

2.(2)

$$\begin{aligned} X &= A\bar{B}\bar{C} + \bar{A}B\bar{C} + \bar{A}\bar{B}C + \bar{A}\bar{B}\bar{C} \\ &= A\bar{B}\bar{C} + \bar{A}(B\bar{C} + \bar{B}C + \bar{B}\bar{C}) \\ &= A\bar{B}\bar{C} + \bar{A}(\bar{B}(\bar{C} + C) + B\bar{C}) \\ &= A\bar{B}\bar{C} + \bar{A}(\bar{B} + B\bar{C}) \\ &= A\bar{B}\bar{C} + \bar{A}\bar{B} + \bar{A}B\bar{C} \\ &= \bar{A}\bar{B} + \bar{C}(A\bar{B} + \bar{A}B) \\ &= \bar{A}\bar{B} + \bar{C}(A \oplus B) \end{aligned}$$