ECE 150 Digital Logic Design, Fall 2023

Quiz 3, October 25th 2023

Problem 1 (4 pts)**.**

(a) Give one possible error that can occur when **writing to memory**, and how to avoid it from happening.

(b) Give one possible error that can occur when **reading from memory**, and how to avoid it from happening.

Problem 2 (5pts)**.**
Consider the following 1024x4 RAM chip, with 1024 words and 4 bits per word.

(a) How many address pins does the chip have? (What is N?)

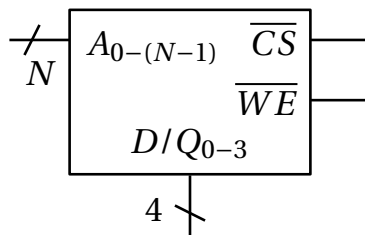(b) Using 1024x4 RAM chip(s), draw a logic diagram of an equivalent 1024x16 RAM chip, and give an associated symbol.

Figure 1: 1024x4 RAM chip