

Review Questions

- Suppose a 6-bit data word stored in memory is $D_6D_5D_4D_3D_2D_1=111111$.
Generate the Hamming SEC code for this word.

① $2^k - 1 \geq m + k$ $m = 6$ $k = 4$

②

	1010	1001	1000	0111	0110	0101	0100	0011	0010	0001
	10	9	8	7	6	5	4	3	2	1
	D_6	D_5	C_8	D_4	D_3	D_2	C_4	D_1	C_2	C_1

③ $C_1 = D_1 \oplus D_2 \oplus D_4 \oplus D_5 = 1 \oplus 1 \oplus 1 \oplus 1 = 0$

$C_2 = D_1 \oplus D_3 \oplus D_4 \oplus D_6 = 1 \oplus 1 \oplus 1 \oplus 1 = 0$

$C_4 = D_2 \oplus D_3 \oplus D_4 = 1 \oplus 1 \oplus 1 = 1$

$C_8 = D_5 \oplus D_6 = 1 \oplus 1 = 0$

④ 1 1 0 1 1 1 1 0 0