Question Bank-unit-I

PART-A

1. The maximum payload length in IEEE 802.3 frame is _____ Bytes. L1
A. 45
B. 3200
C. 1500
D. 8190
ANSWER: C

2. A_____ device is used to connect two separate networks that use different communication protocols. L3
A. bridge
B. router
C. hub
D. gateway
ANSWER: D

3. The _____ layer is concerned with data reliability and correct sequencing. L2
A. data link layer
B. transport layer
C. session layer
D. network layer
ANSWER: B

4.The port address is used in _____ layer. L2
A. presentation layer
B. network layer
C. transport layer
D. data link layer
ANSWER: C

5.The data rate of standard Ethernet is ____ Mbps. L1
A. 10
B. 100
C. 1
D. 1000
ANSWER: A

6.Communication between a computer and a keyboard involves _____ mode. L3
A. simplex
B. half duplex
C. full duplex
D. none of the above
ANSWER: A

7.The number of full duplex links required in mesh topology to connect '10' device is ____. L3
A. 10
B. 100
C. 90
D. 45
ANSWER: D

8.A _____ is a device that operates at the network layer of the OSI model to connect dissimilar networks. L3

A. router
B. bridge
C. gateway

D. hub
ANSWER: A

9.A _____ is a set of rules that governs the communication. L2
A. standards
B. protocols
C. servers
D. RFCs
ANSWER: B

10._____ frame in token ring contains start delimiter and end delimiter. L1

A. Token
B. Abort
C. Date
D. Command
ANSWER: B

11.Token ring uses _____ address, which is imprinted on the NIC card. L3

A. 1 byte
B. 10 byte
C. 48 bits
D. 64 bits
ANSWER: C

12.The datalink layer that manage the data units in the form of _____. L3
A. bits
B. packets
C. frames
D. segments
ANSWER: C

13.The minimum size of frame length in Ethernet is _____ bytes. L1

A. 0
B. 32
C. 54
D. 46
ANSWER: D

14.Checksum is used for ____. L3
A. error correction
B. error detection
C. error correction and error detection
D. none of the above
ANSWER: B

15.PSTN is example of _____ switching networks. L3
A. circuit
B. packet
C. message
D. hybrid
ANSWER: A

16.The main function of MAC sub layer is _____ & _____.
L2

A. encryption and compression
B. dialog control and synchronization
C. framing and channel access
D. routing and end to end delivery
ANSWER: C

17.The data rate of fast Ethernet is _____ Gbps. L1
A. 100
B. 0.1
C. 10
D. 0.01
ANSWER: B

18.OSI model has _____ layers and TCP/IP model has _____ layers. L1
A. 5,7
B. 7,3
C. 5,3
D. 7,5
ANSWER: D

19.Which kind of network category allows to communicate through common physical medium without the necessity of an intermediate switching node? L3
A. LAN
B. MAN
C. WAN
D. all of the above
ANSWER: A

20. Which network topology requires a central controller or hub? L3
A. star
B. mesh
C. ring
D. bus
ANSWER: A

21. _____ topology requires a multipoint connection. L3
A. star
B. mesh
C. ring
D. bus
ANSWER: D

22. Data communication system spanning states, countries, or the whole world is _____. L2
A. LAN
B. MAN
C. WAN
D. all of the above
ANSWER: C

23. What is the minimum number of wires needed to send data over it serial communication link layer? L3
(A) 1
(B) 2
(C) 3
(D) 4
ANSWER:A

24. Which data communication method is used to send data over a serial communication link? L2

(A) simplex
(B) half duplex
(C) full duplex
(D) all of these
ANSWER:D

25. What is the main difference between synchronous and asynchronous transmission? L3
(A) band width required is different.
(B) pulse height is different.
(C) clocking is derived from the data in synchronous transmission.
(D) clocking is mixed with data in asynchronous transmission.
ANSWER:C

26. One important characteristic of LAN is… L1
(A) parallel transmission
(B) low cast access for low bandwidth channel
(C) unlimited expansion
(D) application independent interfaces
ANSWER:D

27. In OSI network architecture, the routing is performed by …. L2
(A) a data link layer
(B) network layer
(C) transport layer
(D) session layer
ANSWER:B

28. Which topology requires a central controller or hub? L3
(A) Star
(B) Mesh
(C) Bus
(D) Ring
ANSWER:STAR

29. The information to be communicated in a data communications system is the _____. L2
(A) Medium
(B) Protocol
(C) Transmission
(D) Message
ANSWER:D

30. An unauthorized user is a network _____ issue.
L3
(A) Performance
(B) Reliability
(C) Security
(D) All of the above
ANSWER:C

31. The _____ layer changes bits into electromagnetic signals. L3
(A) Physical
(B) Transport
(C) None of the above
(D) Data link
ANSWER:A

32.What is the main function of the transport layer? L2

(A) Process-to-process delivery
(B) Node-to-node delivery
(C) Synchronization
(D) Updating and maintenance of routing tables
ANSWER:A

33.Which topology requires a multipoint connection? L3
A) Bus
B) Star
C) Mesh
D) Ring
Answer: A

34. _____ defines how a particular pattern to be interpreted, and what action is to be taken based on that interpretation. L3
A) Syntax
B) Semantics
C) Timing
D) None of the above
Answer: B

35. A _____ standard has not been approved by an organized body but has been adopted as a standard through widespread use. L2
A. de facto
B. de jure
C. a or b
D. none of the above
Correct Answer :A

36. _____ switching is well suited for voice communication while _____ switching is better suited for data and other non-voice communication. L3
A. Message; circuit
B. Circuit; message
C. Packet; circuit
D. Circuit; packet
Correct Answer :D

37. Which of the following method is used for dedicated communications packet between two devices through one or more intermediate switching nodes? L3
A. Switch network.
B. Circuit switching
C. Packet switching
D. Message switching
Correct Answer :B

38. A 10Base5 Ethernet LAN has a maximum cable length of _____ meters (assume no repeaters, bridges, or other such devices). L3
A. 5
B. 10
C. 100
D. 500
Correct Answer :D

39. The flag, CRC, and station address fields are added to the PDU at the _____ layer . L1
A. physical
B. LLC
C. MAC

D. network
Correct Answer :C

40. IEEE 802.1 is concerned with _____ issues in LANs and MANs. L3
A. error handling
B. networking
C. internetworking
D. flow control
Correct Answer :C

PART-B

1. Compare WAN, LAN and MAN
2. What are the various data transfer modes? Give example for each of them
3. Draw the TCP/IP protocol suite with protocols for each layer.
4. Compare Mesh, Star and Ring Topology
5. What are the various data transmission modes? Explain with necessary diagram
6. Explain the working of FDDI
7. List the services provided by data link layer
8. What is the advantage of FDDI over a basic token ring?
9. Give the Parameters used to measure network performance.
10. What is the significance of a token? Give the different frames used in token ring protocol

PART-C

1. Briefly explain the working of Token Ring and the frame format for IEEE 802.5 Standard
2. Explain the Various phases involved in communication via circuit switching network
3. What is the need for layered architecture? Explain TCP/IP protocol suite mentioning the functions of each layer.
4. Explain the frame format of 802.3 MAC sub-layer protocol in detail.
5. Explain in detail about the access mechanism and frame format used in IEEE 802.3 Standard.
6. Compare
    a) Circuit switching and Packet switching
    b) Synchronous and Asynchronous Transmission
7. Discuss the four Basic network topologies and their relevant Features
8. Explain the following Layered Architecture, FDDI and its Frame format