**Addressing Scheme- Question&Answer.**

**TEST I. True/False**

1. An addressing scheme is a framework that assigns unique identifiers to devices in a network. Answer-TRUE
2. The two types of addressing scheme are IPv4 and IPv6. Answer-FALSE – IP Address & DNS
3. An IP (Internet Protocol) address is a numerical label assigned to each device connected to a computer network that uses the Internet Protocol for communication. Answer-TRUE
4. An IPv4 address is a 32-bit numerical identifier that consists of four octets. Answer-TRUE
5. IPv4 has 64-bit address space provides a finite number of unique IPv4 addresses. Answer-FALSE -32 bit
6. IPv6 addresses are 128-bit numeric identifiers that provide a vastly expanded address space compared to IPv4. Answer-TRUE
7. The 3 types of IPv6 Address are Unicast Addresses, Multicast Addresses, Anycast Addresses. Answer-TRUE
8. Unicast addresses identify a single network interface, allowing for direct one-to-one communication between a source and destination device. Answer-TRUE
9. Multicast address is a type of IP address used for one-to-many communication, where a single sender can efficiently send data packets to multiple recipients. Answer-TRUE
10. Anycast addresses identify a group of network interfaces, but data is delivered to the nearest or most optimal interface within the group. Answer-TRUE

**Test II. IDENTIFICATION**

1. It's like a postal code system for digital messages, guiding data to its destination. Addressing Scheme

2. This structure allows for approximately 4.3 billion unique IP addresses, which was sufficient for the early stages of the internet. IPv4 Address

3. It is suitable for smaller networks, with the first three octets identifying the network and the last octet used for host addresses.

Class C

4. Reserved for large networks with a small number of hosts, using the first octet to identify the network and the remaining three octets for host addresses. Class A

5. It is typically represented as eight groups of four hexadecimal digits, separated by colons.

IPv6 Address

6. It is to identify a group of network interfaces, but data is delivered to the nearest or most optimal interface within the group

Anycast Address

7. It is a single network interface, allowing for direct one-to-one communication between a source and destination device

Unicast Address

8. It is a type of IP address used for one-to-many communication, where a single sender can efficiently send data packets to multiple recipients

Multicast Address

9-10. Two Types of IP Address

IPv4 Address

IPv6 Address