**TCP/IP Protocol Stack & Interconnection Device Summary**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Layer Name** | **Name of a “Packet” used at the layer** | **Address Typed used at layer** | **Names of Interconnection Device in Each Layer** | **End-to-end or link-to-link operation** |
| **5** | **Application** | **Message**  | **IP Addresses** | **Protocol Translator** | **End-to-End** |
| **4** | **Transport** | **Segment**  | **IP Addresses** | **End-to-End** |
| **3** | **Internet** | **IP Datagram**  | **IP Addresses** | **Router** | **Link-to-Link** |
| **2** | **Network Interface or Link**  | **Frame** | **MAC Addresses** | **Switch or Bridge** | **Link-to-Link** |
| **1** | **Physical** | **bits** | **---------** | **Hub****or Repeater** | **Link-to-Link** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Layer 5 | 🡨---------------- | ------------------- | ------------------- | ------------------- | ------------------- | ------------------- | ----------------🡪 | Layer 5 |
| Layer 4 | 🡨---------------- | ------------------- | ------------------- | ------------------- | ------------------- | ------------------- | ----------------🡪 | Layer 4 |
| Layer 3 | 🡨-------------🡪 |  | 🡨---------------- | ------------------- | ------------------- | ------------------- | ----------------🡪 | Layer 3 |
| Layer 2 | 🡨-------------🡪 |  | 🡨-------------🡪 |  | 🡨---------------- | ------------------- | ----------------🡪 | Layer 2 |
| Layer 1 | 🡨-------------🡪 |  | 🡨-------------🡪 |  | 🡨-------------🡪 |  | 🡨-------------🡪 | Layer 1 |

 **Host A ROUTER SWITCH HUB Host B**

 **Connects networks Only connects networks Only repeats signals**

 **with different Link layers with the same Link layers (noise/errors are repeated)**