**Find at least 2 interview questions about IP layer: write down the questions and solutions, as well as your understanding**

**Example 1:**

**Question:** What is the IP class of the address 147.255.0.0

**Answer:**  Class B

**Explanation:** Classes depend on the number of hosts they support on a single network. If the first octet begins with 0 then it is of Class A. If it begins with 10, then it’s class B. If it’s 110, then it’s class C. If it’s 1110, then it’s class D. If it’s 1111, then it is class E. We can determine the first octet by converting the IP address to binary.   
147 = 10010011 (first octet), 255 = 11111111, 0 = 00000000, 0 =00000000

Since the first octet starts with 10, the address class is B.

**Example 2:**

**Question**: What is TCP/IP model?

**Answer**: This is an implementation of the OSI model. There are 4 layers: network layer, internet layer, transport layer and application layer.

**Explanation:** The OSI model is a standardised set of rules relating to the communication or networking functions of a computing system. The TCP/IP model is simply a condensed version of this. Below I will explain the different layers.

The network layer is a combination of layer 1 and 2 of the OSI model. It is the physical components (cables, voltages etc.) as well the data link that translates binary into signals, providing node to node data transferral.   
The internet layer is responsible for packet forwarding routing and addressing.

The transport layer coordinates data transfer between system and hosts. This includes the amount of data that should be sent, the rate at which it should be sent etc.

The application layer combines the fifth, sixth and seventh layers of the OSI model. These layers are:

5. Session: Establishes and terminates connections between devices. Basically, this allows devices to communicate with each other.

6. Presentation: Translates application formatting to network formatting and vice versa. It does this in order to make application data understood by the network, and network data understood by application.

7. Application: Web browsers like Chrome rely on this layer. It is not that the application itself resides in this layer, but that the layer facilitates communications in the lower layers in order to establish connections with applications. This layer receives information from the user, and displays information to them. Chrome, for example, uses the protocols from this layer.