

CS 601 DATA COMMUNICATION

Question # 1 of 10

In FDDI, THT stands for:

- Token Hash Timer
- Tier Holding Timer
- Target Holding Timer
- **Token Holding Timer**

Question # 2 of 10

The DSAP and SSAP are addresses used by \_\_\_\_ to identify the protocol stack.

- Network
- **MAC**
- LLC
- None of the above

Question # 3 of 10

Repeaters work on the \_\_\_\_ Layer/Layers

- Data Link
- **Physical**
- Network
- All of the above

Question # 4 of 10

Bridge is \_\_\_\_\_ Layer Device

- **Data Link**
- Physical
- Network
- None of the above

Question # 5 of 10

On the transport layer of TCP/IP suit \_\_\_\_\_ protocols are used

- TCP & IP
- **TCP & UDP**

**Question # 6 of 10**

Application layer of TCP/IP suit is equivalent of \_\_\_\_\_ layers of OSI Model

- Application, Presentation and Transport
- Application, Session and Transport
- **Application, Presentation and Session**
- None of the above

**Question # 7 of 10**

A Repeater does not allow us to extend the physical length of network

- True
- **False**

**Question # 8 of 10**

Shortest frame in HDLC protocols is usually the \_\_\_\_\_ frame.

- Information
- Supervisory
- Management
- **None of the above**

**Question # 9 of 10**

**Repeater is device**

- Layer three
- Intelligent
- Unintelligent
- **None of the above**

**Question # 10 of 10**

\_\_\_\_\_ is HDLC's error detection field.

- Flag
- BCC
- BSC
- **FCS**

Question # 1 of 10 ( Start time: 08:42:52 PM ) Total Marks: 1

Router works on the \_\_\_\_\_ layers.

Select correct option:

Network.

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Physical & Data Link.

All of above.

None of above.

Question # 2 of 10 ( Start time: 08:44:07 PM ) Total Marks: 1

ZMODEM protocol combines the features of \_\_\_\_\_

Select correct option:

XMODEM

YMODEM

BOTH XMODEM & YMODEM

None of the above

Question # 3 of 10 ( Start time: 08:44:40 PM ) Total Marks: 1

Like 10 Base 5, 10 Base 2 is a \_\_\_\_\_ Topology LAN

Select correct option:

Bus

Star

Ring

Mesh

Question # 4 of 10 ( Start time: 08:45:23 PM ) Total Marks: 1

Repeater is \_\_\_\_\_ Device.

Select correct option:

Layer three.

Intelligent.

**Unintelligent.**

None of above.

Question # 5 of 10 ( Start time: 08:46:19 PM ) Total Marks: 1

In token ring frame, the size of the token is \_\_\_\_\_

Select correct option:

4 bytes

3 bytes

2 bytes

**1 bytes**

Question # 6 of 10 ( Start time: 08:47:34 PM ) Total Marks: 1

The Placing position of a repeater in the network is \_\_\_\_\_.

Select correct option:

Unimportant

**Important.**

MC090404560 : Ana Jamil

Question # 7 of 10 ( Start time: 08:48:25 PM ) Total Marks: 1

The address field of a frame in HDLC protocol contains the address of the \_\_\_\_\_ station.

Select correct option:

Primary

**Secondary**

Tertiary

Primary and secondary

Question # 8 of 10 ( Start time: 08:49:26 PM ) Total Marks: 1

Repeater is an amplifier

Select correct option:

True

False

Question # 9 of 10 ( Start time: 08:49:52 PM ) Total Marks: 1

In BSC data frame, header comes before \_\_\_\_\_ and after \_\_\_\_\_

Select correct option:

SYNs, STX

ITB,STX

STX, SYNs

ETX, BCC

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The PDU has no flag fields, no CRC, and no station address

Select correct option:

True

False

MC090400610 : Azka Mashkooor

Question # 1 of 10 ( Start time: 08:53:54 PM ) Total Marks: 1

Repeaters are \_\_\_\_\_ Devices

Select correct option:

Networking

Internetworking

Intelligent

None of above

Question #2

The \_\_\_\_ is HDLC's error detection field.

Select correct option:

Flag

BCC

BSC

FCS

Question # 3 of 10 ( Start time: 08:55:20 PM ) Total Marks: 1

The HDLC \_\_\_\_\_ field defines the beginning and end of a frame.

Select correct option:

Flag

Address

Control

FCS

Question # 4 of 10 ( Start time: 08:55:42 PM ) Total Marks: 1

The \_\_\_\_\_ bit of the DSAP indicates whether the frame is intended for an individual or a group

Select correct option:

last

third

second

first

Question # 5 of 10 ( Start time: 08:56:41 PM ) Total Marks: 1

BSC stands for \_\_\_\_\_

Select correct option:

Binary Search Protocols

Bit Synchronization class

Binary Synchronous communication

Bit synchronous protocol

Question # 6 of 10 ( Start time: 08:57:58 PM ) Total Marks: 1

The shortest frame in HDLC protocol is usually the \_\_\_\_\_ fram

Select correct option:

Information

Supervisory

Management

None of the given

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Question # 7 of 10 ( Start time: 08:58:44 PM ) Total Marks: 1

Information field contains the user data in \_\_\_\_\_ and network management information in a \_\_\_\_\_.

