17K-3795

Date

Question No 1: Roll No: 173795

$L = (5 \% 10) + 1 = 6$ Mbits

$R_1 = (9 \% 10) + 1 = 10$ Mbps

$R_2 = (7 \% 10) + 1 = 8$ Mbps.

$R_3 = (3 \% 10) + 1 = 4$ Mbps.

$d1 = (1 \% 10) + 1 = 2$ Km.

$d2 = (7 \% 10) + 1 = 8$ Km

$d3 = (3 \% 10) + 1 = 4$ Km

~~$d4 = (7 \% 10) + 1 = 8$ Km.~~

~~$dq1$~~ : $d_{proc} = (5 \% 10) + 1 = 6$ μsec.

$dq_1 = (1 \% 10) + 1 = 2$ μsec.

$dq_2 = (7 \% 10) + 1 = 8$ μsec

$dq_3 = (3 \% 10) + 1 = 4$ μsec.

$dq_4 = (7 \% 10) + 1 = 8$ μsec.

$S = 2 \times 10^8$ m/sec

(1)

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17K-3715

(M) 1

Date

Sol:-

$\frac{L}{R_1} = 0.6 \text{ sec}$; $\frac{d_1}{S_1} = 1 \times 10^{-5} \text{ sec}$

$\frac{L}{R_2} = 0.75 \text{ sec}$; $\frac{d_2}{S_2} = 4 \times 10^{-5} \text{ sec}$

$\frac{L}{R_3} = 1.5 \text{ sec}$; $\frac{d_3}{S_3} = 2 \times 10^{-5} \text{ sec}$

$d_{nodal} = d_{proc} + d_{queue} + d_{trans} + d_{prop}$

Formula:

$d_{nodal} = 6 \text{ sec} + (2 \text{ sec} + 8 \text{ sec} + 4 \text{ sec} + 8 \text{ sec}) + (0.6 \text{ sec} + 0.7 \text{ sec} + 1.5 \text{ sec}) + (1 \times 10^{-5} \text{ sec} + 4 \times 10^{-5} \text{ sec} + 2 \times 10^{-5} \text{ sec})$

$d_{nodal} = 2.8 \text{ sec.}$

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17K-379

Date

Question 2:

(A) i) HTTP as application layer.

ii) PUT Request message

iii) For first action "POST"

for 2nd " "Del"

for 3rd " "POST"

iv) POST / samedir / page.html HTTP/1.1.

Host : www.bachan.com.

User-agent : Mozilla /4.0

connection : close.

Accept-language :

DELETE / samedir / page.html HTTP/1.1.

Host : www.bachan.com.

User-agent : "

⋮

POST / samedir / page.html. HTTP 1.1.

Host www.bachan.com.

user-agent : "

(V) HTTP 1.1 is the best version because multiple request can handle.

(B) (i) Through TCP protocol.

(ii) Client Server Model.

(iii) Socket is the interface. which provide.

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communication between application

(iv) Computer identifies the message being recieved through destination ports and port number from which it was recv.

17K-3795

Question No 3.

