

Unit-I

1. Data communication is the exchange of data between two devices through a _____.

- A) Medium
- B) Processor
- C) Compiler
- D) Router only

Answer: A) Medium

2. Which of the following is NOT a component of a data communication system?

- A) Sender
- B) Receiver
- C) Medium
- D) Printer

Answer: D) Printer

3. Data can be represented in the form of:

- A) Text
- B) Images
- C) Audio and Video
- D) All of the above

Answer: D) All of the above

4. Communication between two devices in both directions simultaneously is called:

- A) Simplex
- B) Half-duplex
- C) Full-duplex
- D) Multiplex

Answer: C) Full-duplex

5. Communication in only one direction is called:

- A) Simplex
- B) Duplex
- C) Full-duplex
- D) Half-duplex

Answer: A) Simplex

6. Which network criterion ensures data is delivered correctly?

- A) Performance
- B) Reliability
- C) Security
- D) Efficiency

Answer: B) Reliability

7. Which network criterion protects data from unauthorized access?

- A) Reliability
- B) Security
- C) Performance
- D) Topology

Answer: B) Security

8. A network that covers a small geographical area is called:

- A) WAN
- B) MAN
- C) LAN
- D) PAN

Answer: C) LAN

9. A network covering a city is known as:

- A) LAN
- B) MAN
- C) WAN
- D) PAN

Answer: B) MAN

10. The largest network in the world is:

- A) MAN
- B) WAN
- C) Internet
- D) LAN

Answer: C) Internet

11. The Internet is an example of:

- A) Single network
- B) Network of networks
- C) LAN
- D) PAN

Answer: B) Network of networks

12. Which organization develops Internet standards?

- A) IEEE
- B) ISO
- C) IETF
- D) ANSI

Answer: C) IETF

13. IEEE 802.11 standard is related to:

- A) Ethernet
 - B) Bluetooth
 - C) WiFi
 - D) Fiber optics
- Answer:** C) WiFi

14. The OSI model consists of _____ layers.

- A) 5
 - B) 6
 - C) 7
 - D) 8
- Answer:** C) 7

15. Which layer is responsible for routing?

- A) Data Link Layer
 - B) Network Layer
 - C) Transport Layer
 - D) Session Layer
- Answer:** B) Network Layer

16. Which layer provides end-to-end communication?

- A) Physical Layer
 - B) Data Link Layer
 - C) Transport Layer
 - D) Application Layer
- Answer:** C) Transport Layer

17. TCP/IP protocol suite has _____ layers.

- A) 4
 - B) 5
 - C) 6
 - D) 7
- Answer:** A) 4

18. Which protocol belongs to the Transport layer?

- A) IP
 - B) TCP
 - C) ARP
 - D) ICMP
- Answer:** B) TCP

19. IP stands for:

- A) Internet Program
 - B) Internet Process
 - C) Internet Protocol
 - D) Internal Protocol
- Answer:** C) Internet Protocol

20. The Physical layer deals with:

- A) Routing
 - B) Logical addressing
 - C) Transmission of bits
 - D) Error control
- Answer:** C) Transmission of bits

21. Which layer provides services directly to the user?

- A) Network Layer
 - B) Application Layer
 - C) Session Layer
 - D) Physical Layer
- Answer:** B) Application Layer

22. Wireless LANs are defined by:

- A) IEEE 802.3
 - B) IEEE 802.5
 - C) IEEE 802.11
 - D) IEEE 802.15
- Answer:** C) IEEE 802.11

23. A MAC address operates at the:

- A) Physical Layer
 - B) Data Link Layer
 - C) Network Layer
 - D) Transport Layer
- Answer:** B) Data Link Layer

24. Which addressing is used at the Network layer?

- A) MAC Address
 - B) Port Address
 - C) IP Address
 - D) Physical Address
- Answer:** C) IP Address

25. Which of the following is a standardization organization?

- A) ISO
- B) IEEE
- C) ANSI
- D) All of the above

Answer: D) All of the above

Fill in the Blanks

1. Data communication requires a sender, receiver, message, medium, and _____.
Answer: Protocol
2. Text, numbers, images, audio, and video are forms of data _____.
Answer: Representation
3. In _____ communication, data flows in only one direction.
Answer: Simplex
4. In _____ communication, data flows in both directions simultaneously.
Answer: Full-duplex
5. The three main network criteria are performance, reliability, and _____.
Answer: Security
6. A collection of interconnected devices is called a _____.
Answer: Network
7. The Internet is a _____ of networks.
Answer: Network
8. LAN stands for Local Area _____.
Answer: Network
9. MAN stands for Metropolitan Area _____.
Answer: Network
10. WAN stands for Wide Area _____.
Answer: Network
11. The OSI reference model contains _____ layers.
Answer: Seven
12. The lowest layer of the OSI model is the _____ layer.
Answer: Physical
13. The highest layer of the OSI model is the _____ layer.
Answer: Application
14. The _____ layer is responsible for routing packets.
Answer: Network
15. TCP stands for Transmission Control _____.
Answer: Protocol
16. IP stands for Internet _____.
Answer: Protocol
17. TCP/IP is a _____ protocol suite.
Answer: Internet
18. The Data Link layer uses _____ addresses.
Answer: MAC
19. The Network layer uses _____ addresses.
Answer: IP
20. IEEE 802.11 is the standard for _____.
Answer: WiFi
21. Wireless LAN stands for Wireless Local Area _____.
Answer: Network

22. The organization responsible for many Internet standards is the _____.

Answer: IETF

23. ISO stands for International Organization for _____.

Answer: Standardization

24. Protocols define the rules of _____.

Answer: Communication

25. The process of dividing networking functions into layers is called a _____ architecture.

Answer: Layered

26. The Internet originated from the _____ network.

Answer: ARPANET

27. A protocol consists of syntax, semantics, and _____.

Answer: Timing

28. WiFi communication uses _____ links.

Answer: Wireless

29. Standards ensure compatibility between different _____.

Answer: Devices

30. The TCP/IP model is widely used on the _____.

Answer: Internet