

## GATE EC 2015

36. The Boolean expression  $F(X, Y, Z) = \overline{X}Y\overline{Z} + X\overline{Y}\overline{Z} + XY\overline{Z} + XYZ$  converted into the canonical product of sum (*POS*) form is

- (a)  $(X + Y + Z)(X + Y + \overline{Z})(X + \overline{Y} + \overline{Z})(\overline{X} + Y + \overline{Z})$
- (b)  $(X + \overline{Y} + Z)(\overline{X} + Y + \overline{Z})(\overline{X} + \overline{Y} + Z)(\overline{X} + \overline{Y} + \overline{Z})$
- (c)  $(X + Y + Z)(\overline{X} + Y + \overline{Z})(X + \overline{Y} + Z)(\overline{X} + \overline{Y} + \overline{Z})$
- (d)  $(X + \overline{Y} + \overline{Z})(\overline{X} + Y + Z)(\overline{X} + \overline{Y} + Z)(X + Y + Z)$