

**Department of Computer Science and Engineering
BRAC University
CSE 260: Digital Logic Design**

Experiment # 4: Design and Implementation of 4-bit Parallel Binary Adder

Experiment # 5: Implementation of 4-bit Magnitude Comparator

Experiment # 6: Design circuits using encoder & decoder.

Experiment # 7: Function Implementation Using MUX.

Required Components for Lab - 4:

1. IC 7408
2. IC 7432
3. IC 7486
4. IC 7483

Required Components for Lab - 5:

1. IC 7408
2. IC 7432
3. IC 7404
4. IC 4077

Required Components for Lab - 6:

1. IC 74138
2. IC 74148

Required Components for Lab - 7:

1. IC 74153
2. IC 7408
3. IC 7432
4. IC 7404

Experimental Setup:

*Attach the signed circuit diagram or experimental setup part from the lab

Experimental Setup for Lab - 4:

Experimental Setup for Lab - 5:

Experimental Setup for Lab - 6:

Experimental Setup for Lab - 7:

Result:

*Attach the signed result part from the lab

Result for Lab - 4:

Result for Lab - 5:

Result for Lab - 6:

Result for Lab - 7:

Discussion:

Answer the following questions also as part of discussion:

1. Design a circuit that takes a 3-bit number as input and outputs the corresponding excess-3 using encoder and decoder.
2. Design a 2-bit Parallel adder using exactly four 8:1 Mux(s)