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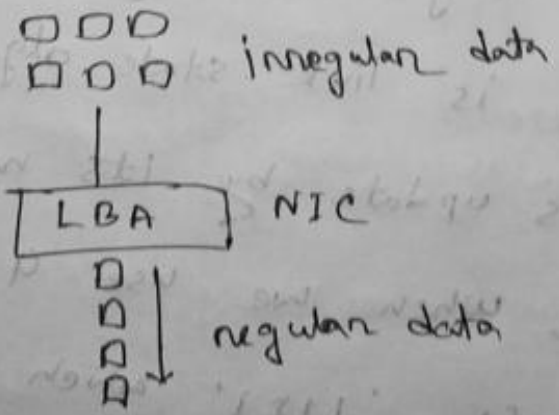
Course : CSE-405
Sec : 03

Ans: to the Q. No: (3)

Leaky bucket algorithm control the flow of irregular data and make the data in regular flow. This helps the network to remain congestion free.

This is how it works:-

Lets assume a bucket with a leak. So the water will come out through the bucket constantly. No matter how much water in it. Similarly this idea applies to control the flow of irregular data in the NIC.



This is how 'LBA' works.

Here, Data Rate = 512 MB/s

Time = 950 μsec

$$\therefore \text{Data} = \frac{512 \times 950 \times 10^{-6}}{1000}$$

$$= 0.00048 \text{ MB}$$

$$\therefore \text{Duration of output} = \frac{0.00048}{64} \text{ sec}$$

$$= 0.0000075 \text{ sec}$$

$$= 7.5 \text{ μsec.}$$ Ans

Ans. to the 9; No; 2

In short length of a sequence number, the sequence length is only 4 bit long. So we know is link state algorithm sequence number is update by its next number which is greater. When we use 4 bit sequence number, after '1111' which is 15 there is no number which is greater than 15.

So it is not possible to update the data. That's why 32 bit sequence number comes to solve this problem.

Distribution table for 9:-

Owner	Source	Age	Seq#	link state Packeet sent				Aeknowledgement sent			
				P	U	T	R	P	U	T	R
P	T	60	118	0	1	0	1	1	0	1	0
T	R	60	98	1	1	0	0	0	0	1	1
P	U	60	116								

Here sequence namber is 116 But 9 already had a packet from 'P' whose sequence nabmer is 118. So it will not include in distribution table.

