ECE 273 - QUIZ 7   KEY
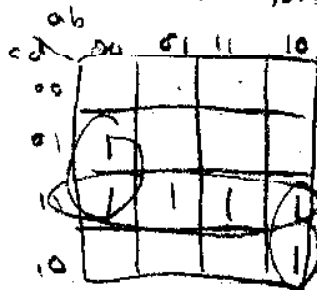
NAME:

Honor Code:

Use the Quine-McCluskey Method to write

$$f(a,b,c,d) = \sum m(1, 3, 7, 10, 11, 15)$$

in minimum SOP form. Show your work.

$$cD + a'b'd + ab'c$$

Col I		Col II		Col III	
1	0001 ✓	(1,3)	00-1	(3,7,11,15)	--11
3	0011 ✓	(3,7)	0-11 ✓	(3,11,7,15)	--11
10	1010	(3,11)	-011 ✓		
7	0111 ✓	(10,11)	101-		
11	1011 ✓	(7,15)	-111 ✓		
15	1111 ✓	(11,15)	1-11 ✓		

PRIME

IMP.		1	3	7	10	11	15
(1,3)	a'b'd	X	X				
(10,11)	ab'c				X	X	
(3,7,11,15)	cd		X	X		X	X

$$= a'b'd + ab'c + cd$$