Select correct option:

S- Frame, U- Frame

U- Frame, I- Frame

I-Frame, U-Frame

S-frame, U-Frame

Question # 8 of 10 ( Start time: 08:59:18 PM ) Total Marks: 1

Bridge is \_\_\_\_\_ Device.

Select correct option:

Layer one.

Intelligent.

Unintelligent.

None of above.

Question # 9 of 10 ( Start time: 09:00:41 PM ) Total Marks: 1

RARP stands for Reverse Address Resolution Protocol.

Select correct option:

True

False



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## Transport Layer

1: One of the responsibilities of the transport layer protocol is to create a \_\_\_\_\_ communication.

- a. host-to-host
- b. process-to-process
- c. node-to-node
- d. none of the above

The correct answer is b

2: UDP is called a \_\_\_\_\_ transport protocol.

- a. connectionless, reliable
- b. connection-oriented, unreliable
- c. connectionless, unreliable
- d. none of the above

The correct answer is c

3: UDP does not add anything to the services of IP except for providing \_\_\_\_\_ communication.

- a. node-to-node
- b. process-to-process
- c. host-to-host
- d. none of the above

The correct answer is b

4: UDP is an acronym for \_\_\_\_\_.

- a. User Delivery Protocol
- b. User Datagram Procedure
- c. User Datagram Protocol
- d. none of the above

The correct answer is c

5: Although there are several ways to achieve process-to-process communication, the most common is through the \_\_\_\_\_ paradigm.

- a. client-server
- b. client-client
- c. server-server
- d. none of the above

The correct answer is a

6: The local host and the remote host are defined using IP addresses. To define the processes, we need second identifiers called \_\_\_\_\_.

- a. UDP addresses
- b. transport addresses
- c. port addresses
- d. none of the above

The correct answer is c

7: The ports ranging from 49,152 to 65,535 can be used as temporary or private port numbers. They are called the \_\_\_\_\_ ports.

- a. well-known
- b. registered
- c. dynamic
- d. none of the above

The correct answer is c

8: In the sending computer, UDP receives a data unit from the \_\_\_\_\_ layer.

- a. application
- b. Transport
- c. IP
- d. none of the above

The correct answer is a

9: In the sending computer, UDP sends a data unit to the \_\_\_\_\_ layer.

- a. application
- b. Transport
- c. IP
- d. none of the above

The correct answer is c

10: UDP and TCP are both \_\_\_\_\_ layer protocols.

- a. data link
- b. network
- c. transport
- d. none of the above

The correct answer is c

11: Which of the following functions does UDP perform?

- a. process-to-process communication
- b. host-to-host communication
- c. end-to-end reliable data delivery
- d. none of the above

The correct answer is a

12: When the IP layer of a receiving host receives a datagram, \_\_\_\_\_.

- a. delivery is complete
- b. a transport layer protocol takes over
- c. a header is added
- d. none of the above

The correct answer is b

13: UDP needs the \_\_\_\_\_ address to deliver the user datagram to the correct application process.

- a. port
- b. Application
- c. Internet
- d. none of the above

The correct answer is a

14: A port address in UDP is \_\_\_\_\_bits long.

- a. 8
- b. 16
- c. 32
- d. any of the above

The correct answer is b

15: Which of the following does UDP guarantee?

- a. flow control
- b. connection-oriented delivery
- c. flow control
- d. none of the above

The correct answer is d

16: The source port address on the UDP user datagram header defines \_\_\_\_\_.

- a. the sending computer
- b. the receiving computer
- c. the process running on the sending computer
- d. none of the above

The correct answer is c

17: The combination of an IP address and a port number is called a \_\_\_\_\_.

- a. transport address
- b. network address
- c. socket address
- d. none of the above

The correct answer is c

18: To use the services of UDP, we need \_\_\_\_\_ socket addresses.

- a. four
- b. two
- c. three
- d. none of the above

The correct answer is b

19: UDP packets are called \_\_\_\_\_.

- a. user datagrams
- b. segments
- c. frames
- d. none of the above

The correct answer is a

20: UDP packets have a fixed-size header of \_\_\_\_\_ bytes.

- a. 16
- b. 8
- c. 40
- d. none of the above

The correct answer is b

21: UDP packets are encapsulated in \_\_\_\_\_.

- a. an Ethernet frame
- b. an TCP segment
- c. an IP datagram
- d. none of the above

The correct answer is c

22: UDP uses \_\_\_\_\_ to handle outgoing user datagrams from multiple processes on one host.

- a. flow control
- b. multiplexing
- c. demultiplexing
- d. none of the above

The correct answer is b

23: UDP uses \_\_\_\_\_ to handle incoming user datagrams that go to different processes on the same host.

- a. flow control
- b. multiplexing
- c. demultiplexing
- d. none of the above

The correct answer is c

24: TCP is a \_\_\_\_\_ protocol.

- a. stream-oriented
- b. message-oriented
- c. block-oriented
- d. none of the above

The correct answer is a

25: TCP allows the sending process to deliver data as a \_\_\_\_\_ of bytes and allows the receiving process to obtain data as a \_\_\_\_\_ of bytes.

- a. message; message
- b. stream; stream
- c. block; block
- d. none of the above

The correct answer is b

26: Because the sending and the receiving processes may not write or read data at the same speed, TCP \_\_\_\_\_.

