.

Circuit:-



FA20-BSE-032-B.

Muhammad Rohan.

Q. No 21

$$f_1 = m_1 + (m_3 + m_4) + (m_5 + m_6 + m_7)$$
$$= m_1 + m_5 + m_6 + m_7$$

A	B	C	Y
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

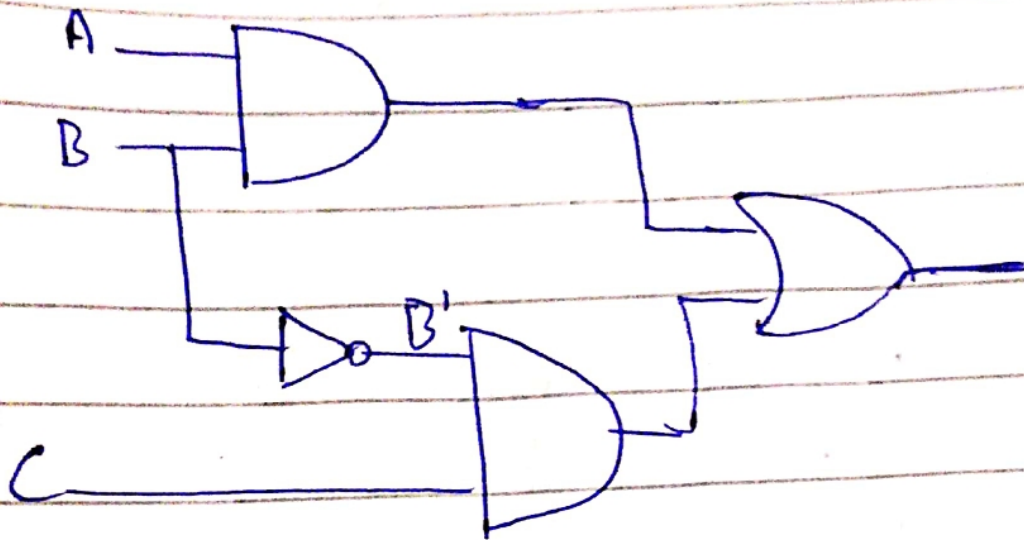
Roll no = 32.

Last digit = 2

A \ BC	00	01	11	10
0		1		
1	0	1	1	1

$B'C + AB$

Circuits by basic logic gates.



Circuit by nor:-

