

CNS unit 5 imp notes

1] Explain HTTP Request and message format and difference between persistent and non persistent HTTP.

→ In computer networks, HTTP (Hypertext Transfer protocol) is used for communication between clients and servers.

• HTTP Request Format :

Specifies the action to be performed (GET, POST)

• HTTP Response Format :

Indicates version of HTTP protocol used in the response

Difference between Persistent and non Persistent.

Persistent

non - Persistent

- Persistent HTTP allows single connection to be used for multiple request-response pair between client & server

- In non-persistent HTTP a new connection is established for each request-response pair between client and server.

- It is default mode

- It is not default mode

- Persistent version is 1.1

- non-persistent HTTP version is 1.0.

2] DNS Request and Response message Format

- DNS means Domain name System
- DNS turns domain names into IP addresses which allow browsers to get to websites and other internet resources.
- DNS has two types of messages
 - query format
 - response

▷ Query Format

- DNS query format has header section with identification, flags, count field.
- question section with containing domain name, query type, query class.
- example - www.example.com.

▷ Response Format

- DNS message format provides a standard structure for DNS clients and servers to communicate.
- This format consist header section for identification and control, question section which specifies queried domain and details and additional sections with resource records.
- This ensures efficient DNS resolution process.

3] SMTP

- SMTP means Simple Mail Transfer Protocol
- SMTP is widely used protocol for sending and receiving emails.
- Initiate email sending and communicates with SMTP server
- contains email details like sender and recipient addresses, subject and metadata.
- SMTP enhances communication security through encryption.

4] MIME

- MIME means multi purpose internet mail extensions.
- It is a standard expanding email message format.
- MIME enables messages to consist of multiple parts.
- MIME supports various range of content types such as HTML, images, audio, video etc.
- MIME is widely utilized for attaching various files types to emails.

5] POP3

- POP3 means Post office Protocol version 3
- used for retrieval of email messages from mail server to client ~~server~~ device
- POP3 does not maintain state of client mailbox on the server
- once emails are retrieved they are deleted from server.
- Requires username and password for access to mailbox

6] IMAP

- IMAP means Internet message Access Protocol.
- IMAP is a protocol used for retrieval and management of email messages from mail server to client's device.
- IMAP allows users to access and manage emails directly on the mail server.
- IMAP download email first and the full content is fetch only when user opens email
- IMAP can be secured using encryption.

7] What is FTP in detail?

- FTP means File Transfer Protocol
- FTP is a standard network protocol used for the transfer of files between a client and a server on a computer network.
- FTP allows users to upload files from their local machines to a remote server and download files from the server.

Control & data connection

1. Control connection

- Control connection in FTP is established for sending commands and receiving responses between FTP client & server.

2. Data connection

- Transfer file data between FTP client & server.

FTP commands

- ① close - closes the FTP connection.
- ② quit - quits FTP.
- ③ help - Displays a list of all client FTP commands.
- ④ struct - Specifies the files structure.

8] TELNET

- Telnet is a network protocol enabling interactive text based communication between client and server.
- It is like a remote login protocol like any desktop application.
- It allows users to log into remote system access command line interfaces and exchange character based information.
- TELNET is essential for certain use cases.
- But for secure remote access SSH is preferred due to its encryption capabilities.

9] Webmail

- Webmail is an email service that allows users to access their email accounts through a web browser.
- Webmail platforms are user friendly which can be accessed through standard web browsers.
- Webmail is platform independent.
- Webmail services provide additional features such as file management, calendar functions.
- Webmail services employ security measures like encryption to protect user data.

