الرقم الجامعي: 0156389

Digital Logic 0907231
Quiz 2

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Problem 1. Using Boolean algebra only, write the algebraic sum-of-minterms (SOM) expression for F(A,B,C) = $\bar{B}\bar{C} + \bar{A}\bar{C}$

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

$= A\bar{B}\bar{C} + \bar{A}\bar{B}\bar{C} + \bar{A}B\bar{C} + \bar{A}B\bar{C}$

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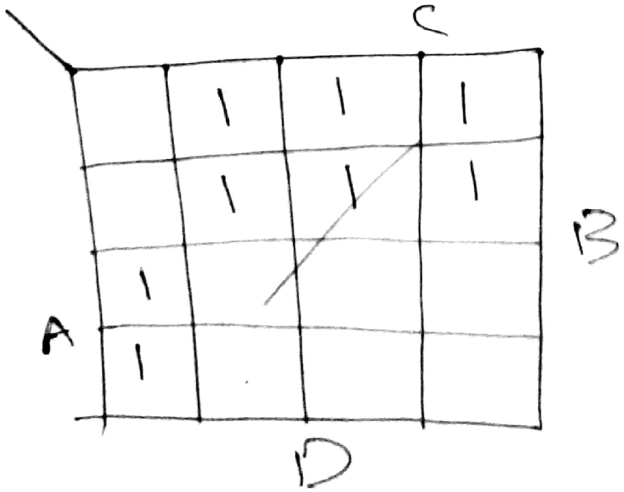
$F = \sum_m (0, 2, 4)$

$= 0, 2, 4$

Problem 2. If F(A,B,C,D,E) = $\sum_m$ (7,13,15,20,26,31) , then

$\overline{F(A,B,C,D,E)} = \prod_M$(7, 13, 15, 20, 26, 31)

Problem 3. Draw and fill the K-map for the function F(A,B,C,D) = $\bar{A}D + \bar{A}C + AC\bar{D}$



$F(A,B,C,D) = \sum_m (1,2,3,5,6,7,8,12)$