a) 
$$Y = \overline{ABC + BC + C}$$

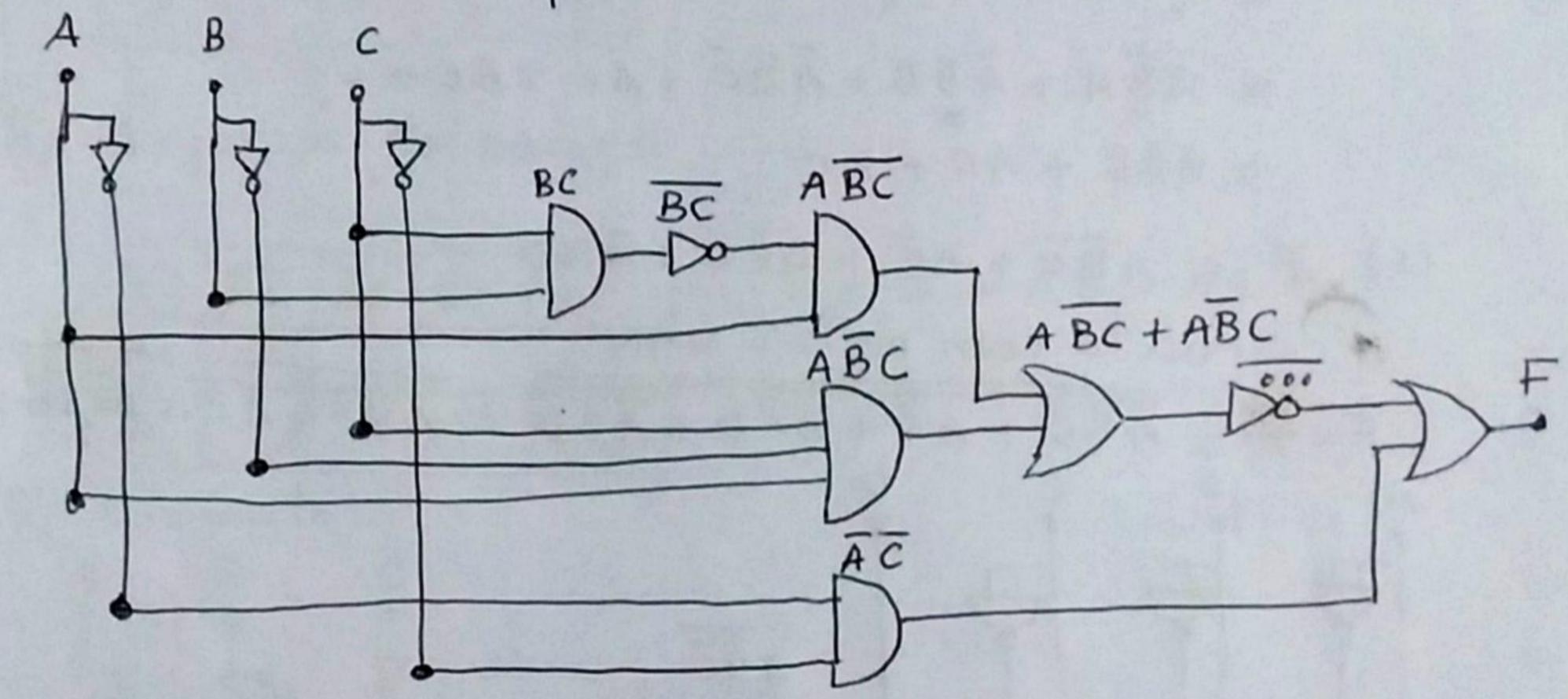
$$= \overline{ABC + B + C + C} = \overline{ABC + B + C}$$

$$= \overline{B}(1 + AC) + \overline{C} = \overline{B} + \overline{C} = \overline{B}.\overline{C}$$

$$= BC$$

b) F = ABC + ABC + AC

circuito com portas AND, OR & NOT



c) X = AC + AD + BC + BD (soma de produtos)