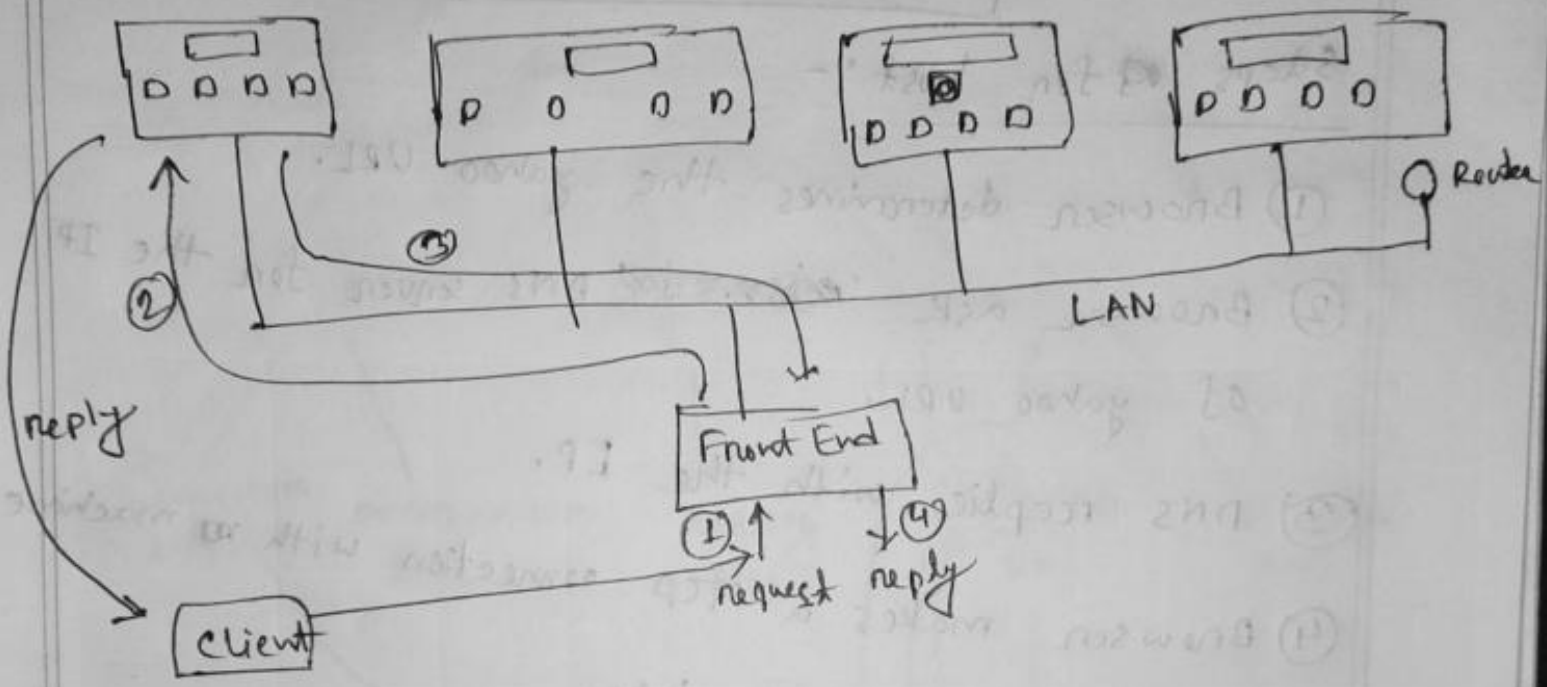
Ans: to the Q.No: 5

Here front end is busy to handle receiving and replying request. To improve performance we can send the reply to the client directly. which is called 'TCP hand off'.

Another way is :- We can send the request to the specific machine and that same specific machine will reply the request.

In this scenario each machine has its own cache memory and its multi-thread system. So it will easily and fast search in its cache memory and reply the request. It can improve the performance significantly.

B) Handoff and specific machine to specific request;—



Ans: to the Q: No: (4)

Steps for host :-

(1) Browser determines the yahoo URL.

(2) Browser ask DNS server for the IP of yahoo URL.

(3) DNS replies with the IP.

(4) Browser makes a TCP connection with machine.

(5) Gets the requested file.

(6) TCP connection is released.

(7) Display the file.

