

1. The Product of sum expression of a Boolean function $F(A, B, C)$ three variables is given by

$$F(A, B, C) = (A + B + \overline{C}) \times (A + \overline{B} + \overline{C}) \times (\overline{A} + B + C) \times (\overline{A} + \overline{B} + \overline{C}) \quad (1)$$

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

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