**Case Study Assignment: Exploring Field Test Mode on Smartphones**

Steps to Access Field Test Mode:

For Android Devices:

■ Open the phone dialer and enter \*#\*#4636#\*#\* to access the testing

menu.

■ Navigate to Phone Information and Wi-Fi Information for relevant

details.

■ Take screenshots of IMEI, signal strength, network type, etc.

**IMEI (International Mobile Equipment Identity):**

A unique 15- or 17-digit identifier assigned to each mobile device.

IMEI helps identify a specific mobile device on a network. It's crucial for tracking lost or stolen devices, blocking them from being used on cellular networks.

**MAC Address (Media Access Control Address):**

A hardware identifier assigned to network interfaces (e.g., Wi-Fi or Ethernet) that uniquely identifies a device on a local network.

It ensures devices are correctly identified within a local network (e.g., a router or switch). MAC addresses are used for managing access, ensuring data is sent to the correct device, and implementing security controls such as MAC filtering.

**IP Address (Internet Protocol Address):**

A numerical label assigned to each device connected to a network that uses the IP for communication (e.g., computers, phones, servers).

IP addresses are critical for identifying and routing data between devices over the internet or within local networks. They can be static (unchanging) or dynamic (changing), and come in two versions: IPv4 and IPv6.

IP : IPv4 (from the Android)

**SSID (Service Set Identifier):**

he name of a Wi-Fi network that devices use to identify and connect to it.

SSIDs allow users to distinguish between different wireless networks. Devices use the SSID to connect to the correct network in areas where multiple networks are available.

**DNS (Domain Name System):**

system that translates domain names (like [www.example.com](http://www.example.com/)) into IP addresses.

DNS simplifies internet navigation by allowing users to use easy-to-remember domain names instead of complex IP addresses. It’s essential for browsing and accessing resources on the internet.

DNS : LTE

**Subnet Mask:**

A 32-bit number that divides an IP address into network and host portions.

Subnet masks help define network boundaries within an IP address range, allowing efficient IP address allocation and improving network management.

**Gateway Address:**

The IP address of a network's gateway device (like a router) that connects a local network to other networks, such as the internet.

The gateway is essential for directing traffic between different networks, such as allowing a home or office network to access the internet.

**Port Number:**

A number that identifies a specific process or service within a device, used alongside an IP address to ensure data reaches the correct application.

Ports are critical in managing network traffic and ensuring that data is directed to the correct service (e.g., web browsing uses port 80 for HTTP and port 443 for HTTPS).



