A) Problem description

y is 1 if a is to 1, or b and c are 1. z is 1 if b or c is to 1, but not both, or if all are 1.

B) Truth table

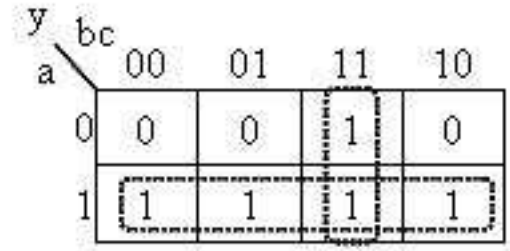
Inputs			Outputs	
a	b	c	y	z
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	1	0
1	0	1	1	1
1	1	0	1	1
1	1	1	1	1

C) Output equations

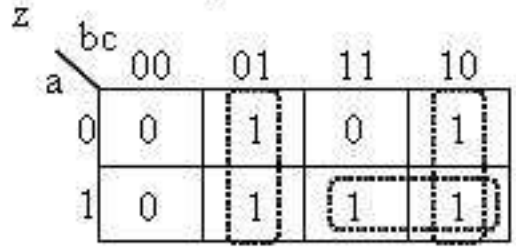
$y = a'bc + ab'c' + ab'c + abc' + abc$

$z = a'b'c + a'bc' + ab'c + abc' + abc$

D) Minimized output equations



$y = a + bc$



$z = ab + b'c + bc'$

E) Logic Gates