	COMPUTER NETWORK (CS-303)					
	TUTORIAL 4					
	UIAC2015 [BHBGA AND BANA]					
Q.1.7	Calculate checksum at sender send and verify checksum at receiver and					
	for given 4 inputs of 8 bits each					
DIT	A select 19 100 At 15 and 16 a					
	10101010 - 1 st					
	10011001 - 2 nd					
	11100010 3 rd					
	00100100 6 4th					
	21200011					
	Note: Calculate checksum of 8 bits and for finding checksum add all					
	4 inputs in one steps at sender and 4 input & checksum in one					
	steps at receiver.					
Ans 1.>	At sender's End:-					
	Adding all 4 inputs in one step					
	10101010					
11720	10011001					
(1)	Johnson parkets parent 111010010- (Markey D) A model 60					
	00100100					
	10 01001001					
north MOA	an and had at timenous a 10 pt thing at a man (
	01001011					
Cong. Ho.	: Checksum = 10110100 [1's complement]					

" Cicason - 10 110 100 1 13 ampairan 1

PROCEDURE (1) Brocak the original message in to 'k' number of blocks with

- 1 Sum all the 'K' data blocks
- 3 Add the carry to the sum, if any.
- @ Do 1's complement to the Sum ⇒ Crel Checksum

VISION

PROCEDURE (1) Collect all the date blocks including the checksum @ sum all the data blocks and checksum (3) IT- result is all 1's -> ACCEPT, else REJECT. 1 0 1 1 0 1 0 0 of checksum 4 states countries checks the 100 00 1 100 days stated

10 1 1 1 1 1 1 0 1

(808 20) 230 U19 C5012 119140)

At Receiver End:

P LAIRSTUT

1 1 1 1 1 1 1 1 3 AH 1'S

1 0 1 0 1 6 1 0 0010 0000

1 1 1 0 0 0 1 0

since all 1's are, and another

Therefore, Checksum verified at Received s's End.

Cwindow size Station A --- (9 packets) --- Station B using sliding window = 3) in Go-Back-N protocol.

- ·) All packets are available for transmission
 - ·) Every 5th packet that A trapsmils is lost but no ACK from B is ever lost.

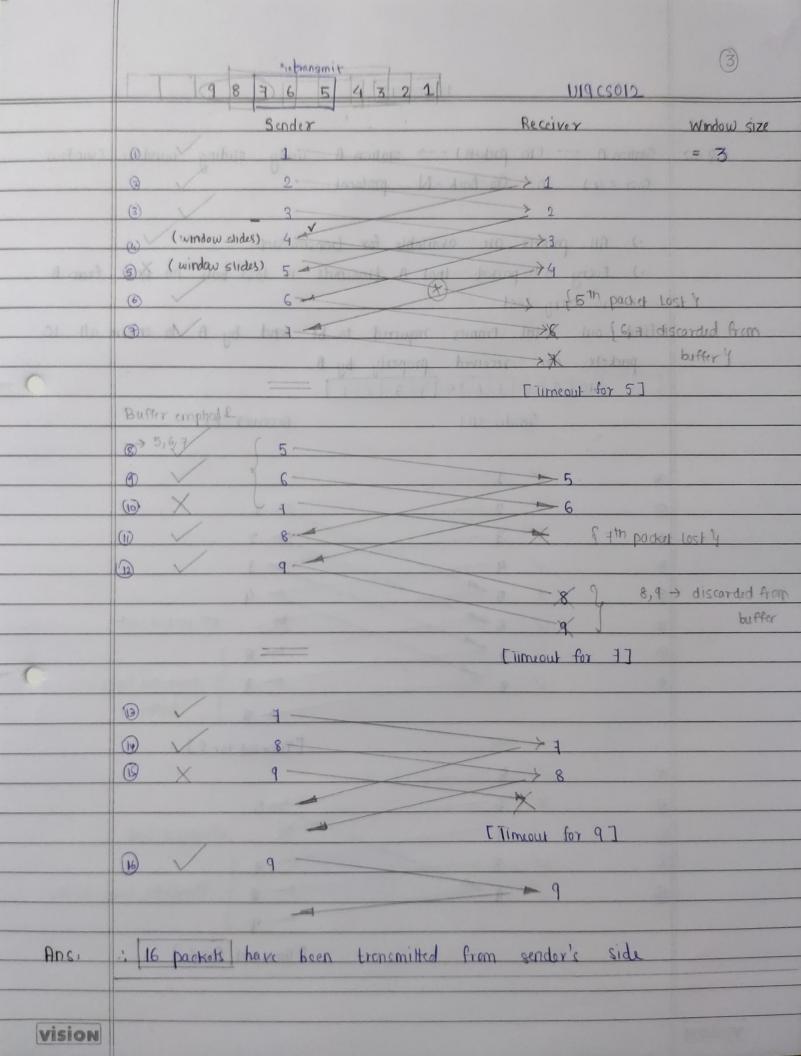
Find out total frames required to be send by A to ensure all packets are received property by B.

