

# Assignment 5

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## 1 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 For The Given Expression

		$AB$			
		00	01	11	10
$CD$	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

## 3 Simplified Expression

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