Computer Architecture–Homework IV

107 Fall semester, Chapter 5

5.11 Suppose an 8-bit data word stored in memory is 11000010. Using the Hamming algorithm, determine what check bits would be stored in memory with the data word. Show how you got your answer.

5.12 For the 8-bit word 00111001, the check bits stored with it would be 0111. Suppose when the word is read from memory, the check bits are calculated to be 1101. What is the data word that was read from memory?

5.13 How many check bits are needed if the Hamming error correction code is used to detect single bit errors in a 1024-bit data word?