- a. speeds up the slower process
- b. slows down the faster process
- c. uses buffers
- d. none of the above

The correct answer is c

27: TCP groups a number of bytes together into a packet called a \_\_\_\_\_.

- a. user datagram
- b. Segment
- c. datagram
- d. none of the above

The correct answer is b

28: TCP is a \_\_\_\_\_ protocol.

- a. connection-oriented
- b. connectionless
- c. both a and b
- d. none of the above

The correct answer is a

29: TCP is a(n) \_\_\_\_\_ transport protocol.

- a. unreliable
- b. best-effort delivery
- c. reliable
- d. none of the above

The correct answer is c

30: TCP uses \_\_\_\_\_ to check the safe and sound arrival of data.

- a. an acknowledgment mechanism
- b. out-of-band signalling
- c. the services of another protocol
- d. none of the above

The correct answer is a

31: The bytes of data being transferred in each connection are numbered by TCP. The numbering starts with a \_\_\_\_\_.

- a. 0
- b. 1
- c. randomly generated number
- d. none of the above

The correct answer is c

32: TCP assigns a sequence number to each segment that is being sent. The sequence number for each segment is the number of the \_\_\_\_\_ byte carried in that segment.

- a. first
- b. last
- c. middle
- d. none of the above

The correct answer is a

33: Communication in TCP is \_\_\_\_\_.

- a. simplex
- b. half-duplex
- c. full-duplex
- d. none of the above

The correct answer is c

34: The value of the acknowledgment field in a segment defines the number of the \_\_\_\_\_ byte a party expects to receive.

- a. first
- b. last
- c. next
- d. none of the above

The correct answer is c

35: The acknowledgment number is \_\_\_\_\_.

- a. independent
- b. randomly generated
- c. cumulative
- d. none of the above

The correct answer is c

36: The value of the window size is determined by \_\_\_\_\_.

- a. the sender
- b. the receiver
- c. both the sender and receiver
- d. none of the above

The correct answer is b

37: The inclusion of the checksum in the TCP segment is \_\_\_\_\_.

- a. optional
- b. mandatory
- c. at the discretion of the application program
- d. none of the above

The correct answer is b

38: A TCP segment is encapsulated in \_\_\_\_\_.

- a. an IP datagram
- b. an Ethernet frame
- c. a UDP user datagram
- d. none of the above

The correct answer is a

39: Connection establishment in TCP is called \_\_\_\_\_ handshaking.

- a. two-way
- b. four-way
- c. one-way
- d. none of the above

The correct answer is d

40: A SYN segment cannot carry data; it consumes \_\_\_\_\_ sequence number(s).

- a. no
- b. one
- c. two
- d. none of the above

The correct answer is b

41: A SYN + ACK segment cannot carry data; it consumes \_\_\_\_\_ sequence number(s).

- a. no
- b. three
- c. two
- d. none of the above

The correct answer is d

42: An ACK segment, if carrying no data, consumes \_\_\_\_\_ sequence number(s).

- a. no
- b. one
- c. two
- d. none of the above

The correct answer is a

45: The FIN segment consumes \_\_\_\_\_ sequence numbers if it does not carry data.

- a. two
- b. three
- c. no
- d. none of the above

The correct answer is d

46: The FIN + ACK segment consumes \_\_\_\_\_ sequence number(s) if it does not carry data.

- a. two
- b. three
- c. one
- d. none of the above

The correct answer is c

47: In TCP, one end can stop sending data while still receiving data. This is called a \_\_\_\_\_.

- a. half-close
- b. half-open
- c. one-way termination
- d. none of the above

The correct answer is a

48: A(n) \_\_\_\_\_ machine is a machine that goes through a limited number of states.

- a. infinite state
- b. finite state
- c. both a and b
- d. none of the above

The correct answer is b

49: \_\_\_\_\_ control regulates the amount of data a source can send before receiving an acknowledgment from the destination.

- a. Error
- b. Flow
- c. Congestion
- d. none of the above

The correct answer is b

50: To accomplish flow control, TCP uses a \_\_\_\_\_ window protocol.

- a. limited-size
- b. sliding
- c. fixed-size
- d. none of the above

The correct answer is b

51: TCP sliding windows are \_\_\_\_\_ oriented.

- a. packet
- b. Segment
- c. Byte
- d. none of the above

The correct answer is c

52: ACK segments consume \_\_\_\_\_ sequence number(s) and \_\_\_\_\_ acknowledged.

- a. no; are not
- b. one; are not
- c. no; are
- d. none of the above

The correct answer is a

53: TCP delivers \_\_\_\_\_ out-of-order segments to the process.

- a. all
- b. no
- c. some
- d. none of the above

The correct answer is b

54: IP is responsible for \_\_\_\_\_ communication while TCP is responsible for \_\_\_\_\_ communication.

- a. host-to-host; process-to-process
- b. process-to-process; host-to-host
- c. process-to-process; network-to-network
- d. none of the above

The correct answer is a

56: Multiply the header length field by \_\_\_\_\_ to find the total number of bytes in the TCP header.

- a. 2
- b. 4
- c. 6
- d. none of the above

The correct answer is b

57: Urgent data requires the urgent pointer field as well as the URG bit in the \_\_\_\_\_ field.

- a. control
- b. offset
- c. sequence number
- d. none of the above

The correct answer is a

58: The options field of the TCP header ranges from 0 to \_\_\_\_\_ bytes.