Now for the server side :-

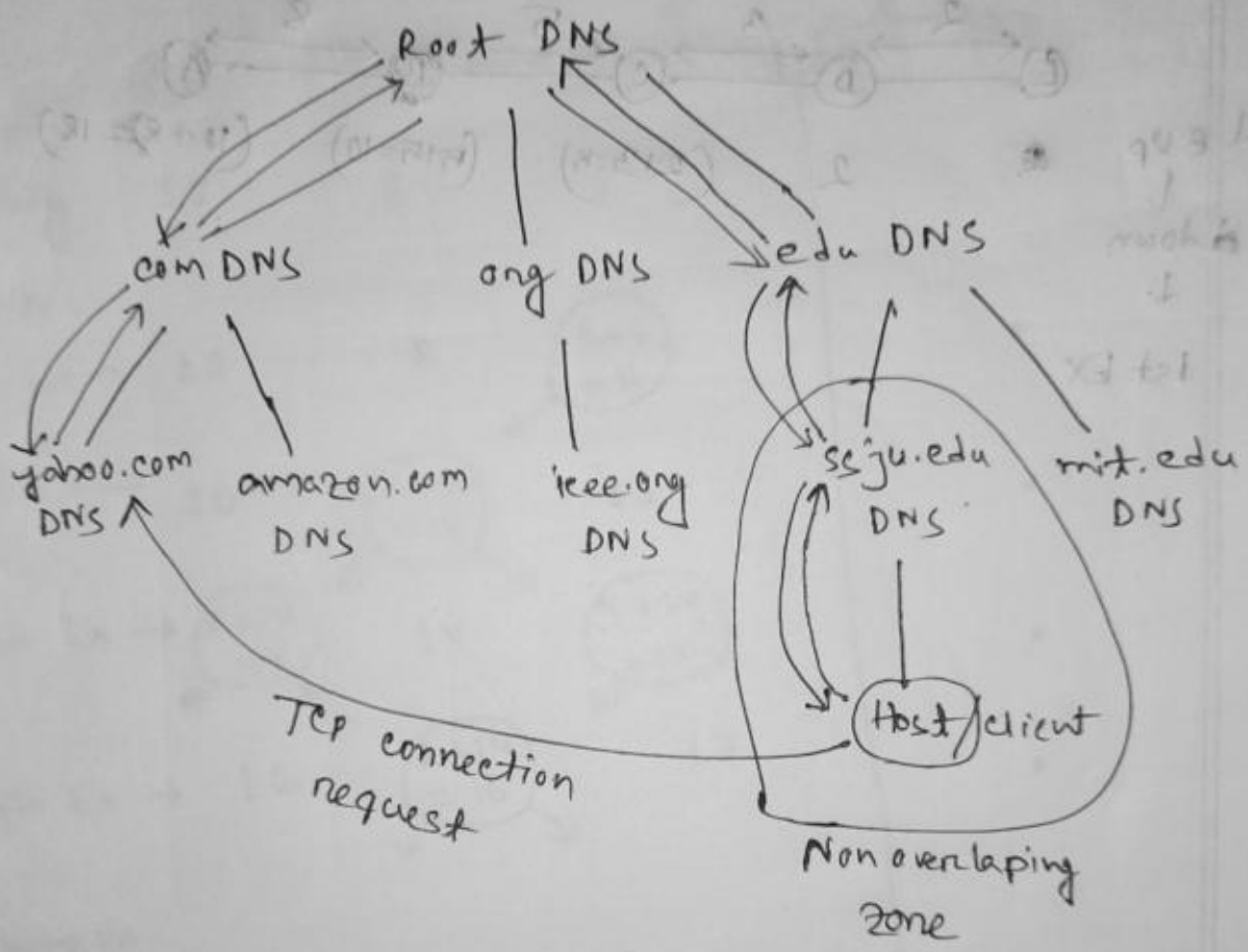
(1) Accept the TCP connection.

(2) Gets the file from the Disk

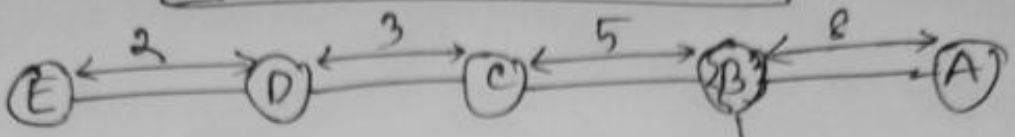
(3) Return to the client.

(4) TCP connection Release.

~~How~~ How TCP connection establish :-



Ans: to the 9: No: (1)



B Up

	E	D	C	B	A
initially	10	8	5		8

Down

1st Ex →	10	8	3+8 = 11	•
2nd Ex →	10	3+11 = 14	11	•
3rd Ex →	2+14 = 16	14	3+14 = 17	•
4th Ex →	16	2+14 = 16	17	•

B gone Up

initial →	16	16	17	•	
1st Ex →	16	16	• to B → 5	8	A to B
2nd Ex →	16	3+5 = 8	5	8	
3rd Ex →	2+8 = 10	8	5	8	
4th Ex →	10	8	5	8	