

CSE 206

offline-2

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

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

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

Logic gates: 2 NOT, 2 AND, 1 OR

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

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

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

Logic gates: 3 NOT, 3 AND, 1 OR