- a. 10
- b. 20
- c. 40
- d. none of the above

The correct answer is c

59: If the ACK value is 200, then byte \_\_\_\_\_ has been received successfully.

- a. 199
- b. 200
- c. 201
- d. none of the above

The correct answer is a

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## **Chapter : Chapter 14 : Wireless LANs**

1: IEEE has defined the specifications for a wireless LAN, called \_\_\_\_\_, which covers the physical and data link layers.

- a. IEEE 802.3      b. IEEE 802.5      c. IEEE 802.11      d. IEEE 802.2

The correct answer is c

2: In IEEE 802.11, a \_\_\_\_ is made of stationary or mobile wireless stations and an optional central base station, known as the access point (AP).

- a. ESS      b. BSS      c. CSS      d. none of the above

The correct answer is b

3: In IEEE 802.11, a BSS without an AP is called an \_\_\_\_\_.

- a. an ad hoc architecture      b. an infrastructure network  
c. either (a) or (b)      d. neither (a) nor (b)

The correct answer is a

4: In IEEE 802.11, a BSS with an AP is sometimes referred to as \_\_\_\_\_.

- a. an ad hoc architecture      b. an infrastructure network  
c. either (a) or (b)      d. neither (a) nor (b)

The correct answer is b

5: In IEEE 802.11, communication between two stations in two different BSSs usually occurs via two \_\_\_\_\_.

- a. BSSs      b. ESSs      c. APs      d. none of the above

The correct answer is c

6: In IEEE 802.11, a station with \_\_\_\_\_ mobility is either stationary (not moving) or moving only inside a BSS.

- a. no-transition      b. BSS-transition      c. ESS-transition      d. none of the above

The correct answer is a

7: In IEEE 802.11, a station with \_\_\_\_\_ mobility can move from one BSS to another, but the movement is confined inside one ESS.

- a. no-transition      b. BSS-transition      c. ESS-transition      d. none of the above

The correct answer is b

8: In IEEE 802.11, a station with \_\_\_\_\_ mobility can move from one ESS to another.

- a. no-transition      b. BSS-transition      c. ESS-transition      d. none of the above

The correct answer is c

9: In IEEE 802.11, \_\_\_\_\_ is an optional access method that can be implemented in an infrastructure network (not in an ad hoc network).

- a. DCF      b. PCF      c. either (a) or (b)      d. neither (a) nor (b)

The correct answer is b

10: In IEEE 802.11, when a frame is going from one station in a BSS to another without passing through the distribution system, the address flag is \_\_\_\_\_.

- a. 00      b. 01      c. 10      d. 11

The correct answer is a

11: In IEEE 802.11, when a frame is coming from an AP and going to a station, the address flag is \_\_\_\_\_.

- a. 00      b. 01      c. 10      d. 11

The correct answer is b

12: In IEEE 802.11, when a frame is going from a station to an AP, the address flag is \_\_\_\_\_.

- a. 00      b. 01      c. 10      d. 11

The correct answer is c

13: In IEEE 802.11, when a frame is going from one AP to another AP in a wireless distribution system, the address flag is \_\_\_\_\_.

- a. 00      b. 01      c. 10      d. 11

The correct answer is d

14: The IEEE 802.11 standard for wireless LANs defines two services: \_\_\_\_\_ and \_\_\_\_\_.

- a. BSS; ASS      b. ESS; SSS      c. BSS; ESS      d. BSS; DCF

The correct answer is c

15: In IEEE 802.11, the access method used in the DCF sublayer is \_\_\_\_\_.

- a. ALOHA      b. CSMA/CA      c. CSMA/CD      d. none of the above

The correct answer is b

16: In IEEE 802.11, the access method used in the PCF sublayer is \_\_\_\_\_.

- a. contention      b. controlled      c. polling      d. none of the above

The correct answer is c

17: In IEEE 802.11, the \_\_\_\_\_ is a timer used for collision avoidance.  
a. NAV                      b. BSS                      c. ESS                      d. none of the above

The correct answer is a

18: In IEEE 802.11, the MAC layer frame has \_\_\_\_\_ fields.  
a. four                      b. five                      c. six                      d. none of the above

The correct answer is d

19: In IEEE 802.11, the addressing mechanism can include up to \_\_\_\_\_ addresses.  
a. four                      b. five                      c. six                      d. none of the above

The correct answer is a

20: The original IEEE 802.11, uses \_\_\_\_\_.  
a. FHSS                      b. DSSS                      c. OFDM                      d. either (a) or (b)

The correct answer is d

21: The IEEE 802.11a, uses \_\_\_\_\_.  
a. FHSS                      b. DSSS                      c. OFDM                      d. either (a) or (b)

The correct answer is c

22: The IEEE 802.11b, uses \_\_\_\_\_.  
a. FHSS                      b. DSSS                      c. OFDM                      d. either (a) or (b)

The correct answer is b

23: The IEEE 802.11g, uses \_\_\_\_\_.  
a. FHSS                      b. DSSS                      c. OFDM                      d. either (a) or (b)

The correct answer is c

24: The original IEEE 802.11, has a data rate of \_\_\_\_\_ Mbps.  
a. 1                      b. 6                      c. 11                      d. 22

The correct answer is a

25: IEEE 802.11a, has a data rate of \_\_\_\_\_ Mbps.  
a. 1                      b. 2                      c. 6                      d. none of the above

