



# CS601-Data Communication

(Solved MCQ's)

**LECTURE FROM**  
**(23 to 45)**



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ALL answers are verified if found any mistake then Correct ACCORDINGLY

## Question No: 1

Ethernet Address is of ----- bytes

- 4
- 6
- 8
- 12

## Question No: 2

In Pure ALOHA, the vulnerable time is -----the frame transmission time.

- Same as
- Two times
- Three times
- Four times

## Question No: 3

----- was used as a medium in 10 Base-T

- Thick coaxial Cable
- Think coaxial Cable
- Twisted Pair Cable
- Two Mode For Cable

## Question No: 4

When data are transmitted from device A to device B, the header from A's layer 4 is read by B's ----- layer.

- physical
- transport
- application
- none of the given

## Question No: 5

In ----- encoding, we use three levels: positive, zero, and negative.

- polar
- nonpolar
- mmultilevel
- bipolar

## Question No: 6

A periodic signal completes one cycle in 0.001 s. What is the frequency?

- 1 Hz
- 100 Hz
- 1 KHz
- 1 MHz

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## Question No: 7

There are \_\_\_\_\_ basic modes for the propagation of light in fiber-optic cables.

- 3
- 4
- 5
- **2**

## Question No: 8

A parabolic dish antenna is a(n) \_\_\_\_\_ antenna.

- Omnidirectional
- Bidirectional
- Horn
- **Unidirectional**

## Question No: 9

Zero crossing bandwidth is also called as equivalent noise bandwidth.

- True
- **False**

## Question No: 10

During the transmission, transmitting device produces a high frequency signal which acts as a basis for the transmission. This base signal is called \_\_\_\_\_.

- Analog signal
- **Digital signal**                      Not Confirm
- Modulated signal
- Carrier signal

## Question No 11:

There are \_\_\_\_\_ types of serial transmission:

- 1
- **2**
- 3
- 4

## Question No 12:

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

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

## Question No 13

Using \_\_\_\_\_ encoding scheme in digital transmission, we represent 0 by zero voltage level and represent 1 by any positive voltage level.

- Polar
- AMI
- Bipolar
- **Unipolar**

## Question No 14

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\_\_\_\_\_ is the formula for finding number of bits sent per level.

- Log L
- Log2
- Log2\*2
- **Log2 L**

## Question No 15

Which of the following is an example of ITU-T modem standards:?

- T-series**
- X-series
- N-series
- V-series

## Question No 16

The maximum data rate in the uploading direction is still\_\_\_\_\_.

- 26.6 Kbps
- 33.6 Kbps**
- 36.6 Kbps
- 46.6 Kbps

## Question No 16

In\_\_\_\_\_ each station is forced to send a frame only at beginning of time slot

- Pure ALOHA
- Slotted ALOHA**
- Fragmented ALOHA
- None of the given

## Question 17

In\_\_\_\_\_ each station sends a frame whenever it has a frame to send

- Pure ALOHA**
- Slotted ALOHA
- Fragmented ALOHA
- None of the given

## Question No 18

The data rate of a T-1 line is\_\_\_\_\_.

- 1.544 Gbps
- 2.544 Mbps
- 1.544 Kbps
- 1.544 Mbps**

## Question 19

Circuit switched networks have\_\_\_\_\_ efficiency but\_\_\_\_\_ delay compared to the packet switched networks.

- high, minimal

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- high, high
- low, minimal

## **Question No 20**

Category 5 UTP cable is used for data transmission of upto\_\_\_\_\_.

- 100 Mbps
- 200 Mbps
- 250 Mbps
- 400 Mbps

## **Question No 21**

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

- Conical
- Barrel
- Circular
- Rectangular

## **Question No 22**

SONET stands for \_\_\_\_\_

- synchronous optical network
- synchronous operational network
- stream optical network
- shell operational network

## **Question No 23**

Fast Ethernet has a data rate of \_\_\_\_\_ Mbps.

- 10
- 100
- 1000
- 10,000

## **Question No 24**

The VLF and LF bands use \_\_\_\_\_ propagation for communications.

- Ground
- Sky
- Line of sight
- Space

## **Question No 25**

In Bit-oriented framing, \_\_\_\_\_ bit pattern is used as a flag to define beginning and end of a frame.

- $(1111111)_2$
- $(1000001)_2$
- Single
- $(0111110)_2$

## **Question No 26**

Traditionally, \_\_\_\_\_ protocols have been defined for the data-link layer to deal with flow and error control.

- Two
- Three

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- Five
- **Four**

Question No 27

Multiplexing is the set of techniques that allows simultaneous TX of multiple signals across \_\_\_\_\_ data link

- **Single**
- Multi
- Single and Multi
- none of the given

Question No 28

Need for Addressing makes Asynchronous TDM inefficient for bit or byte \_\_\_\_\_.

- Interleaving
- **Addition**
- Substraction
- None of the given

Question No 29

\_\_\_\_\_ takes data from one high speed line and breaks it into portions.

