Đ ÔN TÂP PE NWC203c s 2 – Summer 20211.

Let g1(x) = x + 1 and let g2(x) = x^3 + x^2 + 1. Consider the information bits (1,1,0,1,1,1).

a. Find the codeword corresponding to these information bits if g1(x) is used asthe generating polynomial.

b. Find the codeword corresponding to these information bits if g2(x) is used as the generating polynomial.

Data: 1 1 0 1 1 1

G2: x^3 + x^2+ 1(x^0) 🡪 1 1 0 1

because the polynomial generator has 4 bits . therefore,we add 3 bits to the end of data bit string.

We have: 1 1 0 1 1 1 0 0 0

Then we take these bits and divide to 1 1 0 1 in module -2 method

Phép toán

Result: R = 010 and the codeword is 1 1 0 1 1 1 0 1 0

4. A router has the following CIDR entries in its routing table:

Address/mask Next hop

135.46.56.0/22 Interface 0

135.46.60.0/22 Interface 1

192.53.40.0 /23 Router 1

default Router 2

(a) What does the router do if a packet with an IP address 135.46.63.10

arrives?

(b)What does the router do if a packet with an IP address 135.46.57.14 arrives?

TaKe 22 first bits of the IP address 135.46.63.10

10000111.00101110.00111111.00001010

10000111.00101110.00111100.00000000( giữ lại 32 bit đầu còn lại đổi thành 0)

135.46.63.10

135.46.60.0

We found that 22 first bits of the IP address is match with the address of interface 1. Therefore , router will forward the packet to Interface 1.