Tutorial – 10 (Questions)

1. Design an 8×1 multiplexer using 2×1 multiplexer.

2. Design an 8×1 multiplexer using 4×1 multiplexer. Note: You may use enable input of the multiplexers.

3. Use a multiplexer having three data select inputs to implement the logic for the function $F = \Sigma m (0, 1, 2, 3, 4, 10, 11, 14, 15)$.

4. Use a multiplexer to implement the logic function $F = A \oplus B \oplus C$.

5. Implement the following multiple output combinational logic circuit using a 4-line to 16-line decoder.

   $F = \Sigma m (1, 2, 4, 7, 8, 11, 12, 13)$
   $F = \Sigma m (2, 3, 9, 11)$
   $F = \Sigma m (10, 12, 13, 14)$
   $F = \Sigma m (2, 4, 8)$