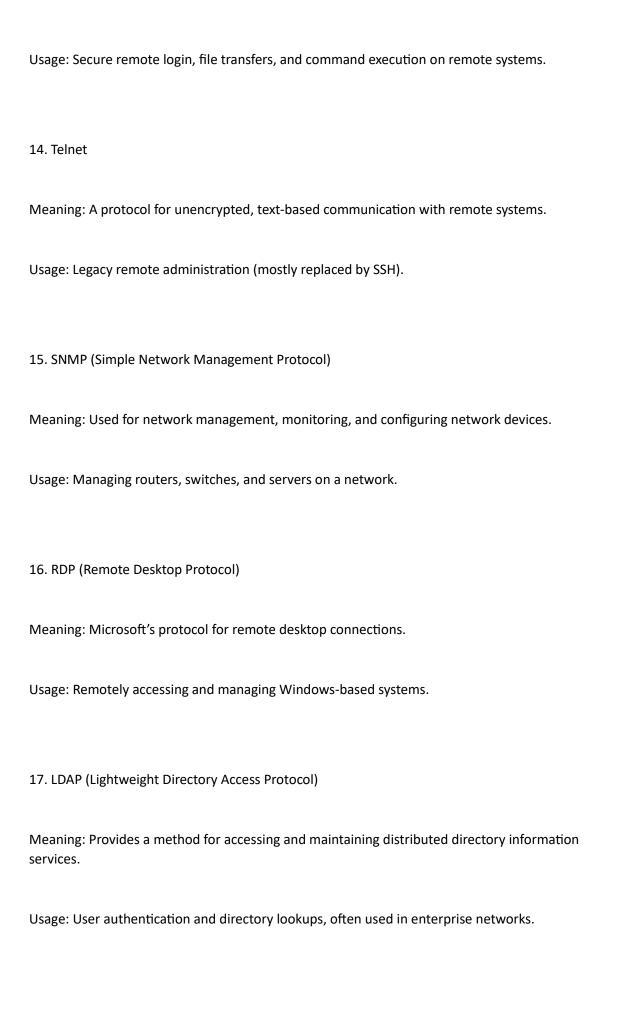ROSE OBIANUJU UDENSI

ASSIGNMENT

Twenty well-known computer protocols, meanings and typical usages:

1. HTTP (HyperText Transfer Protocol)

Meaning: Used for transmitting hypertext (HTML) over the internet.

Usage: The foundation of data communication for websites for browsing web pages.

2. HTTPS (HyperText Transfer Protocol Secure)

Meaning: An extension of HTTP with encryption for security.

Usage: Secured communication for websites, ensuring data integrity and confidentiality.

3. FTP (File Transfer Protocol)

Meaning: Used for transferring files between a client and a server on a network.

Usage: Uploading or downloading files from a server, commonly used for website management.

4. SFTP (Secure File Transfer Protocol)

Meaning: A secure version of FTP that uses SSH for encryption.

Usage: Safe transfer of files between systems, often used in remote file access.

5. SMTP (Simple Mail Transfer Protocol)

Meaning: Protocol for sending emails from a client to a server or between servers.

Usage: Sending and relaying email messages.

6. IMAP (Internet Message Access Protocol)

Meaning: Allows email clients to retrieve messages from a mail server.

Usage: Managing and accessing emails on a remote server without downloading them.

7. POP3 (Post Office Protocol, version 3)

Meaning: A protocol for receiving emails by downloading them to the client's device.

Usage: Email retrieval for offline access, commonly used in older email clients.

8. DNS (Domain Name System)

Meaning: Translates human-readable domain names into IP addresses.

Usage: Enables browsers to load websites using domain names.

9. DHCP (Dynamic Host Configuration Protocol)

Meaning: Automatically assigns IP addresses and other network configurations to devices.

Usage: Managing IP addresses on a network to prevent conflicts.

10. TCP (Transmission Control Protocol)

Meaning: Provides reliable, ordered, and error-checked delivery of data.

Usage: Ensures data packets are delivered accurately over the internet.

11. UDP (User Datagram Protocol)

Meaning: A connectionless protocol used for fast transmission without error-checking.

Usage: Streaming, gaming, and real-time applications where speed is critical.

12. IP (Internet Protocol)

Meaning: Defines how data packets are sent and received on a network.

Usage: Core of internet communications, routing data between devices.

13. SSH (Secure Shell)

Meaning: A cryptographic network protocol for secure access to a remote computer.

Usage: Secure remote login, file transfers, and command execution on remote systems.

14. Telnet

Meaning: A protocol for unencrypted, text-based communication with remote systems.

Usage: Legacy remote administration (mostly replaced by SSH).

15. SNMP (Simple Network Management Protocol)

Meaning: Used for network management, monitoring, and configuring network devices.

Usage: Managing routers, switches, and servers on a network.

16. RDP (Remote Desktop Protocol)

Meaning: Microsoft's protocol for remote desktop connections.

Usage: Remotely accessing and managing Windows-based systems.

17. LDAP (Lightweight Directory Access Protocol)

Meaning: Provides a method for accessing and maintaining distributed directory information services.

Usage: User authentication and directory lookups, often used in enterprise networks.

18. BGP (Border Gateway Protocol)

Meaning: A protocol for exchanging routing information between different networks.

Usage: Routing data across the internet backbone between ISPs.

19. ICMP (Internet Control Message Protocol)

Meaning: Used for network diagnostic and error reporting.

Usage: Troubleshooting and testing network issues (e.g., the ping command).

20. NTP (Network Time Protocol)

Meaning: Synchronizes the clocks of computers over a network.

Usage: Ensuring accurate timestamps for events, crucial in distributed systems.