

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
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Problem Set No. 1

Reading: sections 2.3, 2.4, 2.5, 2.6

Problem 1:

- A) For the generator string $G=110011$ and data string $M=11100011$ find the CRC and the transmitted string T . (Since G is 6 bits long, $r=5$, and the CRC should be 5 bits long)
- B) Suppose $G=1001$ and the received $T=1010101$, did any transmission errors occur?
- C) Suppose $G=101$ and the received $T=1100110$, did any transmission errors occur?
- D) Suppose $G=1011$ and $M=10010$ Give the shift register implementation of the CRC generator and show the register sequence for generating the CRC with the above value of M .

Text problems: 2.9, 2.10, 2.30, 2.31, 2.35