1. A Boolean function F of three variables $X, Y,$ and Z is given as $F(X, Y, Z) = (X' + Y + Z) \cdot (X + Y' + Z') \cdot (X' + Y + Z') \cdot (X'Y'Z' + X'YZ' + XYZ')$.

   Which one of the following is true? (IN2021,31)

   (a) $F(X, Y, Z) = (X + Y + Z') \cdot (X' + Y' + Z')$

   (b) $F(X, Y, Z) = (X' + Y) \cdot (X + Y' + Z')$

   (c) $F(X, Y, Z) = X'Z' + YZ'$

   (d) $F(X, Y, Z) = X'Y'Z + XYZ$