**OSI Layers and Protocols**

| **Sender** | **Layers** | **Receiver** | **Function** | **Protocols & Devices** |
| --- | --- | --- | --- | --- |
| **1** | **Application Layer** | **7** | **This layer provides the services to the user.** | **SNMP, SMTP, FTP, TELNET, HTTP, NCP, SMB, AppleTalk** |
| **2** | **Presentation Layer** | **6** | **This layer is responsible for translation, compression and encryption.(ASCII, MD5, SHA)** | **NCP, AFP, TDI** |
| **3** | **Session Layer** | **5** | **This layer establishes, manages and terminates the session.** | **NetBIOS** |
| **4** | **Transport Layer** | **4** | **This layer delivers messages process to process.** | **NetBEUI, TCP, SPX, NWlink** |
| **5** | **Network Layer** | **3** | **This layer is responsible for the packet moving from source to the destination.** | **IP, IPX, NWlink, NetBEUI / (Routers, Switches)** |
| **6** | **Data-Link Layer** | **2** | **This layer transfers error free data frames.** | **Bridges and Switches** |
| **7** | **Physical Layer** | **1** | **All the hardware components comes under this layer** | **Hubs, NICs, Cables** |

**TCP / IP Model**

| **Layers OSI** | **5 - Layers TCP / IP** | **4 - Layers TCP / IP** |
| --- | --- | --- |
| **Application Layer** | **Application Layer** | **Application Layer** |
| **Presentation Layer** |
| **Session Layer** |
| **Transport Layer** | **Transport Layer** | **Host-To-Host /**  **Transport Layer** |
| **Network Layer** | **Network Layer** | **Internet Layer** |
| **Data-Link Layer** | **Data-Link Layer** | **Network Access**  **Layer** |
| **Physical Layer** | **Physical Layer** |