1. Given the following function: \( Z(E,F,G,H) = \Sigma m(0,2,6,7,8,9,10,11,13,15) \).
   a. Implement the function using an 8-input multiplexer.
   b. Implement the function using a 4-input multiplexer.

2. Implement a 4-input multiplexer:
   a. Using three 2-input multiplexers.
   b. Using a decoder and four tri-state buffers.

3. Determine the ROM size and contents to implement a function which converts a single octal digit to a 3-out-of-6 code.