Drs 2 > Since, Go-Back-N error control Strategy is used, all packets after a lost packets are sent again.

Next Page

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2.7



	014(501)	
wheles aze	Keringa.	Tihn &
Q 5.7	Station A (10 packets)> station B Size = 4) in Go-Back - N protocol	
	.) All packets are available for tro	ansmiss) on
	.) Every 5th packet that A transmir	
and being	Find out total Frames required to	he could be A to once all 10
The Name of Street, St	packets are received property by	a solid by 11 to distinct all 10
	10 9 8 7 6 5 4 3 2 1	
	Sender (A)	Receiver (B)
		-2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	0 1	-2 / (B)
	② · · · · · · · · · · · · · · · · · · ·	1 (61)
i y too	3 3	2
	6 4	3
A total or the	S × 5	4
Mid.	6	5th packet last
	1 1 10 10 10 7	~ × 1
	® \ \ 8 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X y Discarded from O
		buffer buffer
	ļ ————————————————————————————————————	[Time out for 5]
	(1) 5	
	(b) X 6	5
	0 1 1 1	6th packet lost
	(h) / 8	THE STATE OF THE S
	(3) / q	& g Discarded from buffer
		9
	this Trabas and bellianced	[Time out for 6]

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hyr Report Polo	UIACROID
Add M	Continued Sender (A) Receiver (B)
**	polychanic (gli ci)
hann	ETimeout for 67
to the place	19 Land of the state of the sta
that the sup	(b)
	16 8 th packet lost
	(B) 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	10 Discarded from
Jaga M	to the form of the first to the feet with th
	Timcow for 7)
(6041)	(i) (i) (ii) (ii) (ii) (ii) (ii) (ii) (
	(20) × 8
14 = unbatta	8th packet missed
- Waterland	Diardia from
lawe	buffer buffer
	[Timeout for 8]
	(24) 8 Bandon (2
455.04 (51.4	B × 10
C	10th packet discarded
	mend asaras
ducates	19 dister the design of the base
	ETimeout for 107
110	26
	10
×199	Joseph Company of the Application of the Applicatio
Ans:	26 Frames are required to be sent by A to ensure all 10 packels
	(have been transmitted from Sunder) neach receiver (B)
dakaga	Actorioted Technical Samples and
Vision	Type of transmission that deplex But deplex
	The state of the s

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	1	-		

				(6)		
	UI9CSO12 11 & Selective Repeat					
Q4.>	What are similarities	and differences b	etween stop and wa	& Selective Repeat Proto		
A4.>	What are similarities and differences between stop and wait, Go Back-N,					
,						
	·> Go-Back-N	and Stephen Prepent	are sliding winds	(i) Distract (that		
	They are all Flow control protocols used in noisy channel The are all Flow control protocols used					
	allow sender to send multiple fromes before receiving acknowled					
	(B) Differences.		- p	70		
	The second		- nr V	00 1		
74.17	Parametrs	Stop and Wait	Go Back N	Selective Repeat		
	Theread theorem 7	ARQ	ARQ	Ö		
	Efficiency	1/(1+20)	N/ C1+2a)	N/(1+2a)		
	0		3			
	Window	Sender Window = 1	Sender Window = N	Sender Window = N		
- m3 n	Size	Receiver Window = 1	Recoiver window = 1	Receiver window = N		
	14 91 -1	The state of the s		The state of the s		
	Minimum no of sequence	2	N+1	2* N		
	numbers required		- 9	61		
	3-0		P. P. L.	Carried States		
	Retransmission required	Only the lost packet	The entire window	Only the lost packet		
- Land	if packet is lost	is transmitted	is transmitted	is re-transmitted		
	<u>'</u>					
	Bandwidth requiremen	Low	High	Moderate		
	Total for 101		0			
	CPU Usage	Low	Moderate	High		
	01-93			0		
	Level of difficulty in	Low	Moderate	Complex		
In present	implementation	In ald being	rac and coming :	200		
(A. mas	The second second	to ten inded	density and made			
	Acknowledgements	Individual	Comulative	Independent		
	Types of transmission	Half duplex	Full duplex	tull duplex		
vision	SUBMITTED BY: UIACSOIZ [BHAGYA VINOD RANA]					