

② If  $A > B$ ,

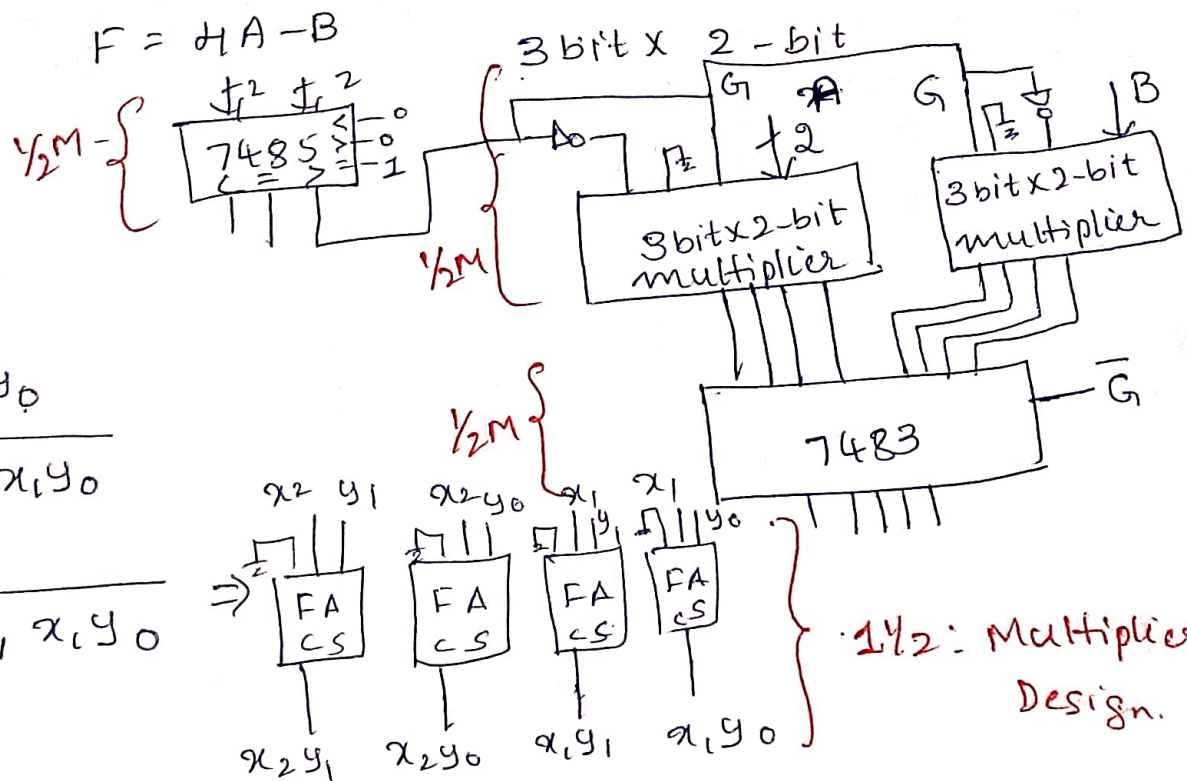
$$F = A + 4B$$

else

$$F = H A - B$$

$$H = 100 \quad A \succ B$$

$$1 = \frac{00}{\underline{\quad}} \frac{1}{\underline{\quad}}$$



• 142: Multiplier Design.