Window Size : (95 % 10) + 1 = 6

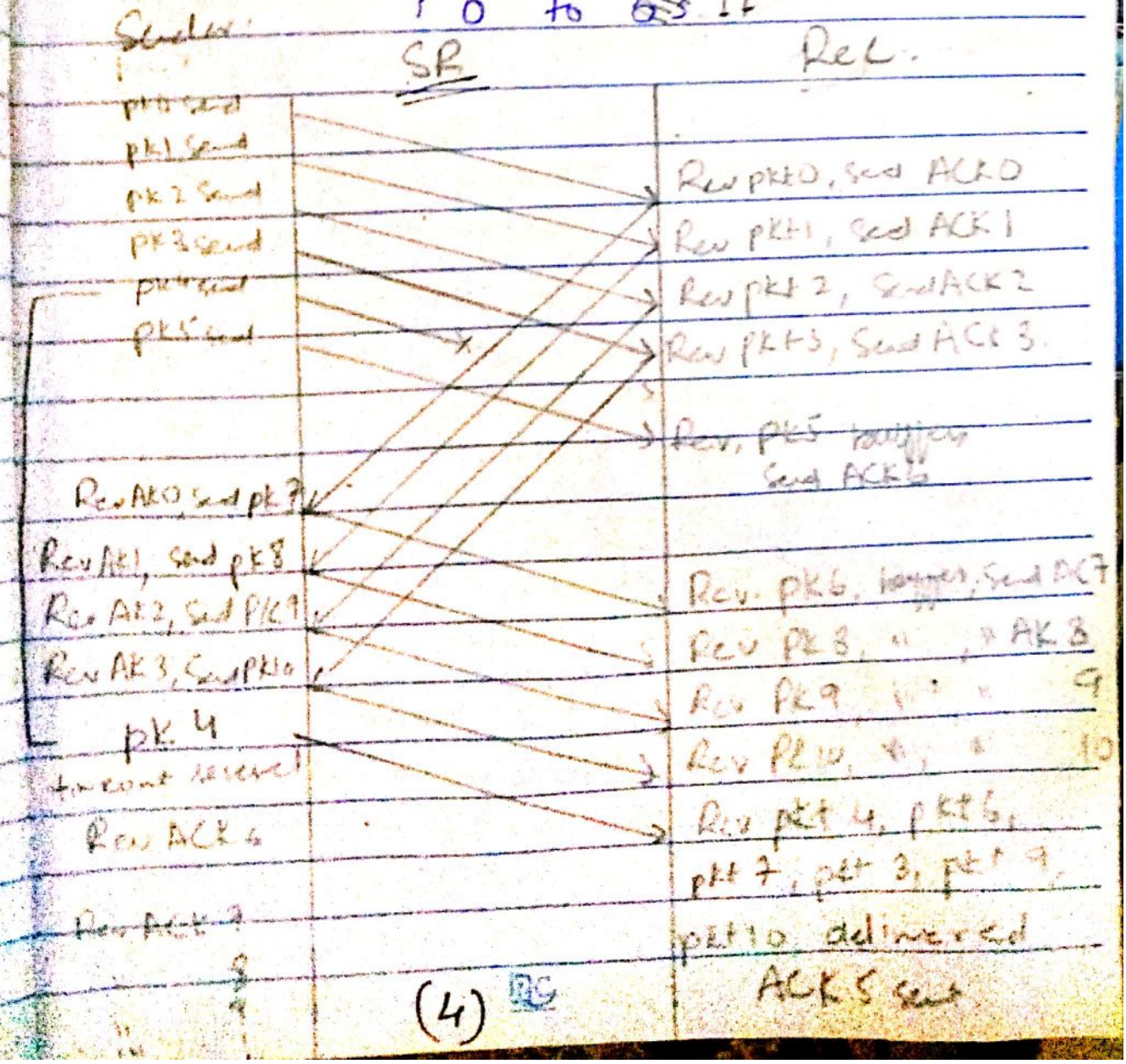
Seq No : 0 to (2 * 6) - 1

~~window size~~

∴ 2nd last pkt lost

Seq No : 0 to 2 * 6 - 1

: 0 to ~~63~~ 11

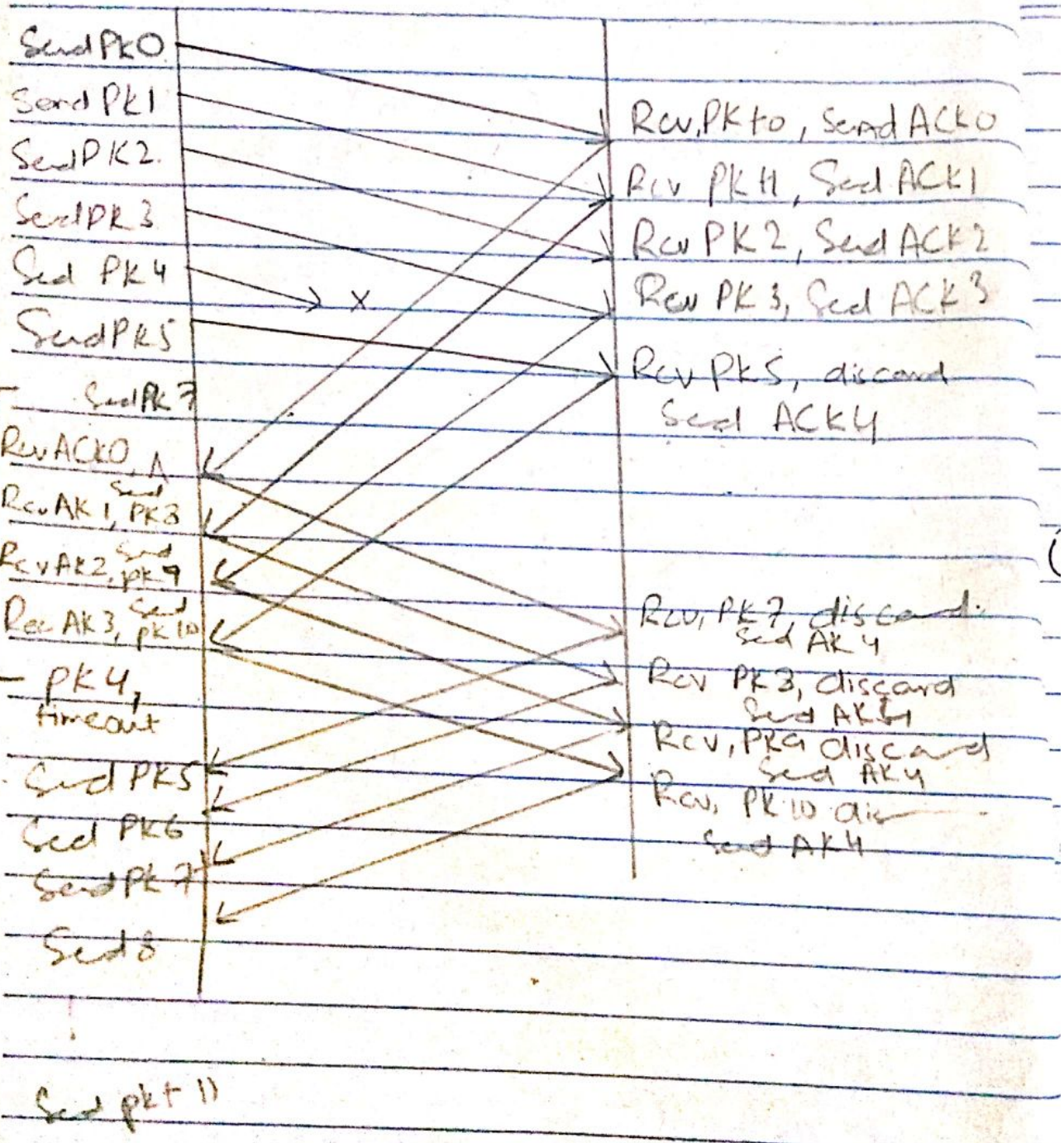


17k-3795

Rf

"GBN"

Date



GBN vs SR.

GBN re-transmits all frames where as SR re-transmit only frame which is damge.

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Question 5

(a)

Subnet	Network Add
255.255.255.128	192.168.65.128
255.255.252.0	10.100.16.0
255.255.255.192	192.168.64.192
255.255.255.0	10.100.22.0
255.255.255.192	192.70.65.200

Next Hop	Interface
192.168.65.135	M0
10.100.16.2	M1
192.168.64.194	M2
10.100.22.3	M3
192.168.64.194	M2

(b) Destination Add:

192.70.65.140.1

11000000.01000110.01000001.10001100

M2.

(c) Dest.. Add: 168.4.22.35

10101000.00000100.00010110.00100011

M2

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17K-3795

Date

(d) Dest Add: 192.24.32.78. M2.

(7)

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17K-3795
(M. P

Date

Question No 6

A) Min time would 'more than 10 second for route 2. to start, add a few millisecond for each other neighbour and its adjacent to Compute the routing table.

