

Xor

Xnor

①  $x \oplus 1 = \bar{x}$

$x \ominus 1 = x$

$x \oplus 0 = x$

$x \ominus 0 = \bar{x}$

②  $x + \bar{x} = 1$  ,  $x \cdot \bar{x} = 0$

③  $A + \bar{A}B = A + B$

④ Nand

Nor

→ Seeing 0, it gives 1.

Seeing 1, it gives 0.

⑤

Nor

Nand .

or 2

3

And 3

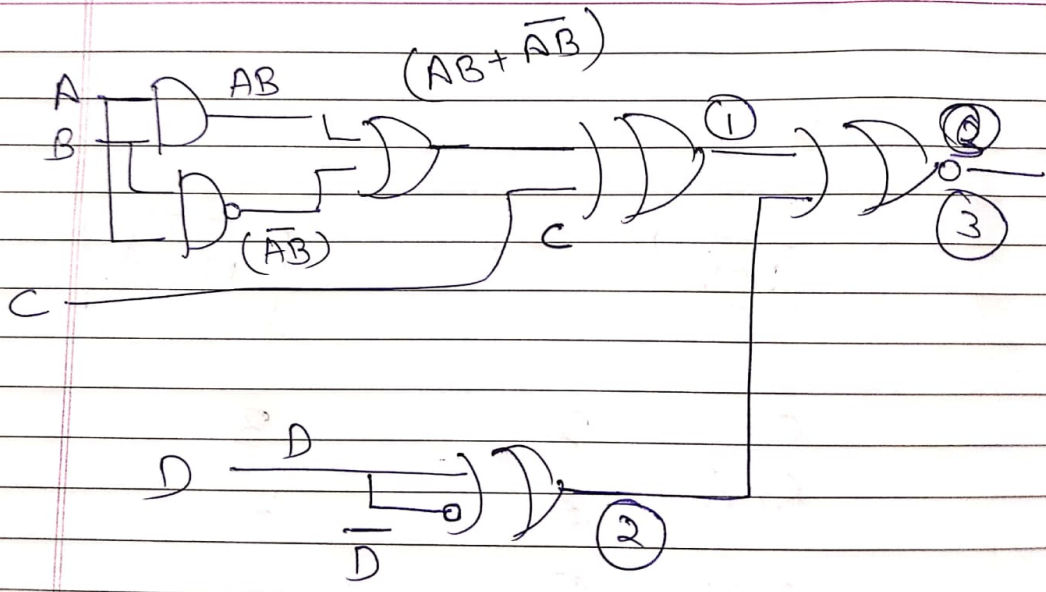
2

Xor 5

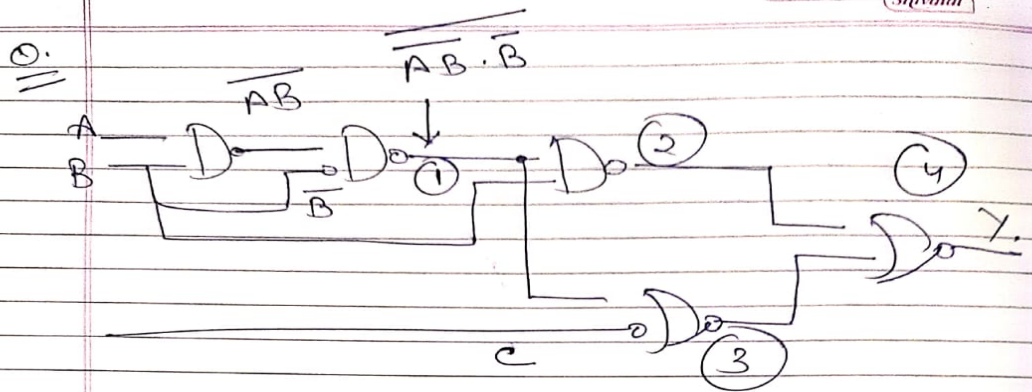
4

Xnor 4

5



Answer is = c'



①  $AB + B = B$

②  $\overline{B}$

③  $(B + \overline{B}) = B + \overline{B}$

④  $(\overline{B + \overline{B}}) = \overline{B + \overline{B}}$

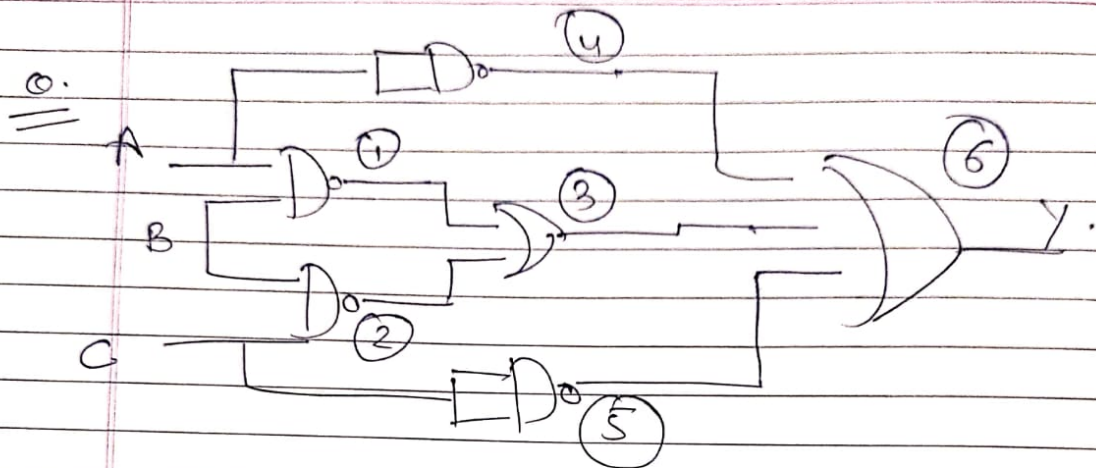
$\overline{B + \overline{B}}$

$= B \cdot (\overline{\overline{B + \overline{B}}})$

$= B \cdot (B + \overline{B})$

$= BB + B\overline{B} = B + B\overline{B}$

$= B$  ✓



(1)  $\overline{AB}$

(2)  $\overline{BC}$

(3)  $\overline{AB} + \overline{BC}$

(4)  $\overline{A}$

(5)  $\overline{C}$

$\overline{A} + \overline{C} + (\overline{A} + \overline{B} + \overline{C})$

$= \overline{A} + \overline{B} + \overline{C} \checkmark$