3 bit  $\times$  2 bit

$$x_2 \circ x_1, xy, y_0$$

$$x_2 y_0 \quad 0 \quad x_1 y_0$$

$$x_2 y_1 \quad 0 \quad x_1 y_1$$

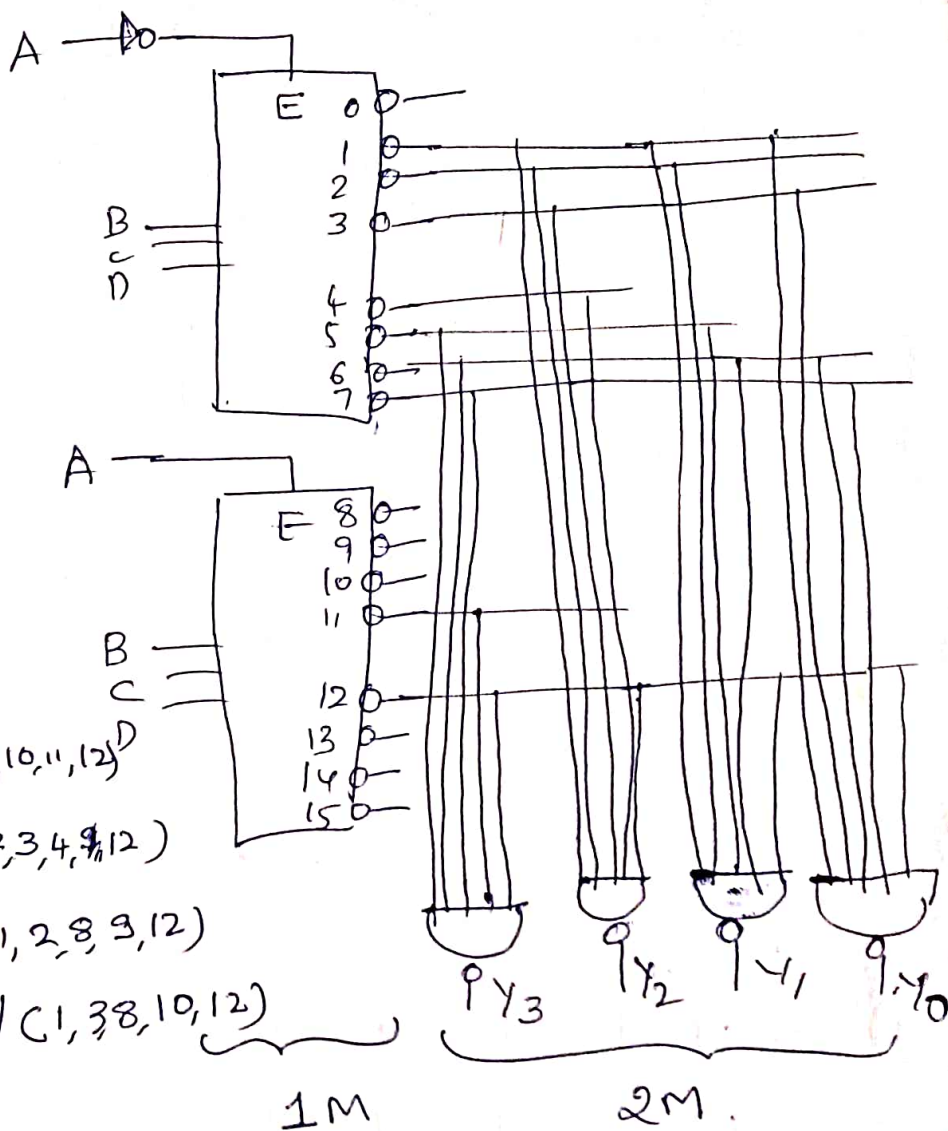
$$x_2 y, x_2 y_0, x_1 y, x_1 y_0$$

Q6

5421 code to 84-2-1 using 3 to 8 decoders

with active low outputs & external gates.

5	4	2	1	$y_3 y_2 y_1 y_0$
				84-2-1
0	0	0	0	0 0 0 0
0	0	0	1	0 1 1 1
0	0	1	0	0 1 1 0
0	0	1	1	0 1 0 1
0	1	0	0	0 1 0 0
0	1	0	1	1 0 1 1
0	1	1	0	1 0 1 0
0	1	1	1	1 0 0 1
1	0	1	1	1 0 0 0
1	1	0	0	1 1 1 1



$$y_3 = \sum m(5, 6, 7, 11, 12) / (\overline{8}, 9, 10, 11, 12)$$

$$y_2 = \sum m(1, 2, 3, 4, 12) / (1, 2, 3, 4, 12)$$

$$y_1 = \sum m(1, 2, 5, 6, 12) / (1, 2, 8, 9, 12)$$

$$y_0 = \sum m(1, 3, 5, 7, 12) / (1, 3, 8, 10, 12)$$