Department of Computer Science & Engineering

Digital Design and Computer Architecture

Question Bank – Boolean Functions

1. What is the total number of boolean functions of four inputs?

     a. 32768   b) 65536   c. 131072   d. 262144

2. Find the complement of the functions $F1 = x'yz\_' + x'y'z$ and $F2 = x(y'z' + yz)$. By applying DeMorgan's theorems as many times as necessary.

3. Express the Boolean function $F = A + B'C$ as a sum of minterms. The function has three variables: A, B, and C.

4. Express the Boolean function $F = xy + x'z$ as a product of maxterms.