The correct answer is c

26: IEEE 802.11b, has a data rate of \_\_\_\_\_ Mbps.  
a. 1                      b. 2                      c. 5.5                      d. none of the above

The correct answer is c

27: IEEE 802.11g, has a data rate of \_\_\_\_\_ Mbps.  
a. 1                      b. 2                      c. 11                      d. 22

The correct answer is d

28: The IEEE 802.11 wireless LANs use \_\_\_\_\_ types of frames.  
a. four                      b. five                      c. six                      d. none of the above

The correct answer is d

29: Bluetooth is a \_\_\_\_\_ technology that connects devices (called gadgets) in a small area.  
a. wired LAN                      b. wireless LAN                      c. VLAN                      d. none of the above

The correct answer is b

30: A Bluetooth network is called a \_\_\_\_\_.  
a. piconet                      b. scatternet                      c. bluenet                      d. none of the above

The correct answer is a

31: In Bluetooth, multiple \_\_\_\_\_ form a network called a \_\_\_\_\_.  
a. scatternet; piconets                      b. piconets; scatternet  
c. piconets; bluenet                      d. bluenet; scatternet

The correct answer is b

32: A Bluetooth network consists of \_\_\_\_\_ primary device(s) and up to \_\_\_\_\_ secondary devices.  
a. one; five                      b. five; three                      c. two; six                      d. one; seven

The correct answer is d

33: The RTS and CTS frames in CSMA/CA \_\_\_\_\_ solve the hidden station problem. The RTS and CTS frames in CSMA/CA \_\_\_\_\_ solve the exposed station problem.  
a. can; cannot                      b. cannot; can                      c. can; can                      d. cannot; cannot

The correct answer is a

34: In Bluetooth, the current data rate is \_\_\_\_\_ Mbps  
a. 2                      b. 5                      c. 11                      d. none of the above

The correct answer is d

35: In Bluetooth, the \_\_\_\_\_ layer is roughly equivalent to the physical layer of the Internet model.  
a. radio                      b. baseband                      c. L2CAP                      d. none of the above

The correct answer is a

36: In Bluetooth, the \_\_\_\_\_ layer is roughly equivalent to the MAC sublayer in LANs.  
a. radio                      b. baseband                      c. L2CAP                      d. none of the above

The correct answer is b

37: In Bluetooth, the L2CAP sublayer, is roughly equivalent to the LLC sublayer in LANs.  
a. radio                      b. baseband                      c. L2CAP                      d. none of the above

The correct answer is c

38: The access method in Bluetooth is \_\_\_\_\_.  
a. FDMA                      b. TDD-TDMA                      c. CDMA                      d. none of the above

The correct answer is b

39: In Bluetooth, the \_\_\_\_\_ link is used when avoiding latency (delay in data delivery) is more important than integrity (error-free delivery).

- a. SCO                      b. ACL                      c. ACO                      d. SCL

The correct answer is a

40: In Bluetooth, the \_\_\_\_\_ link is used when data integrity is more important than avoiding latency.

- a. SCO                      b. ACL                      c. ACO                      d. SCL

The correct answer is b

41: Bluetooth uses \_\_\_\_\_ method in the physical layer to avoid interference from other devices or other networks.

- a. DSSS                      b. FHSS                      c. FDMA                      d. none of the above

The correct answer is b

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## Quiz # 5

### Question # 1

The shortest frame in HDLC protocol is usually the \_\_\_\_\_ frame

- Information                       Supervisory                       Management                       **None of the given**

### Question # 2

\_\_\_\_\_ sub-layer , resolves the contention for the shared media

- MAC**                       LLC                       Physical                       None of the above

### Question # 3

The process to send control information in the information field of I-Frame along with data is called \_\_\_\_\_

- Acknowledgment management                       Piggy Forwarding                       AckTrick  
 **Piggybacking**

### Question # 4

The DSAP and SSAP are addresses used by \_\_\_\_\_ to identify the protocol stacks

- Network                       MAC                       **LLC**                       All of above

### Question # 6

Router is \_\_\_\_\_ Device.

- Layer one       Intelligent.       Unintelligent.       **None of above.**

Question # 7

The repeater works at \_\_\_\_\_ Layer of OSI model

- Data Link layer       **Physical layer**       Transport Layer       Network Layer

Question # 8

**Bridges are \_\_\_\_\_ Devices**

- Networking**       Internetworking       All of above       None of above

Question # 9

**In Multi station Access Unit (MAU) Individual automatic hubs are combined in to a router**

- True       False

Question # 10

**The address field of a frame in HDLC protocol contains the address of the \_\_\_\_\_ station.**

- Primary       Secondary       Tertiary       **Primary and secondary**

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---

**FINALTERM EXAMINATION**  
Spring 2009  
CS601- Data Communication

**Question No: 1 ( Marks: 1 ) - Please choose one**

---

There are how many factors on which the performance of a network depends?

- ▶ Three
- ▶ Five
- ▶ Four

- ▶ Two

**Question No: 2 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_requires the maximum number of I/O ports.

- ▶ Bus
- ▶ Star
- ▶ Mesh
- ▶ Ring

**Question No: 3 ( Marks: 1 ) - Please choose one**

---

Headers are added at layers 1 and 7 of OSI model.