(B) Path from R1 & R2 as this is minimum path common for all the router traffic, this will utilized even if R3, R4, R5 want to send R2.

(C) For link R1 & R2 to stop utilize by other router, R1 can be table this cost as 7. So the rest of the ~~router~~ routers that it can ever table it as 7. because it will be the greatest cost in the network for all router.

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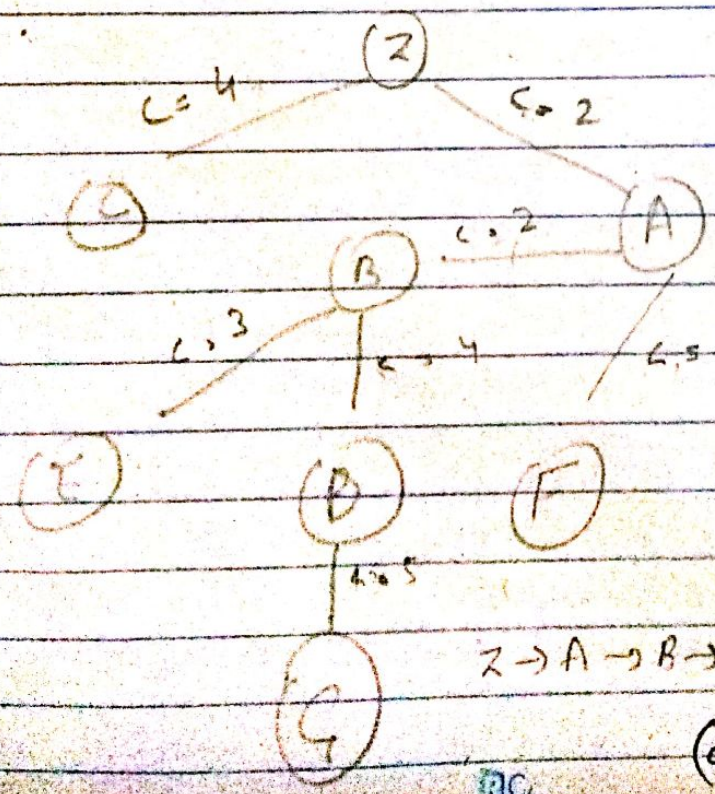
17K-3795

Date

Question No. 7

Step.	N'	P(A)	P(B)	P(C)	P(D)	P(E)	P(F)	P(G)	P(Z)
0		∞, -	∞, -	∞, -	∞, -	∞, -	∞, -	∞, -	0, -
1	Z	2, Z	5, Z	4, Z	∞, -	∞, -	∞, -	∞, -	
2	ZA		4, A	4, Z	9, A	∞, -	14, A	∞, -	
3	ZAB			4, Z	8, B	7, B	14, A	∞, -	
4	ZABC				8, B	7, B	14, A	∞, -	
5	ZABCE				8, B		14, A	14, E	
6	ZABCED						14, A	13, B	
7	ZABCEDG						14, A		

(B)



Z → A → B → D → G → 13.

(a)

17k-3795

Question No 9: Date

(a) There are three technique for Error detection & connection.

* Parity Checking:
  - → Detection of single bit parity
  - → Two dimensional bit is also used for detection and correction of single bit

* Checksum:
  - → Transport layer used checking sum.
  - → Goal is to detect error 1 bit or 2 bit error but 2 bit error may goes undetected.

* Cyclic Redundancy Check (CRC)
  - → Data link layer used. (CRC)
  - ⇒ Used for data verification.

Reason:

We use error detection technique on data link layer. because there is a chance error goes undetected even check sum at transport layer.

(10)

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17K-3795

Date

Question (9b)

$G(x) = x^3 + x^2 + 1$

DOB = 10 - 06 - 1999.

1006 = 0001 0000 0000 0110

Degree 3, so apped 0's at end.

```
1101 ) 000100.000
       1101
       ----
       1100.
       1101
          1000.
          1101
          01010
          ~~1000~~
          1101
          01110
           1101
           0011
```

CRC bit : 011.

New data : 000100011.

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I solemnly ~~page~~ affirm that I have not copied or cheated during the exam.

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