UIT2403 – Data Communication and Networking

UNIT II: PHYSICAL LAYER AND MEDIA ACCESS

Tutorial – III

Error Detection

Checksum

1. Calculate the checksum of 10010010 and 00111000 (8 bit segment).

2. Consider the data unit to be transmitted is

   10011001111000100010010010000100

   Consider 8 bit checksum is used. Calculate the checksum for this data unit.

3. Compute the checksum value of 1001001110010011 and 1001100001001101 of 16 bit segment.

4. If k = 4 and n =8, find the checksum of four segments: (10110011 10101011 01011010 11010101), along with each transmitted message, the checksum of the messages is also transmitted. How does the receiver detect errors using checksum?

5. Suppose the information portion of a packet (D) contains 10 bytes consisting of the 8-bit unsigned binary ASCII representation of string "**Computer**". Compute the Internet checksum for this data.

6. Suppose the information portion of a packet (D) contains 10 bytes consisting of the 8-bit unsigned binary ASCII representation of string "**Forouzan**". Compute the Internet checksum for this data.

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