

Assignment 8

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1 The Boolean Expression For e

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

2 K-Map

Realisation using k-map when its POS.

$CD \backslash AB$				
	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 under given don't care condition.

3 Simplified expression

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