- ▶ **Multiplexing**
- ▶ Inverse multiplexing
- ▶ Inverse subtraction
- ▶ Inverse addition

Question No 30

For Carrier Sense Multiple Access/Collision Detection (CSMA/CD) we need a restriction on the \_\_\_\_\_

- Collision Size
- Signal Size
- **Frame Size**
- Station Size

Question No 31:

In Y-MODEM Multiple files can be sent simultaneously

- ▶ **True**
- ▶ False

Question No 32

At the data-link layer, \_\_\_\_\_ protocol is designed to handle both flow and error control, but communication is one frame at a time.

- Simple
- Go-Back-N
- Selective-Repeat
- **Stop-and-Wait**

Question No 33

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The PPP protocol uses \_\_\_\_\_, which is responsible for establishing, maintaining, configuring, and terminating links.

- Internet Protocol Control Protocol (IPCP)
- Challenge Handshake Authentication Protocol (CHAP)
- Network Control Protocols (NCPs)
- **Link Control Protocol (LCP)**

Question No 34

Aloha, CSMA/CD and CSMA/CA are part of \_\_\_\_\_.

Controlled Access protocol

Channelization protocol

Mutual access protocol

**Random Access protocol**

Question No 35

Which of the following is an example of ITU-T modem standards:

- **T-series**
- X-series
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- V-series

Question No 36

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- 26.6 Kbps
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- 46.6 Kbps

Question No 37

Category 5 UTP cable is used for data transmission of upto \_\_\_\_\_.

- **100 Mbps**
- 200 Mbps
- 250 Mbps
- 400 Mbps

Question No 38

ALOHA the earliest random access method was developed in early \_\_\_\_\_.

1950s

1960s

1980s

**1970s**

Question No 39

In block coding, we divide our message into blocks, each of \_\_\_\_\_ bits; and add \_\_\_\_\_ redundant bits to each block to make the codewords of \_\_\_\_\_ bit length.

m, r, c

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n, k, r

n, r, k

k, r, n

## Question No 40

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

- Conical
- **Barrel**
- Circular
- Rectangular

## Question No 41

MAC stand for \_\_\_\_\_

- Media Access Controller
- Main Access Control
- Mandatory Access Control
- **Media Access Control**

## Question No 42

Which one of the following is a Random-Access protocol

- CDMA/CA
- **ALOHA OR CSMA/CD Both are correct**
- CDMA/CD
- TDMA

## Question No 43

The VLF and LF bands use \_\_\_\_\_ propagation for communications.

- Ground
- **Sky**
- Line of sight
- Space

## Question No 44

Multiplexing is the set of techniques that allows simultaneous TX of multiple signals across \_\_\_\_\_ data link

- **Single**
- Multi
- Single and Multi
- none of the given

## Question No 45

Need for Addressing makes Asynchronous TDM inefficient for bit or byte \_\_\_\_\_.

- Interleaving
- **Addition**
- Subtraction
- None of the given

## Question No 46

CDMA stands for \_\_\_\_\_

- Carrier Data Multiple Access
- **Code Division Multiple Access**
- Code Data Multiple Access
- Carrier Division Multiple Access

## Question No 47



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In Ethernet, the source address field in the MAC frame is the \_\_\_\_\_ address.

- Sender's logical
- Previous station's physical
- Next destination's physical
- Sender's service port

Question No 48

\_\_\_\_\_ takes data from one high speed line and breaks it into portions.

- Multiplexing
- Inverse multiplexing
- Inverse subtraction
- Inverse addition

Question No 49

A traditional telephone line has a bandwidth of \_\_\_\_\_.

- ▶ 2000Hz
- ▶ 4000 Hz
- ▶ 2000 MHz
- ▶ 4000 MHz

Question No 50

To detect five errors, the Hamming distance between each pair of codewords should be at least \_\_\_\_\_.

- 4
- 5
- 11
- 6

Question No 51

For FEC using XOR operation, we divide a packet into N chunks, and need to send \_\_\_\_\_ chunks to the receiver side.

- N
- 2N
- $(N+1)/2$
- N+1

Question No 52

If the ASCII character H is sent and the character I is received, what type of error is this?

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

Question No 53

At the CRC generator, \_\_\_\_\_ added to the data unit after the division process

- 0s are
- 1s are
- The polynomial
- The CRC remainder is

Question No 54

Error control in the data link layer is based on \_\_\_\_\_

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- ▶ automatic repeat request
- ▶ automatic repeat acknowledgment
- ▶ automatic send acknowledgment

Question No 55

In a technique called, compounding High-and-Low Resolution Packets, the low-resolution section in the first packet is \_\_\_\_\_.

- ▶ CRC Not Sure
- ▶ Parity code
- ▶ Empty

Question No 56

In line discipline the initiator first transmits a frame called an \_\_\_\_\_

- Enquiry
- Acknowledgment
- NAK
- Reques

Question No 57

Primary device uses \_\_\_\_\_ to receive transmission from the secondary devices.

