ITEC 350
Quiz 1 (10 points)

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.**

   ☝ NOTE:
   An answer without showing the intermediate calculation (i.e., explanation) will consider as an incorrect answer.