

**Indian Institute of Technology, Delhi**  
**EEP 201: Digital Electronic Circuits Laboratory**  
**Experiment 4, July-Dec 2008**  
**Exercise with Multiplexers**

**Pre-lab exercises:**

1. Evaluate the truth-table of the circuit diagram shown in Fig. 1.
2. Evaluate the truth-table of the circuit diagram shown in Fig. 2.

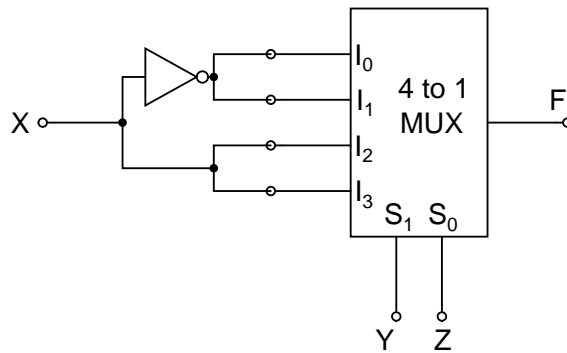


Figure 1:

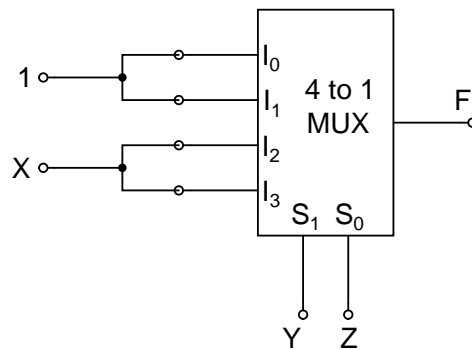


Figure 2:

**Experiment:**

The function,  $F = \sum 0, 1, 2, 5, 6, 8, 9, 11, 13, 14, 15$  needs to be realized.

- Realize the function F using one 8 to 1 multiplexer (74151), and minimum additional gates.
- Realize the function F using two 4 to 1 multiplexers (74153), and minimum additional gates.