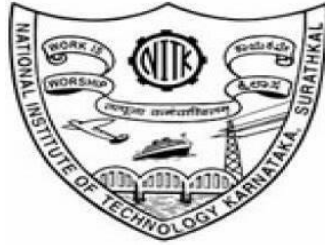


NATIONAL INSTITUTE OF TECHNOLOGY SURATHKAL
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LAB ASSIGNMENT :-06



NAME :- CHIKKERI CHINMAYA

ROLL NO :- 211IT017

COURSE :- B.TECH (INFORMATION TECHNOLOGY)

**SUBJECT :- IT205 (COMPUTER COMMUNICATION
AND NETWORKING LAB)**

SUBMITTED TO :-

GEETHA V MADAM

1)

- **HTTP:** Hypertext Transfer Protocol (HTTP) is a method for encoding and transporting information between a client (such as a web browser) and a web server. HTTP is the primary protocol for transmission of information across the Internet.
- **HTTPS:** Hypertext transfer protocol secure (HTTPS) is the secure version of HTTP, which is the primary protocol used to send data between a web browser and a website. HTTPS is encrypted in order to increase security of data transfer. This is particularly important when users transmit sensitive data.
- **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway.
- **DNS:** Domain Name System (DNS) is a hierarchical naming system built on a distributed database for computers, services, or any resource connected to the Internet or a private network. Most importantly, it translates human readable domain names into the numerical identifiers associated with networking equipment, enabling devices to be located and connected worldwide. Analogous to a network “phone book,” DNS is how a browser can translate a domain name (e.g., “facebook.com”) to the actual IP address of the server, which stores the information requested by the browser.
- **SMTP:** Simple Mail Transfer Protocol (SMTP) is a protocol used for sending messages to other computer users based on e-mail addresses. SMTP can both send and receive mail, but it's bad at queuing incoming messages, hence the other protocols are used to receive messages.

2)

	Answers
Preamble	101010..10
Source MAC address	0030.F2D6.BAE5
Destination MAC address	FFFF.FFFF.FFFF
Type field value	0x0800
Source IP address	172.16.0.10
Destination IP address	255.255.255.255

- a. It is a connectionless service
It is running on UDP services
Source port used by DHCP servers is 67.
- b. HTTP, HTTPS and SMTP use TCP services

3)

- a. It is a connectionless service It is running on
UDP services Source port used by DHCP servers is
67.
- b. HTTP, HTTPS and SMTP use TCP services.

4)

- a) Before the interaction of the clients using SMTP, DNS
protocol was used first.
- b) Servers running SMTP use port 25

5)

3 fields present in TCP that are not found in UDP.

- The sequence number
- Acknowledge number
- Window fields

6)

- ICMP protocol used
- Internet Address → 172.16.0.101 Physical Address → 0009.7CCB.8E49

	Answer
Source IP address	172.16.0.100
Destination IP address	172.16.0.101
ICMP Type value	0x08
ICMP code value	0x00
Source Ethernet Address	00D0.BA4E.EE3A
Destination Ethernet Address	0009.7CCB.8E49
Internet Protocol version	4
Time to live (TTL) value	128