

01

CSE320

Quiz-4

Fall 2022

Total Marks: 15

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Sec: 06

1. [CO5] Write the steps of calculating checksum? Can a checksum be used to detect errors correctly 100% of the time? Why or why not? Explain with an example. [5]

01  
A checksum can't be used to detect errors correctly 100% of the time. Though it can detect maximum errors but it will miss some of them correctly with in 100% of the time. Because of its length. It can detect only up to 8 bits per time. So it is quit time consuming. There are ~~2~~ steps to calculate checksum.

X

2. [CO5] Given the data word  $x^7+x^5+x^3+x^2+1$  and the divisor  $x^3+x+1$ , show the generation of the codeword at the sender site. If the receiver receives codeword as 10101010001, show whether is it a valid codeword or not. [10]

Given,

$$\text{The data word} = x^7 + x^5 + x^3 + x^2 + 1$$

$$\text{The divisor} = x^3 + x + 1$$

