Name : Md. Shakhawat Hossain

ID : 22201960

Course: CSE421

Ques : Spring 2024 (A)

Assignment-1

FAC: BIJS

Answere: (1)

(a)

Mac Address

	Source	Destination
$R_2 \rightarrow$	A	E
	F	G
$R_3 \rightarrow$	H	J
	K	L

IP Address

Soura	Desti
16	12

Port Address

Source	Desti
49135	49149

(b) Ans: well known / registered.

(Q2) Ans:

Web cookies are small pieces of data stored on a users browsers by a website. They help improve the user experience by remembering importance informations. Cookies can keep users logged in so they do not have to enter their username and password everytime. In online shopping, cookies remember items added to the cart, even if the user leaves the site. Overall, cookies make website more convenient & easy.

Q3) Ans: John used pop3 to access his emails.

when pop3 is used, the client downloads all emails from the mail server to local device by default and deletes them from mail server after retrieval. As a results, the mails are no longer available on the mail server and John cannot access them from other device.

Q4) Ans: When users types a wrong domain name like "www.utube.com" instead of "www.youtube.com" the DNS will try to find the ip address.

Companies like Google & Youtube usually buy and register the common misspelling of their website names. They own the wrong spelling domain and redirect it to the main. This are done by:

(i) Creating a DNS record or Cname record which points to the same ip address.

(ii) When a user enters misspelling the DNS resolver find server using that record.

Q5) Ans: Flow control in the transport layer makes sure that the sender does not send data faster than the receiver can handle.

The receiver tells the client how much data it can accept which is called "rwnd." for eg. if the receiver can only take 5 segments, the sender will send only 5 segments and then wait for permission, before sending more. By this, it prevents the receivers buffer from becoming full and stops data from being lost or dropped.

Q6)

(Q7) Ans:

(a) no. of objects = N

Total RTT = (TCP + HTTP)

$$480 = 1(15+15) + N(15+15)$$

$$\text{or, } \frac{480}{30} = 1+N$$

$$\therefore N = 15 \text{ obj.}$$

(Ans:)

(b) Ans: Transmission time (TT)

$$= \frac{\text{Data size}}{\text{Download speed}}$$

$$= \frac{\text{object no.} \times \text{obj size}}{\text{Download speed}}$$

$$= \frac{15 \times 80}{80} = 15 \text{ sec}$$

∴ Total Transmission time is 15 seconds. (Ans:)

Rough

each obj = 10 MB

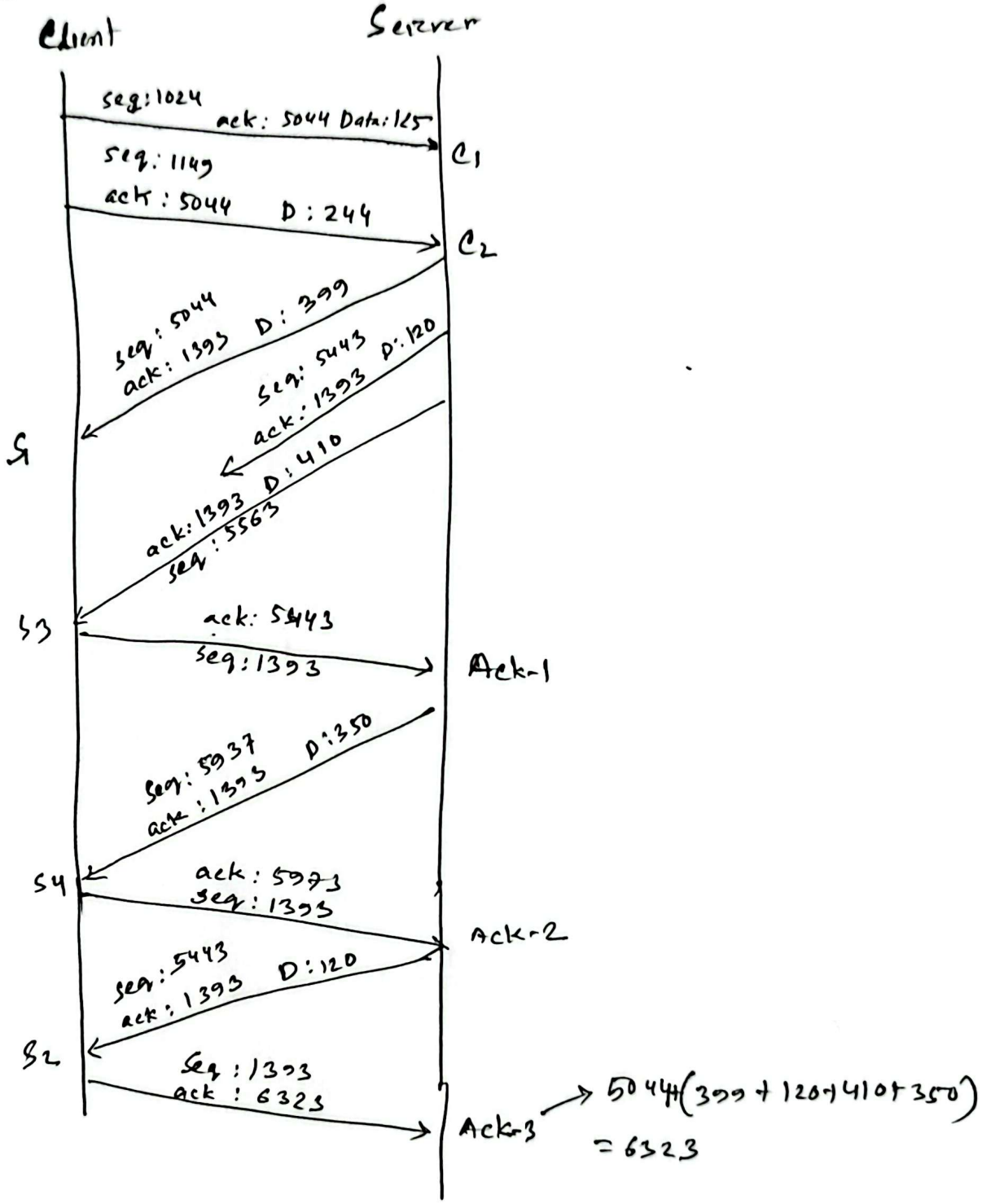
object no. = 15

web speed = 80 Mbps

1 byte = 8 bit

obj size = 10 × 8 = 80 Mbps

Q8) Ans:



(a) Ans: S3 → seq : 5563
ack : 1393

(b) Ans: Ack-1 → ack : 5443

(c) Ans: Here, if selective reapeat sliding window is used.
Ack3 → ack : 6323.