- ▶ True
- ▶ False

**Question No: 4 ( Marks: 1 ) - Please choose one**

---

Trailer is only added at \_\_\_\_\_layer of OSI model.

- ▶ data link
- ▶ physical
- ▶ network
- ▶ application

**Question No: 5 ( Marks: 1 ) - Please choose one**

---

A sine wave must be an analog signal.

- ▶ True
- ▶ False

**Question No: 6 ( Marks: 1 ) - Please choose one**

---

If there is \_\_\_\_\_ in voltage then the frequency is infinite.

- ▶ instantaneous change
- ▶ continuous change
- ▶ no change

**Question No: 7 ( Marks: 1 ) - Please choose one**

---

The inversion of the level at 1 bit is called as \_\_\_\_\_

- ▶ NRZ-L
- ▶ NRZ-I
- ▶ RZ

**Question No: 8 ( Marks: 1 ) - Please choose one**

---

The last process in PCM is \_\_\_\_\_ digital data into digital signal.

- ▶ encoding

- ▶ decoding
- ▶ modulating

**Question No: 9 ( Marks: 1 ) - Please choose one**

---

Amplitude in ASK is more resistive to EMI and Noise.

- ▶ True
- ▶ False

**Question No: 10 ( Marks: 1 ) - Please choose one**

---

If FCC regulations are followed, the carrier frequencies of adjacent AM radio stations are \_\_\_\_\_ apart.

- ▶ 5 KHz
- ▶ 10 KHz
- ▶ 200 KHz
- ▶ 530 KHz

**Question No: 11 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ transmission, a start bit and a stop bit frame a character byte.

- ▶ Asynchronous serial
- ▶ Synchronous serial
- ▶ Parallel

- ▶ Asynchronous & Synchronous serial

**Question No: 12 ( Marks: 1 ) - Please choose one**

---

Synchronous transmission have \_\_\_\_\_.

- ▶ a start bit
- ▶ a stop bit
- ▶ gaps between bytes
- ▶ none of the given

**Question No: 13 ( Marks: 1 ) - Please choose one**

---

Transmission media are usually categorized as \_\_\_\_\_

- ▶ Fixed or Unfixed
- ▶ Guided or Unguided
- ▶ Determinate or Indeterminate
- ▶ Metallic or Nonmetallic

**Question No: 14 ( Marks: 1 ) - Please choose one**

---

The RG number gives us information about \_\_\_\_\_.

- ▶ Twisted pairs
- ▶ Coaxial cables
- ▶ Optical fibers

- ▶ all of the given

**Question No: 15 ( Marks: 1 ) - Please choose one**

---

Radio wave and microwave frequencies range from \_\_\_\_\_.

- ▶ 3 to 300 KHz
- ▶ 300 KHz to 300 KHz to 3 GHz
- ▶ 3 KHz to 300 GHz
- ▶ 3 KHz to 3000 GHz

**Question No: 16 ( Marks: 1 ) - Please choose one**

---

All of popular Fiber optic connectors are \_\_\_\_\_ shaped.

- ▶ Conical
- ▶ Barrel
- ▶ Circular
- ▶ Rectangular

**Question No: 17 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ method a signal can be directed in a straight from Antenna to antenna.

- ▶ Line of sight
- ▶ Ground propagation
- ▶ Sky propagation

- ▶ Microwaves

**Question No: 18 ( Marks: 1 ) - Please choose one**

---

Amplifiers are used to \_\_\_\_\_ the signal to heat.

- ▶ Amplify
- ▶ Rectify
- ▶ Testify
- ▶ NULLify

**Question No: 19 ( Marks: 1 ) - Please choose one**

---

There are \_\_\_\_\_ basic categories of multiplexing.

- ▶ 3
- ▶ 4
- ▶ 2
- ▶ 5

**Question No: 20 ( Marks: 1 ) - Please choose one**

---

If a T-1 carries 8000 frames, the data rate is \_\_\_\_\_

- ▶ 2.544 Mbps
- ▶ 1.544 Mbps
- ▶ 1.544 Kbps

- ▶ 1.544 Gbps

**Question No: 21 ( Marks: 1 ) - Please choose one**

---

FTTC stands for \_\_\_\_\_

- ▶ flexible to the curb
- ▶ fiber to the curb
- ▶ fiber to the cable
- ▶ fiber to the center

**Question No: 22 ( Marks: 1 ) - Please choose one**

---

Optical signals are multiplexed using \_\_\_\_\_ at switching office to create wider BW optical signals

- ▶ WDM
- ▶ FDM
- ▶ TDM
- ▶ MUX

**Question No: 23 ( Marks: 1 ) - Please choose one**

---

Which error detection method consists of a parity bit for each unit as well as an entire data unit of parity bits?

- ▶ Simple parity check
- ▶ Two-dimensional parity check

- ▶ CRC
- ▶ Checksum

**Question No: 24 ( Marks: 1 ) - Please choose one**

---

If the ASCII character G is sent and the character D is received, what type of error is this?

- ▶ Single-bit
- ▶ Multiple-bit
- ▶ Burst
- ▶ Recoverable

**Question No: 25 ( Marks: 1 ) - Please choose one**

---

Flow control is needed to prevent \_\_\_\_\_

- ▶ Bit errors
- ▶ Overflow of the sender buffer
- ▶ Overflow of the receiver buffer
- ▶ Collision between sender and receiver

**Question No: 26 ( Marks: 1 ) - Please choose one**

---

In data link layer, communication requires at least \_\_\_\_\_ devices working together

- ▶ 3

▶ 2

▶ 4

▶ 5

**Question No: 27 ( Marks: 1 ) - Please choose one**

---

Data link control is composed of \_\_\_\_\_ important functions.

