The protocols use information in their header known as a demultiplexing key to determine the higher layer. The TCP is used for multiple socket in one process, and each connected socket is associated with the following 4 values.

1. Sender source address
2. Recipient’s destination address
3. Source port
4. Destination port

TCP sockets involve a server creating a socket that is responsible for listening for accepting incoming connections. The system is in the “listen state” when a system call is performed, which allows for accepting incoming connections.

HTTP communication is carried over TCP/IP layered set of packet-switched network protocols that connect network capable devices on a global scale.

1. *Which Ethernet header field is the demultiplexing key that tells it the next higher layer is IP? What value is used in this field to indicate “IP”?*

The demultiplexing key for Ethernet is the Type field, which has a value of 0X800 that also indicates the IP.

1. *Which IP header field is the demultiplexing key that tells it the next higher layer is TCP? What value is used in this field to indicate “TCP”?*

The demultiplexing key that corresponds to IP is the protocol field, which has a value of ‘6’ when the higher layer is TCP.