

Digital input signals A, B, C with A as the MSB and C as the LSB are used to realize the Boolean function $F = m_0 + m_2 + m_3 + m_5 + m_7$, where m_i denotes the i^{th} minterm. In addition, F has a don't care for m_1 . The simplified expression for F is given by

(GATE-2018,EE,37)

1. $\bar{A}\bar{C} + \bar{B}C + AC$
2. $\bar{A} + C$
3. $\bar{C} + A$
4. $\bar{A}C + BC + A\bar{C}$