▶ 2

▶ 3

▶ 4

▶ 5

**Question No: 28 ( Marks: 1 ) - Please choose one**

---

Error control is both error \_\_\_\_\_ and error \_\_\_\_\_

▶ detection; correction

▶ detection; deletion

▶ detection; avoidance

▶ detection; forwarding

**Question No: 29 ( Marks: 1 ) - Please choose one**

---

ENQ/ACK stands for \_\_\_\_\_

▶ Enquiry/ Acknowledgment

- ▶ Enque/ Acknowledgment
- ▶ Enquist/ Acknowledgment
- ▶ none of the given

**Question No: 30 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ ARQ, if a NAK is received, only the specific damaged or lost frame is retransmitted.

- ▶ Stop-and-wait
- ▶ Go-Back-N
- ▶ Selective repeat
- ▶ Stop-and-wait & Go-back-N

**Question No: 31 ( Marks: 1 ) - Please choose one**

---

Sliding window requires that data frames be transmitted \_\_\_\_\_

- ▶ Sequentially
- ▶ Frequently
- ▶ Synchronously
- ▶ Asynchronously

**Question No: 32 ( Marks: 1 ) - Please choose one**

---

Which of the following combines features of the other two.

- ▶ ZMODEM
- ▶ YMODEM
- ▶ XMODEM
- ▶ None of given

**Question No: 33 ( Marks: 1 ) - Please choose one**

---

BLAST stands for :

- ▶ Blocked asynchronous transmission
- ▶ Blocked synchronous transmission
- ▶ Barrel asynchronous transmission
- ▶ Below asynchronous transmission

**Question No: 34 ( Marks: 1 ) - Please choose one**

---

HDLC is an acronym for \_\_\_\_\_.

- ▶ High-duplex line communication
- ▶ High-level data link control
- ▶ Half-duplex digital link combination
- ▶ Host double-level circuit

**Question No: 35 ( Marks: 1 ) - Please choose one**

---

The HDLC \_\_\_\_\_ field defines the beginning and end of a frame.

- ▶ Flag
- ▶ Address
- ▶ Control
- ▶ FCS

**Question No: 36 ( Marks: 1 ) - Please choose one**

---

The shortest frame in HDLC protocol is usually the \_\_\_\_\_ frame.

- ▶ Information
- ▶ Supervisory
- ▶ Management
- ▶ None of the given

**Question No: 37 ( Marks: 1 ) - Please choose one**

---

The PDU has no flag fields, no CRC, and no station address

- ▶ TRUE
- ▶ FALSE

**Question No: 38 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_ is the access protocol used by traditional Ethernet.

- ▶ CSMA/CD
- ▶ CSMA/CA

- ▶ Token Ring
- ▶ CSMA

**Question No: 39 ( Marks: 1 ) - Please choose one**

---

Repeater is an amplifier, not a regenerator.

- ▶ True
- ▶ False

**Question No: 40 ( Marks: 1 ) - Please choose one**

---

Bridges can divide a large \_\_\_\_\_ into smaller segments

- ▶ Network
- ▶ Packet
- ▶ Frame
- ▶ Address

**Question No: 41 ( Marks: 2 )**

---

Stop-and- wait ARQ has two control variables S and R. What are their functions?  
[2]

Go-back-n ARQ  
Selective Reject ARQ

**Question No: 42 ( Marks: 2 )**

---

What's the name of the telephone service in which there is no need of dialing.

**Question No: 43 ( Marks: 2 )**

---

What is meant by Transmission Impairments?

**Question No: 44 ( Marks: 3 )**

---

How does the checksum checker know that the received data unit is undamaged? [3]

**Question No: 45 ( Marks: 3 )**

---

What is Geosynchronous satellite?

**Question No: 46 ( Marks: 3 )**

---

Following abbreviations stands for?

1. ARP
2. RARP
3. ICMP

**Question No: 47 ( Marks: 5 )**

---

Name and discuss briefly the bits in the HDLC control field. [5]

**Question No: 48 ( Marks: 5 )**

---

Describe method of checksum briefly?

**Question No: 49 ( Marks: 5 )**

---

What is satellite communication?

**Question No: 50 ( Marks: 10 )**

---

In how many ways TDM can be implemented? Describe any one with example.

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---

**MIDTERM EXAMINATION**  
**Spring 2009**  
**CS601- Data Communication (Session - 1)**

**Question No: 1 ( Marks: 1 ) - Please choose one**

---

In RS 422 Balanced mode two lines carry \_\_\_\_\_ signals which are not identical to each other.

- ▶ same
- ▶ different
- ▶ digital
- ▶ analog

**Question No: 2 ( Marks: 1 ) - Please choose one**

---

The \_\_\_\_\_ generates the data and passes it along with any control information to a \_\_\_\_\_.

- ▶ DTE; DCE
- ▶ DCE; DTE
- ▶ DCE; node
- ▶ DTE; application

**Question No: 3 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ transmission, a start bit and a stop bit frame a character byte.

