

1. Design a 32:1 MUX using 4:1 Mux(s); Selector bits QWEZA
2. Implement the following function using only 4:1 Mux;

$$F(QWEZA) = \sum(0,1,5,7,11,15,19,21,24,25,26,28,30,31)$$
3. Design a system using encoder and decoder that can convert a three bit number to its 1s complement form.
4. Design a system using encoder and decoder that can convert a 3 bit 2s complement number to its actual form.
5. Design a system using encoder and decoder that takes a 2 bit number and generates output by adding 2 with the input.
6. Design a half adder using encoder and decoder.
7. Design a full adder using encoder and decoder.
8. $F(O, A, S, L, B) =$

$$\sum(0,1,5,7,11,15,19,21,24,25,26,28,30,31)$$
 1. Implement the above boolean function using three 2:1 Mux(s)
 2. Implement the above boolean function using a 2:1 Mux