

UNIT1

UNIT I INTRODUCTION AND PHYSICAL LAYER

Networks – Network Types – Protocol Layering – TCP/IP Protocol suite – OSI Model – Physical Layer: Performance – Transmission media – Switching – Circuit-switched Networks – Packet Switching

QUIZ QUESTION

1. What are the end network devices?

- A) Servers, smartphones and computers
- B) Transceivers, NICs
- C) Routers and servers
- D) Smart phones, cell towers

2. Communication channel is shared by all the machines on the network in

- A) unicast network
- B) broadcast network
- C) multicast network
- D) none of the mentioned

3. When nine devices are arranged in a mesh topology, each device needs ----- input/output ports

- A) Nine
- B) Eight
- C) Five
- D) Thirty-Six

4) In a mesh topology, with n devices, if a new device is added, ----- new links are needed

- A) n-1
- B) n
- C) n+1
- D) 2n

5) Mr. John is a small business man run a hardware, he have been experiences problem with his small accounting department which he depended on to provide him with the sales reports. Mr. John want to be able to shared information between his 7 computer station and have on central printing area, what type of network would you recommend to Mr. John?

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

6) _____ can determine the category of a network

- A) Size
- B) Physical architecture

C) Ownership

D) All of the mentioned

7) _____ defines the rules that both the sender and receiver and all intermediate devices need to follow to be able to communicate effectively.

A) Networking

B) Protocol

C) Communication

D) Host

8) Match the followings between column A and column B.

i) TCP	M) Physical Layer
ii) NIC	N) Data Link layer
iii) Repeaters	O) Network Layer
iv) Router	P) Transport Layer
v) SMTP	Q) Application

● i,M; ii,N; iii,O; iv,P; v,Q

● **i,P; ii,N; iii,Q; iv,O; v,Q**

● i,N; ii,Q; iii,M; iv,O; v,P

● i,O; ii,Q; iii,M; iv,N; v,P

9) What is the basic difference between LAN and WAN

A) LAN works with a small area while WAN covers a large geographic area

B) LAN connection need to be set up by an organisation while WAN connection need to be rented from a service provider

C) Both

D) None

10) In the OSI model when data is transmitted from device A to device B, the header from A's layer 5 is read by B's _____ layer

A) physical

B) transport

C) session

D) presentation

11) Which of the followings state correct differences between a switch and a hub?

I. Switch transmit a signal to all the devices connected to it, hub transmit a signal only to the intended port I.

II. Switch works in physical layer, hub works at data-link layer

III. Switch works at layer 2 while hub works at layer 1

IV. Switch is a smart device, whereas hub is a dumb device

A) I & II

B) II & III

C) III & IV

D) IV & I

12)The physical layer translates logical communication requests from the _____ into hardware specific operations.

- a) **data link layer**
- b) network layer
- c) transport layer
- d) application layer

13) _____ cable consists of an inner copper core and a second conducting outer sheath.

- A) Twisted-pair
- B) Shielded twisted-pair
- C) Coaxial**
- D) Fiber-optic

14)_____ are used for cellular phone, satellite, and wireless LAN communications.

- A) Radio waves
- B) Infrared waves
- C) Microwaves**
- D) none of the above

15)A parabolic dish antenna is a(n) _____ antenna.

- A) unidirectional**
- B) bidirectional
- C) omnidirectional
- D) horn

16)When end system A needs to communicate with end system M, system A needs to request a connection to M that must be accepted by all switches as well as by M itself.It is called

- A)Data transfer phase
- B)teardown phase
- C)Setup phase**

D)propagation phase

17) In _____,there is no resource allocation for a packet

A)datagram switching

B)circuit switching

C)frame switching

D)None of the above

18) A switch in a datagram network uses a routing table that is based on the _____ address

A)Source

B)Destination

C)local

D)none of the above

19.Which of the following primarily uses guided media?

a.Cellular telephone system

b.local telephone system

c.satellite communications

d.radio broadcasting

20. Which data communication method is used to transmit the data over a serial communication link?

a. Simplex

b. Half-duplex

c. Full duplex

d. All of above

21.The method of communication in which transaction takes place in both directions,but only in one direction at a time, is called ?

a. Simplex

b. Four wire circuit

c. Full duplex

d. Half-duplex

22. In communication satellite, multiple repeaters are known as?

a. Detectors

b. Modulators

c. Stations

d. Transponders

23. Loss in signal power as light travels down the fiber is called?

a. Attenuation

b. Propagation

c. Scattering

d. Interruption

24. Twisted- pair wire, coaxial cable and fiber optic cable are all examples of _____ .

(A) Guided media

(B) Unguided media

(C) Both A and B

(D) None of these

Ans:A

25. Why UTP is popular in LAN technology?

(A) Flexibility

(B) Low cost

(C) Easy to installation

(D) All of the above

ANS:D

26. Which cable is used for voice and data communications?

(A) Twisted-pair

(B) Coaxial

(C) Fiber-optic

(D) None of these

ANS:A

27. What is the frequency range of Coaxial Cable?

- (A) **100 KHz to 500MHz**
- (B) 100 MHz to 500GHz
- (C) 100Hz to 5MHz
- (D) 100MHz to 5GHz

ANS:A

28. Which connector is used in ethernet networks for branching out a cable for connection to a computer or other devices?