- ▶ Asynchronous serial
- ▶ Synchronous serial

- ▶ Parallel
- ▶ Asynchronous & Synchronous serial

**Question No: 4 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ transmission, bits are transmitted simultaneously, each across its own wire.

- ▶ Asynchronous serial
- ▶ Synchronous serial
- ▶ Parallel
- ▶ Asynchronous & Synchronous serial

**Question No: 5 ( Marks: 1 ) - Please choose one**

---

Asynchronous transmission is \_\_\_\_\_

- ▶ slow
- ▶ costly
- ▶ non-effective
- ▶ fast

**Question No: 6 ( Marks: 1 ) - Please choose one**

---

In \_\_\_\_\_ transmission the timing of the signal is unimportant.

- ▶ Asynchronous
- ▶ Synchronous
- ▶ Polar
- ▶ Bi-polar

**Question No: 7 ( Marks: 1 ) - Please choose one**

---

In 8QAM each signal shift or one baud represents \_\_\_\_\_.

- ▶ 4 bits
- ▶ 2 bits
- ▶ 5 bits
- ▶ 3 bits

**Question No: 8 ( Marks: 1 ) - Please choose one**

---

PCM is the first process of PAM.

- ▶ True
- ▶ False

**Question No: 9 ( Marks: 1 ) - Please choose one**

---

Bi phase encoding is a type of bipolar encoding in which we use two voltage levels.

- ▶ True
- ▶ False

**Question No: 10 ( Marks: 1 ) - Please choose one**

---

The amplitude of a digital signal depends upon the \_\_\_\_\_ to represent a bit.

- ▶ phase

- ▶ voltage
- ▶ wavelength

**Question No: 11 ( Marks: 1 ) - Please choose one**

---

Time domain plot show changes in signal phase with respect to time.

- ▶ True
- ▶ False

**Question No: 12 ( Marks: 1 ) - Please choose one**

---

OSI model was developed prior to TCP/IP model.

- ▶ True
- ▶ False

**Question No: 13 ( Marks: 1 ) - Please choose one**

---

The \_\_\_\_\_ layer is the layer closest to the transmission medium.

- ▶ physical
- ▶ data link
- ▶ network
- ▶ transport

**Question No: 14 ( Marks: 1 ) - Please choose one**

---

Data chunk at data link layer is called\_\_\_\_\_

- ▶ frame
- ▶ packet
- ▶ datagram

**Question No: 15 ( Marks: 1 ) - Please choose one**

---

The internet model consists of \_\_\_\_\_ layers.

- ▶ three
- ▶ two
- ▶ five
- ▶ seven

**Question No: 16 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_representation of links that connect nodes is called as physical topology.

- ▶ geometrical
- ▶ logical
- ▶ physical

**Question No: 17 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_ is a multipoint topology.

- ▶ Ring
- ▶ Mesh
- ▶ Tree

▶ Bus

**Question No: 18 ( Marks: 1 ) - Please choose one**

---

In mesh topology, if there are five nodes then there will be \_\_\_\_\_ links.

- ▶ 5
- ▶ 10
- ▶ 15
- ▶ 20

**Question No: 19 ( Marks: 1 ) - Please choose one**

---

Non proprietary standard is also termed as de facto standard.

- ▶ True
- ▶ False

**Question No: 20 ( Marks: 1 ) - Please choose one**

---

Effective network mean that the network has fast delivery, timeliness and

- ▶ high bandwidth
- ▶ duplex transmission
- ▶ accurate transmission
- ▶ low bandwidth

**Question No: 21 ( Marks: 2 )**

---

What is purpose of distributed processing?

**Question No: 22 ( Marks: 3 )**

---

What is HDB3.

**Question No: 23 ( Marks: 5 )**

---

Differentiates between the following terms. [10 marks]

- (a) Syntax and Semantics of protocol.
- (b) Network management and exchange management.
- (c) Monolithic and structured.

**Question No: 24 ( Marks: 10 )**

---

Differentiate between the following terms.

**a) Frequency spectrum and bandwidth.**

**(b) Bandwidth and throughput.**

**(c) Bit interval and bit rate.**

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**Question No: 1 ( Marks: 1 ) - Please choose one**

---

An unauthorized user is a network \_\_\_\_\_ issue.

- ▶ Performance
- ▶ Reliability
- ▶ **Security**
- ▶ All of the given

**Question No: 2 ( Marks: 1 ) - Please choose one**

---

Which is not an element of protocol

- ▶ semantics
- ▶ timing
- ▶ **communication service module**

**Question No: 3 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_ is a multipoint topology.

- ▶ Ring
- ▶ Mesh
- ▶ Tree
- ▶ **Bus**

**Question No: 4 ( Marks: 1 ) - Please choose one**

---

Unidirectional traffic movement is overcome by dual ring technology.

- ▶ True
- ▶ False

**Question No: 5 ( Marks: 1 ) - Please choose one**

---

Physical layer defines characteristics of interface between device and \_\_\_\_\_

- ▶ **transmission medium**
- ▶ another device
- ▶ another peer physical layer at other side
- ▶ modem

**Question No: 6 ( Marks: 1 ) - Please choose one**

---

\_\_\_\_\_ layer deals with syntax and semantics of information exchange.

- ▶ **presentation**
- ▶ session
- ▶ application
- ▶ physical

**Question No: 7 ( Marks: 1 ) - Please choose one**

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