

## ASSIGNMENT 8

Read sections 14.1, 14.2, 14.3, 14.4, 14.5 and 14.6

Let  $f = x^5 + x^2 + 1$  and let  $F = \mathbb{Z}_2[x]/f$ . Let  $\alpha \in F$  be  $\alpha = x$  Show that  $\text{ord}(\alpha) = 31$ . Using  $\alpha$ , find the generator polynomial  $g$ , the check polynomial  $h$ , and the generator matrix  $G$  for BCH(5, 3)