TCP/IP Model

The OSI Model is extremely popular and very well known to all networking techs/engineers. Today's world. however, is a TCP/IP world.
The complexity of the OSI model doesn't always make sense in a world with one protocol suite. Given its dominance, the aptly named TCP/IP model shares some popularity with the venerable OSI model.

LAYER 4 — Application

Deals with the communication of the whole message, provides an interface between the network services and the applications.
Provides services to end-users to work over the network.
Helps in setting up and managing the network connections. It also checks for the user's program authentication and authorization for the data.
Performs some complex operations like data translation, encryption and decryption, and data compression.
Defines the interface and session for application programs to interact with transport layer services.
IMAP, SMTP, POP3, HTTP/S, IRC, SSH, DNS, SOAP, DHCP, API's, SSL/TLS, FTP, MPEG, JPEG, NetBIOS, Sockets

LAYER 3 — Transport

Provides reliable or unreliable data delivery.
Message segmentation and reassembly, message acknowledgment, message traffic control, session multiplexing.
Chops data into segments (TCP) or datagrams(UDP).
Host-to-host, end-to-end connections, flow control.
ESP, TCP, SPX, UDP

LAYER 2 — Internet

Controls the operations of the subnet, deciding which physical path the data takes, logical addressing.
The PDU (Protocol Data Unit) in this layer are: Packets and Datagrams, it contains IP addresses .
Routing using IP addresses, subnet traffic control, frame fragmentation.
IP, IPX, ICMP, IPSec, RIP, OSPF

LAYER 1 — Link / Network Interface

Data Link

Provides error-free transfer of data frames from one node to another over the physical layer via a NIC (Network Interface Card).
The PDU (Protocol Data Unit) in this layer is: Frame, it contains mac addresses.
Establishes & terminates the logical link between nodes, frame traffic control, frame sequencing, frame acknowledgment, frame delimiting, frame error checking, media access control, switching using MAC addresses.
ARP, ATM, IEEE 802.11, L2F, L2TP, WAP, PPP, SLIP, STP, VLAN, Ethernet

Physical Network

Concerned with the transmission and reception of the unstructured raw bit stream (ones and zeros) over the physical medium, process performed by the NIC.
Converts digital data so that it can be sent over physical medium.
Physical structure (coax cables, fiber optic, wireless, hubs, repeaters, DSL, USB, etc.).
Data encoding, physical medium attachment, transmission technique, baseband or broadband, physical medium transmission (Bits & Volts).