

# FPGA

1. **Question(GATE-IN-2018-43):**The product of sum expression of a Boolean function  $F(A, B, C)$  of three variables is given by

$$F(A, B, C) = (A + B + \bar{C}) \cdot (A + \bar{B} + \bar{C}) \cdot (\bar{A} + B + C) \cdot (\bar{A} + \bar{B} + \bar{C})$$

The canonical sum of product expression of  $F(A, B, C)$  is given by

- (a)  $\bar{A}\bar{B}C + \bar{A}BC + A\bar{B}\bar{C} + ABC$
- (b)  $\bar{A}\bar{B}\bar{C} + \bar{A}B\bar{C} + A\bar{B}C + AB\bar{C}$
- (c)  $AB\bar{C} + A\bar{B}\bar{C} + \bar{A}BC + \bar{A}\bar{B}\bar{C}$
- (d)  $\bar{A}\bar{B}\bar{C} + \bar{A}BC + AB\bar{C} + ABC$