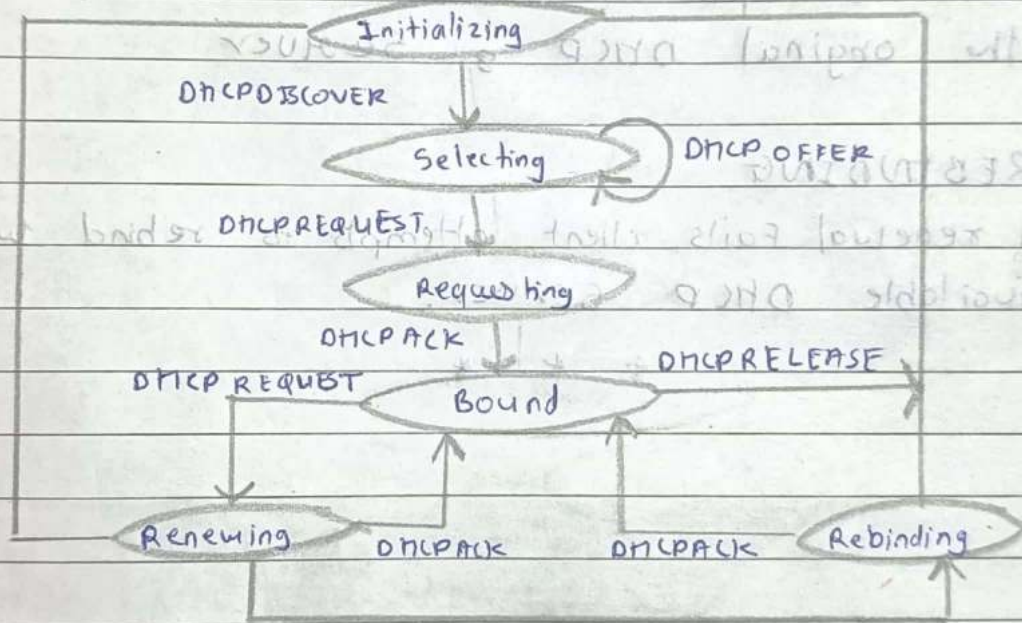
most imp

10] DHCP ? working with client state diagram?

→ DHCP means ~~that~~ Dynamic Host Configuration Protocol

• DHCP is a client / server protocol that automatically provides an IP host with its IP address.

working of DHCP with client state diagram



DHCP client state diagram.

1. INIT -

DHCP client initiates the DHCP process

2. SELECTING -

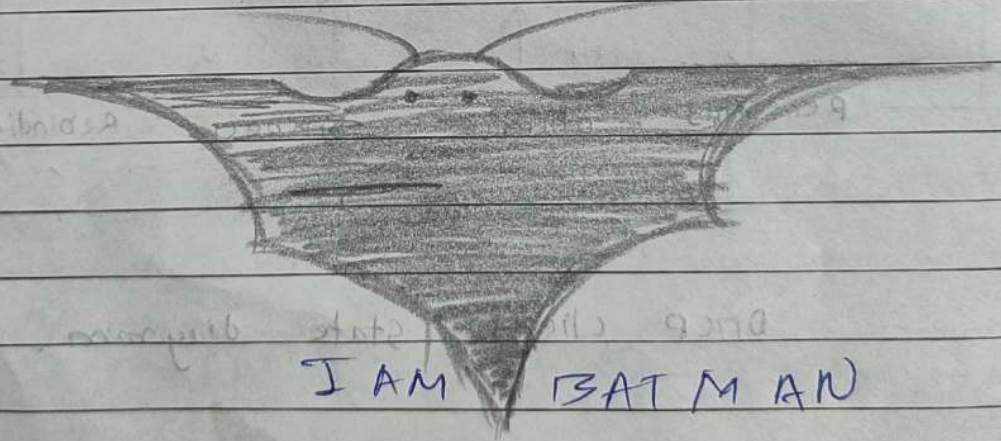
client broadcasts DHCPDISCOVER to find available DHCP server

3 REQUESTING
Client sends a DHCPREQUEST to request configuration

4 BOUND
The client receives DHCPACK from the selected Server, indicating successful lease.

5 RENEWING
Client attempts to renew its lease with the original DHCP server

6 REBINDING
If renewal fails client attempts to rebind with any available DHCP server.



[Handwritten signature]