Exercise 6

Name:_____ Student ID:_____

<u>Question 1</u>

Let $g(x) = x^3 + x^2 + 1$. Consider the information bits $(1, 0, 1, 0, 1, 0, 1)$.

(a)   Show the calculation to find the codeword if $g(x)$ is used as the generating polynomial.

(b)   Suppose that the codeword received is 0010101011. Show the calculation performed by the receiver to detect the error.

[10 marks]