CSE421
Lab 02 Home Task
Summer 2022

Write answers to the following questions.

1. How would a proxy server check to see if it's data is up to date with the most updated data in the Origin Server?

2. The HTTP protocol is implemented in the Physical layer. Is this statement true or false?

3. Can you receive mail using SMTP, why or why not?

4. Briefly explain how SMTP and POP3 protocol works using a scenario.

5. Why does root DNS servers maintain a hierarchical structure rather than a centralized structure?

6. Suppose, you have a quiz which will take place at bux but your local DNS server does not know the IP address of "bux.bracu.ac.bd". Will you be able to attend your quiz? Please, provide a brief explanation.

7. Suppose, you recently changed your ISP and the new ISP forgot to set the DNS server's IP address when configuring your internet connection. Can you now browse the internet properly?

8. What is the size of an ARP request or reply packet (in bytes)?

9. What happens to an ARP request packet when it is received by a host that does not match the target IP address of the request?

10. What is the value of the 'operation' field in an ARP reply packet?

11. What flags are used during a TCP connection establishment and TCP connection termination process.

12. A web server sends a TCP packet to a client with sequence number=0 and acknowledgement number =1. Which stage of the 3 way handshake is this and what does the sequence and acknowledgement number mean?

13. In an outbound PDU packet, what does source port: 80 and destination port: 1027 means?