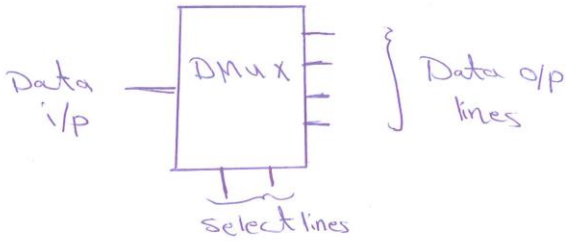
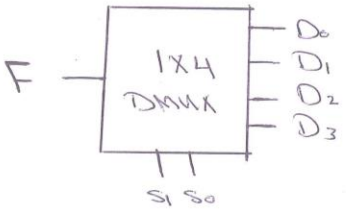
Demultiplexer

A demultiplexer (DMUX) basically reverses the multiplexing function. It takes data from one line and distributes them to a given number of output lines.



Ex:- $F = \Sigma(0,2)$

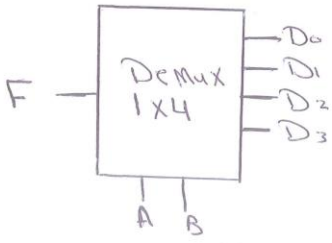
S_1 S_0	F	D_0	D_1	D_2	D_3
0 0	1	1	0	0	0
0 1	0	0	0	0	0
1 0	1	0	0	1	0
1 1	0	0	0	0	1



when $S_1S_0 = 00$

$O/P = D_0 = F = 1$

Note:- The decoder with enable input can be used as Demultiplexer which is a circuit that receives information in single line and transmit this information on the multi output.

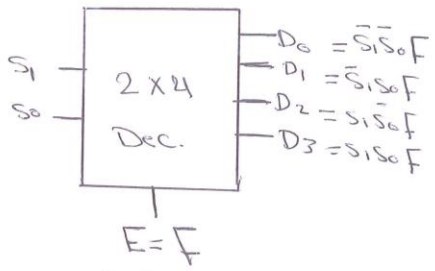


$D_0 = F\bar{A}\bar{B}$

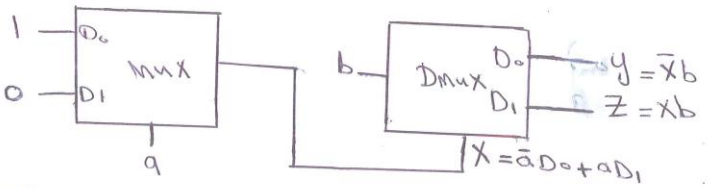
$D_1 = F\bar{A}B$

$D_2 = FA\bar{B}$

$D_3 = FAB$



Ex:- Find the value of y and z for the circuit below:-



a	b	X	y	z
0	0	1	0	0
0	1	1	0	1
1	0	0	0	0
1	1	0	1	0