Soumen Samanta Exp-8
16010420133 B1 Date
Topic: - Assignment on Numericals.
Bil Two neighbouring nodes A and B wing
Selective kep eat ARQ with 3-bit souldonce
number Assume A is tronsmitting
Bis receiving show the position of
Bis receiving show the position of window and frome flow you following
V 0 0 0 2
a) Initial position at both A and B
à Evame on ave sent.
E) AIK 2 98 received.
12 P 0, 0 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
Initial position at both A and B
At A: Him Joseph Policy nonhouse to
0 1 2 3 4 5 6 7
10 11 12 13 14 15 16 1 11 15 11 10 10
Λι ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο
At B: 4 Mar a Control of the second of the s
0/1/2/3/4/5/6/7/
0 1 2 3 4 5 6 7
b) Frome 0,1 all sert.
At A:
H. St. Sn
10 1 2 3 4 5 6 2
[0] 7(2) 3 1 1 5 [0] 1

16010420133 --- 10/11/2/3/4/5/6/ At B. of Alk 2 is ruceived ---- 10 1 1 2 3 4 5 6 Ata Buno K allod to a sities 0112/8/4/5/6 no A Mod to gottleag consider a nois y channel with -SNRd8=86 and channel bond with is 2 MHz calculate channel capacity When: SNRd8=36, B=2M 42=2x10142 SNR. dB = 10100 10 SNR :- SNR = 10 (3NRd8/10)  $300 = 10(36/10) = 10^{3.6} = 398$ 

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= 24 NbR 3

B3) The sender needs to send the four data
Stems 0x65-43, 0x ABCC, 0x02AC, 0x EFEX a) Find the checksum at sender site. (i) convent all data Ptems to binary 0x 6543 -> 0110 0101 0100 0011 0xABCC > 1010 1011 1100 1100 0×02AC > 0000 0010 1010 1100 0 X FF EF = 1110 1111 1110 1111 (i) Then, find sum of all data Hems. Frome 1: 0110 0101 0100 0011 Frame 2: 1010 1011 1100 1100 Partial sum 10001.0001.0000 0001 0001 0001 0000 From 3. 6000 0010 1010 1100 Pautial sum 0001 0011 1011 1100 Frame 4: 1110 1111 1110 10000 0011 1010 0000 0011 1010 Sum

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	Sum: 0000 0011 1010 110 0  Checksum: 1111 1100 0101 0011
	So the phecksum is (1111 1100 0101 0811) 2
(b)	Find the checksum at the succises side if there is no ever.  Frome 1- 0110 0101 0100 0011
	Frome 2: 1010 1011 1100 1100 1100 1100 1100 1
	Frame 3: 0000 0010 1010 1100 Partial sum: 0001 00110 1011 1100
	Partial sum: 1.0000 0011 1010 1011
	Checksom: +1111 1100 0101 0011  Sum: 1111 1111 1111 1111  Complement: 0000 0000 0000 0000  Complement: 0000 0000 0000 0000  Thus there is no every and it will accept
_	(hus there is not a

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Find the hucesum at the ruceiver side & the second data it em is changed to OY ABCE 1) lonvert all data items to binary-0 x 6543 > 010 0101 0100 0011 0 x AB(F -> 1010 1011 1100 1110 0x 02AC -> 0000 0010 1010 1100 1110 INI THO THY OXEFEF -> (i) Sum of all data items. Frome 1: 0110 0101 0100 0011 For ame 2: 1010 11011 1100 1110 Partial sum. 1000111000100001 0001 0001 0010 Frame 3: Partial sum: 0001 DOIL 10H 1101 1140 und ullo della 10000 0010 1010 Sum; 0000 0011 1010 checkgum: 1111 1100 010 1 10000 0000 0000 0000 0000 0000 0010 5um

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Complement: 1411 1111 1111 1101						
OXF F P						
Thus there is euror and data is dis-						
could.						
d) Find the checksom at the receiver side if the second data item is changed to						
0xABCE and the third dat a item to						
(i) convert to binary						
0×6543 -> 0110 0101 0100 0011						
0 x AB(E -> 1010 (011 1100 (110						
6 × 02 Bp → 0000 0010 1011 1010						
0 X E F E F -> 1110 1111 1110 1111						
(i) Addition						
Frome 1: 0110 0101 0100 0011						
Frome 2: 1010 1011 1100 1110						
Partial som: 1 0001 0001 0001						
+ ( )						
0001 0001 0001 0010						
Frame 3: 0000 0010 1011 1010						
0001 0011 1100 1100						
From 4: 1110 1111 1110 1111						
10000 0011 1011 1011						
Sum: 0000 0011 1011 1100						
checksom: + 1111 1100 0101 0011						
# [20] 문화에 이 집을 하고 하고 모두스러 이 모든 이 회원은 전기를 끊지고 있다. [2] 사는 [2] 사람이 되었다.						

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	1 0000	000	0 00	0001111
	0000	0000	0001	0000
Complement	OXE	IIIL FEF (	1110 Eseron	) 1111

- 13 ) acres

Data is disconded as there are everons