

ITEC 350
Homework 2 - CRC

Name:

CRC (Cyclic Redundancy Check) Code = Polynomial Code

Suppose that

- (1) $k = 5, n - k = 3,$
- (2) Generator polynomial: $g(x) = x^3 + x + 1$
- (3) Information: $(1, 1, 0, 0, 1)$

1. (2 points) What is the polynomial representation of the binary information vector $(1, 1, 0, 0, 1)$?

2. (8 points) What is the transmitted codeword? You must show the intermediate calculation which leads you to the solution. Show the transmitted codeword in a polynomial representation and a binary vector representation.