- (A) BNC connector
- (B) **BNC-T connector**
- (C) BNC terminator
- (D) BNC-L terminator

ANS:B

29. RG - 11 is used in

- (A) Radio
- (B) Cable TV
- (C) **Thick Ethernet**
- (D) Thin Ethernet

Ans:C

30. What is the diameter of thinnest coaxial cable?

- (A) 0.5 inches
- (B) **0.25 inches**
- (C) 0.55 inches
- (D) 0.35 inches

ANS:B

31. NIC is small printed circuit board that is installed in _____ of CPU.

- (A) Hard disk
- (B) Floppy disk
- (C) RAM
- (D) **Mother board**

ANS:D

32. How different computers are connected to a LAN by a cable?

- (A) Modem
- (B) **Interface card**
- (C) Printer
- (D) None of the above

Ans:B

33. How is a unique MAC address assigned to a Network Card?

- (A) A unique address is automatically assigned when the card drivers are installed
- (B) A unique address is automatically assigned whenever you boot up the computer
- (C) It is built into the card when the card is manufactured
- (D) The network administrator must assign the address

ANS:C

34. What is Ethernet?

- (A) A type of computer cable
- (B) An early version of the Internet
- (C) A type of network card
- (D) A type of CPU

ANS:C

35. Which router is created table automatically?

- (A) Static
- (B) Dynamic
- (C) Simplex
- (D) None of the above

ANS:B

36. A _____ is operates in all seven layers of OSI model.

- (A) Gateway
- (B) Bridge
- (C) Hub
- (D) Repeater

ANS:A

37. Which of the following is the correct sequence of layers in the OSI model (From lowest layer to highest)?

- (A) Physical, Data link, Network, Transport, Session, Presentation, Application
- (B) Transport, Session, Data link, Application, Presentation, Network, Physical
- (C) Physical, Data link, Network, Transport, Presentation, Session, Application
- (D) Physical, Network, Data link, Transport, Session, Presentation, Application

ANS:A

38. Routers operate at which layer of the OSI model?

- (A) Session
- (B) Network
- (C) Transport
- (D) Presentation

ANS:B

39. In OSI model, which layer provides services such as file transfer, data base access and email, remote login to hosts?

- (A) Data link
- (B) Session
- (C) Presentation
- (D) Application

Ans:d

40. Which layer establishes, maintains, and terminates communications between applications located on different devices?

- (A) Application
- (B) Presentation
- (C) Session
- (D) Transport

Ans:c

41. When compared to OSI model, the functionality of which of the two sub layer is incorporated the application layer of TCP/IP model?

- (A) Session and Presentation
- (B) Transport and Session
- (C) Presentation and Data link
- (D) Session and Physical

Ans:A

42. Which of the following statements is correct for the use of packet switching?

- a. the employment of additional intelligence within the network enabled more sophisticated error control and link control procedures to be applied
- b. by employing wide bandwidth circuits for the trunk networks substantial economies through extensive sharing of capacity could be achieved
- c. the subdivision of information into individually addressed packets in conjunction with alternative routing arrangement enabled the transmission path to be altered in the event of congestion or individual link failure
- d. all of the above**

43. Examples are packet switching using frame relay, and cell switching using ATM technologies. Select the best fit for answer:

- a. Extranets
- b. Switching alternating**
- c. Bandwidth alternatives
- d. Inter organizational networks

44. A T-switch is used to

- a. transmit characters one at a time
- b. echo every character that is received
- c. control how messages are passed between computers

d. rearrange the connections between computing equipment

45. The routing processor searching for the routing table is called

- a. switch fabric
- b. buffer
- c. table lookup**
- d. rolling table

46. A Virtual-Circuit Network (VCN) is normally implemented in the

- a. session layer
- b. data link layer**
- c. network layer
- d. physical layer

47. Which frame completes the entries in the switching tables

a. acknowledgment frame

- b. setup frame
- c. routing frame
- d. None

48. The phase where the establishment of the channels takes place is

- a. setup phase
- b. Data transfer phase**

c.teardown phase

d. Both a and b

49. The Asynchronous Transfer Mode (ATM) network is an example of

a.Packet switching network

b.Datagram Networks

c.Virtual circuit network

d.message switched network

50. A circuit-switched network is made of switches connected by physical links, in which each link is divided into

a.n channels

b.n+1 channels

c.2n channels

d.n-1 channels