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Ans. to the ques. no. 1

	Source	Destination
Mac address	G1	H
IP address	1	11
Port address	5093	80

Ans. to the ques. no. 2

I) ~~POST~~ POST

II) PUT/PATCH

III) ~~DELETE~~ DELETE

Explanation: The PUT method should be used as an update involves replacing the existing assignment on the server with a completely new version.

Ans. to the ques. no. 3

A : maps non-www domain name directly to the website's IP address

CNAME; maps an alias to the canonical domain name.

Ans. to the ques. no. 4

The issue occurred due to the use of HTTP instead of HTTPS. The security improvement made was implement HTTPS by installing an SSL/TLS certificate. This encrypts the communication between user's browser and website server.

Ans. to the ques. no. 5

Demultiplexing fields:

- 1) Source IP Address
- 2) Source Port Number
- 3) Destination IP address
- 4) Destination Port number

Sequence in ascending order:

1, 2, 3, 4, 5

Ans to the ques. no. 6

The cached page will expire on  $16 + 5 = 21^{\text{st}}$  March.

So, the cached copy will be ~~not~~ sent by the server to the client.

Benefits:

- 1) It saves bandwidth
- 2) Improves efficiency
- 2) Reduces latency



Ans. to the ques. no. 7

I) Let

$$N = 15$$

$$\therefore \text{Total RTT delay} = 15 \times (2 \times \text{RTT}) \\ = 30 \times \text{RTT}$$

$$1200 = 30 \times \text{RTT}$$

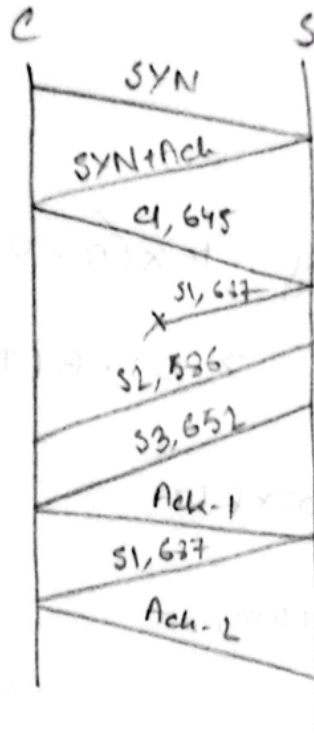
$$\therefore \text{RTT} = 40 \text{ ms}$$

$$\text{II) } T = \frac{CS \times 8 \times 10^6}{100 \times 10^6}$$

$$= 3.2 \text{ s}$$

$$= 3200 \text{ ms}$$

Ans. to the ques. no. 8



I) Seq:  $9876 + 1 + 645 = 10522$

Ack of Ack1 =  $5432 + 1 = 5433$

II)  $8000 - 687 = 7313$

III) SF  
Seq =  $5432 + 1 = 5433$

SN =  $5433 + 536 + 687 + 652$

=  $7358$