

## Lab 2

### I. Truth Table

Truth Table						
X	Y	Z	F <sub>3</sub>	F <sub>2</sub>	F <sub>1</sub>	V
0	0	0	0	0	0	0
0	0	1	1	1	1	0
0	1	0	1	1	0	0
0	1	1	1	0	1	0
1	0	0	1	0	0	1
1	0	1	0	1	1	0
1	1	0	0	1	0	0
1	1	1	0	0	1	0

K-Map & Boolean Equations:

X \ YZ	00	01	11	10
0		1	1	1
1	1			

$$F_3 = X'Z + X'Y + XY'Z'$$

X \ YZ	00	01	11	10
0		1		1
1		1		1

$$F_2 = Y'Z + YZ'$$

X \ YZ	00	01	11	10
0		1	1	
1		1	1	

$$F_1 = Z$$

X \ YZ	00	01	11	10
0				
1	1			

$$V = XY'Z'$$

Digital Circuit:

