

Assignment 5 (2.5.1,e)

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1 Question

draw Kmap for "e" using dont care condition!

2 Boolean Expression For "e"

$$e = A.\overline{B}.\overline{C}.\overline{D} + A.B.\overline{C}.\overline{D} + \overline{A}.\overline{B}.C.\overline{D} + A.\overline{B}.C.\overline{D} + A.B.C.\overline{D} + A.\overline{B}.\overline{C}.D \quad (1)$$

3 K-Map For The Given Expression

$CD \backslash AB$				
	00	01	11	10
00	0	0	1	1
01	0	0	0	1
11	X	X	X	X
10	1	0	X	X

Figure 1: K-Map for e using don't care condition

4 Simplified Expression

$$e = A.\overline{B} + A.\overline{D} + \overline{B}.C$$