Problem I. Problem 2.3, Tanenbaum textbook, page 113

Problem II. Problem 2.19, Tanenbaum textbook, page 115

Problem III. Problem 4.26, Tanenbaum textbook, page 301

Problem IV. Use Hamming’s Algorithm to compute the codewords for the following data values:

(a) 0x3D

(b) 0x2BAD

Problem V. Determine if there is an error in the following 12-bit codeword. Write the bit number if an error occurred or write “none” if there is no error. This codeword was generated using Hamming's Algorithm and contains 8 data bits.

0x8E3

Problem VI. Using the following list of addresses, give the final state of the direct-mapped cache. Assume the architecture has a 16-bit datapath. Also, a cache line holds 16 words.

Address read 1: 0xA5ED
Address read 2: 0x77B7
Address read 3: 0x92FB
Address read 4: 0x2B51