

CSE 206offline-2

$$1) f(A, B, C, D) = \Sigma (1, 4, 10, 11) + D(0, 2, 3, 5, 8, 14, 15)$$

		CD	00	01	11	10
		AB	00	01	11	10
00	01	00	X	1		
		01	1	X		
11	10	00			X	X
		01			1	1

$$f = \bar{A}\bar{C} + AC$$

Logic gates: 2 NOT, 2 AND,
1 OR

$$2) f = (A, B, C, D, E) = \Sigma (4, 5, 17, 19, 25, 27) + D(3, 6, 12, 13, 16, 18, 24, 26, 30, 31)$$

		CDE		000	001	011	010	110	111	101	100
		AB		00	01	11	10	10	11	10	10
00	01	00			X		X		1	1	
		01							X	X	
11	10	00	X	1	1	X		X			
		01	X	1	1	X					

$$f = A\bar{C} + \bar{A}CD$$

Logic gates: 3 NOT, 3 AND, 1 OR