

ASSIGNMENT #2

(Dr. Waseem Ikram)

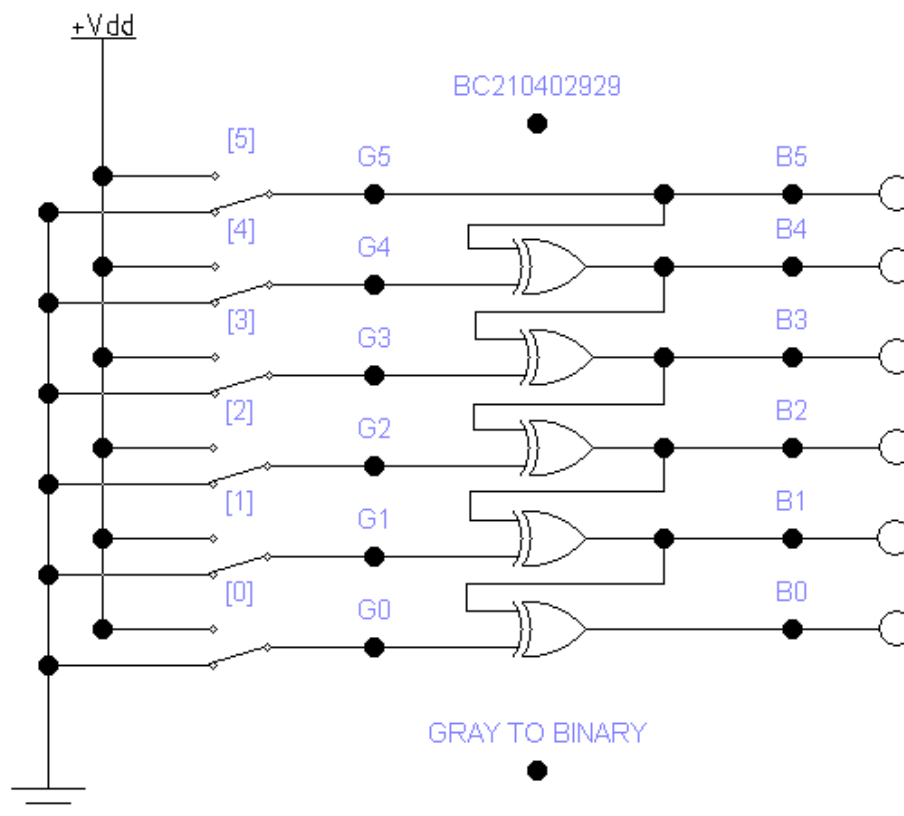
ID #BC210402929

(Muhammad Umair)

Question #1

Draw the circuit diagram for a complete 6-bit Gray Code to Binary converter using EWB application, also submit the truth table for the stated circuit as well.

Solution



Truth Table (Gray Code to Binary)

G0	G1	G2	G3	G4	G5	B0	B1	B2	B3	B4	B5
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	1	1	1	1	1	1	1
0	0	0	0	1	0	1	1	1	1	1	0
0	0	0	0	1	1	0	0	0	0	0	1
0	0	0	1	0	0	1	1	1	1	0	0
0	0	0	1	0	1	0	0	0	0	1	1
0	0	0	1	1	0	0	0	0	0	1	0
0	0	0	1	1	1	1	1	1	1	0	1
0	0	1	0	0	0	1	1	1	0	0	0
0	0	1	0	0	1	0	0	0	1	1	1
0	0	1	0	1	0	0	0	0	1	1	0
0	0	1	0	1	1	1	1	1	0	0	1
0	0	1	1	0	0	0	0	0	1	0	0
0	0	1	1	0	1	1	1	1	0	1	1
0	0	1	1	1	0	1	1	1	0	1	0
0	0	1	1	1	1	0	0	0	1	0	1
0	1	0	0	0	0	1	1	0	0	0	0
0	1	0	0	0	1	0	0	1	1	1	1
0	1	0	0	1	0	0	0	1	1	1	0
0	1	0	0	1	1	1	1	0	0	0	1
0	1	0	1	0	0	0	0	1	1	0	0
0	1	0	1	0	1	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	0	1	0
0	1	0	1	1	1	0	0	1	0	0	1
0	1	1	0	0	0	0	0	1	0	0	0
0	1	1	0	0	1	1	1	0	1	1	1
0	1	1	0	1	0	1	1	0	1	1	0
0	1	1	0	1	1	0	0	1	0	0	1
0	1	1	1	0	0	1	1	0	1	0	0
0	1	1	1	0	1	0	0	1	0	1	1
0	1	1	1	1	0	0	0	1	0	1	0
0	1	1	1	1	1	1	1	0	1	0	1
1	0	0	0	0	0	1	0	0	0	0	0
1	0	0	0	0	1	0	1	1	1	1	1
1	0	0	0	1	0	0	1	1	1	1	0
1	0	0	0	1	1	1	0	0	0	0	1
1	0	0	1	0	0	0	1	1	1	0	0
1	0	0	1	0	1	1	0	0	0	1	1
1	0	0	1	1	0	1	0	0	0	1	0
1	0	0	1	1	1	0	1	1	1	0	1
1	0	1	0	0	0	0	1	1	0	0	0
1	0	1	0	0	1	1	0	0	1	1	1
1	0	1	0	1	0	1	0	0	1	1	0
1	0	1	0	1	1	0	1	1	0	0	1
1	0	1	1	0	0	1	0	0	1	0	0
1	0	1	1	0	1	0	1	1	0	1	1
1	0	1	1	1	0	0	1	1	0	1	0
1	0	1	1	1	1	1	0	0	1	0	1
1	1	0	0	0	0	0	1	0	0	0	0

1	1	0	0	0	1	1	0	1	1	1	1
1	1	0	0	1	0	1	0	1	1	1	0
1	1	0	0	1	1	0	1	0	0	0	1
1	1	0	1	0	0	1	0	1	1	0	0
1	1	0	1	0	1	0	1	0	0	1	1
1	1	0	1	1	0	0	1	0	0	1	0
1	1	0	1	1	1	1	0	1	1	0	1
1	1	1	0	0	0	1	0	1	0	0	0
1	1	1	0	0	1	0	1	0	1	1	1
1	1	1	0	1	0	0	1	0	1	1	0
1	1	1	0	1	1	1	0	1	0	0	1
1	1	1	1	0	0	0	1	0	1	0	0
1	1	1	1	0	1	1	0	1	0	1	1
1	1	1	1	1	0	1	0	1	0	1	0
1	1	1	1	1	1	0	1	0	1	0	1