

Gate assignment

December 26, 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 \bar{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) $X\bar{Y} + Y\bar{Z} + \bar{X}\bar{Y}\bar{Z}$

(Gate CS 2021)