

# Trendyol Bootcamp Network Case

**1. Why is the OSI layered architecture?**

**2. Why are different types of addresses used in Layers 2 and 3? Why do you think one address type was not enough?**

**3. Is the packet sent by ping TCP or UDP?**

**4. What is the response when you send an ICMP echo request packet (ping) with TTL (time-to-live) 1 to the 1.2.3.4 IP address from your computer? Why is this message coming and what is the connection between traceroute and this event?**

**5. How is it determined which application will receive the packets incoming to a device in the network? For example, how does the operating system decide which applications will receive ping, ssh, and HTTP packets from a web server? Can we run a web server on TCP 22 port in this context?**

**6. Which of the following does the router change in the frame header before forwarding a packet? (Multiple Choice)**

- a. Source IP Address
- b. Source MAC Address
- c. Destination IP Address
- d. Destination MAC Address

**7. If the source MAC address of the incoming packet is not in the switch's MAC address table, which of the following actions does the switch perform regarding this frame? (Multiple Choice)**

- a. Discards the frame
- b. Forwards the frame from all ports
- c. Stores the source MAC address in the table
- d. Sends to its Gateway
- e. Starts an ARP request

**8. What is the protocol in the area marked with red areas that you see in the attached Wireshark screenshot?**

```
> Frame 1572: 42 bytes on wire (336 bits), 42 bytes captured (336 bits) on interface en0, id 0
  Ethernet II, Src: zte_f6:df:eb (90:fd:73:f6:df:eb), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
    > Destination: Broadcast (ff:ff:ff:ff:ff:ff)
    > Source: zte_f6:df:eb (90:fd:73:f6:df:eb)
    Type: [redacted] (0x0806)
  [redacted] (request)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: request (1)
    Sender MAC address: zte_f6:df:eb (90:fd:73:f6:df:eb)
    Sender IP address: 192.168.1.1
    Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
    Target IP address: 192.168.1.44
```

- a. IPv4
- b. ARP
- c. Ethernet
- d. ICMP
- e. Broadcast