CSE260: Digital Logic Design
Lab Final, Fall 2025
Total Marks:10
Time: 25 minutes

Name:
ID:
Marks Obtained:

Question: Design and construct a circuit using appropriate components that takes two 3-bit binary numbers, A and B, as inputs, subtracts B from A and determines whether the result of the subtraction is even or odd.

The circuit should produce an output that includes the result of the subtraction followed by an additional single bit, where this bit is 1 if the result is even and 0 if the result is odd.

Note:
You may assume that A is always greater than B, so no negative result will occur.

Sample Input-Output:
Input: 111, 100
Output: 0110 [First three bits are the result and the lsb bit is indicating if the result is even or odd]

---

1. Write the name of the IC(s) that you chose to build your circuit. [2]
Answer:

2. Correctly build the circuit. [8]

CSE260: Digital Logic Design
Lab Final, Fall 2025
Total Marks:10
Time: 25 minutes

Name:
ID:
Marks Obtained:

Question: Design and construct a circuit that takes a 4 bit number as input and generates a two bit output.

If the input is divisible by 3 the output should be last two digits of the input
Else the output should be the first two digits of the input.

Sample Input-Output:
Input1: 0011
Output: 11

Input2: 1011
Output: 10

---

1. Write the name of the IC(s) that you chose to build your circuit. [2]
Answer:

2. Correctly build the circuit. [8]