Gate assignment

December 22, 2023

1. Consider the following Boolean expression

   $F = (X + Y + Z)(\bar{X} + Y)(\bar{Y} + Z)$

   Which of the following Boolean expressions is/are equivalent to $\overline{F}$ (complement of F)?

   (a) $(\bar{X} + \bar{Y} + \bar{Z})(X + \bar{Y})(Y + \bar{Z})$

   (b) $X\bar{Y} + \bar{Z}$

   (c) $(X + \bar{Z})(\bar{Y} + \bar{Z})$

   (d) $X\bar{Y} + Y\bar{Z} + \bar{X}\bar{Y}\bar{Z}$