- ACK Not Sure
- ENQ
- POLL

Question N0 58

Token Bus has no commercial application in data communications

- True
- False

Question No 59

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 59

The BNC-T connector is a T-shaped device with \_\_\_\_\_ ports

- Three
- Two
- Four
- Five

Question No 60

Each station in the Token Ring regenerates the frame.

- True
- False

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## Question No 61

Repeater works on \_\_\_\_\_ layer.

- Data Link
- Physical
- **Network**
- Application

## Question No 62

Trunks are transmission media such as \_\_\_\_\_ that handle the telephone to the nearest end office.

- Satellite links
- **Twisted-pair & Fiber-optic**
- Twisted-pair
- Fiber-optic

## Question No 63

At the data-link layer, \_\_\_\_\_ protocol is designed to handle both flow and error control, but communication is one frame at a time.

- Simple
- Go-Back-N
- Selective-Repeat
- **Stop-and-Wait**

## Question No 64

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- Challenge Handshake Authentication Protocol (CHAP)
- Network Control Protocols (NCPs)
- **Link Control Protocol (LCP)**

## Question No 65

The original Ethernet technology with the data rate of 10 Mbps is called \_\_\_\_\_?

- **Standard Ethernet**
- Fast Ethernet
- Gigabit Ethernet
- 10 Gigabit Ethernet

## Question No 66

Normally the value of  $K_{max}$  in pure ALOHA is \_\_\_\_\_.

- 10
- **15**
- 25
- 30

## Question No 67

Which one of the following is not a Channelization Protocol?

- **CSMA**
- CDMA

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➤ FDMA

➤ TDMA

Question No 68

In CSMA/CA \_\_\_\_\_ is the amount of time divided into slots.

➤ **Contention Window**

➤ Interframe Window

➤ Fragmented Window

➤ Collided Window

Question No 69

Aloha, CSMA/CD and CSMA/CA are part of \_\_\_\_\_.

Controlled Access protocol

Channelization protocol

Mutual access protocol

**Random Access protocol**

Question No 70

ALOHA the earliest random access method was developed in early \_\_\_\_\_.

• 1950s

• 1960s

• 1980s

• **1970s**

Question No 71

For FEC using XOR operation, we divide a packet into N chunks, and need to send \_\_\_\_\_ chunks to the receiver side.

N

2N

(N+1)/2

**N+1**

Question No 71

The \_\_\_\_\_ layer is responsible for the creation and delivery of a frame to another node, along the link.

➤ Application

➤ Network

➤ Physical

➤ **Data-link**

Question No 72

IP addresses are the identifiers at the \_\_\_\_\_ layer.

Physical

Data-link

Transport

➤ **Network**

Question No 73

Each host or each interface of a router is assigned \_\_\_\_\_ address.

➤ A multicast

➤ A broadcast

➤ Both multicast or broadcast

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- **A unicast**

Question No 74

The ARP protocol is one of the auxiliary protocols defined in the \_\_\_\_\_ layer, which maps an IP address to a logical-link address.

- Physical
- Data-link
- Transport
- Network**

Question No 75

Following are the examples of connecting devices EXCEPT \_\_\_\_\_.

- Link Layer Switches
- Hub
- Routers
- **Wire**

Question No 76

\_\_\_\_\_ eliminates collision and connect heterogeneous devices.

- Hub
- Repeater
- Bridge
- **Switch**

Question No 77

\_\_\_\_\_ creates looping problem in learning switch.

- Unicast
- Multicast
- None of the Given
- **Broadcast**

Question No 78

The term FTTC stands for \_\_\_\_\_.

Front Technology Terminal Connection

Free Technology Transmission Connection

Fiber Terminal Transmission Commission

**Fiber to the Curb**

Question No 79

Multiple-access Protocol is divided into \_\_\_\_\_.

- Two categories
- Four categories
- Five categories
- Three categories**

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Question No 80

The original Ethernet technology with the data rate of 10 Mbps is called \_\_\_\_\_ Ethernet.

- Fast
- Gigabit
- 10 Gigabit
- Standard**

Question No 81

CSMA/CD is not used in \_\_\_\_\_ Ethernet.

- Standard
- Fast
- Gigabit
- 10 Gigabit**

Question No 82

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

- Phase
- Wavelength
- Bandwidth
- Voltage**

Question No 83

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

- None of the choices are correct
- No-transition
- ESS-transition**
- BSS-transition

Question No 84

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

- BSSs
- ESSs
- None of the given

**Aps**

Question No 89

A property of a signal where it is being received by receiver after reflection from different intermediate objects (Building, iron polls, walls) is called \_\_\_\_\_

- Attenuation**
- Interference
- Error
- Multipath Propagation

Question No 90

\_\_\_\_\_ medium is used in wireless LANs for transportation of data.

Copper pair cable

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Optical fiber cable

Coaxial cable

**Air**

Question No 91

In context of control signaling network, what does STP stand for \_\_\_\_\_

- Shielded twisted pair
- Signaling transmission point
- Signal transportation procedure
- Signal transfer point**

Question No 92

POP stands for \_\_\_\_\_

- Presentation of points
- Points of points
- Points of packets
- Points of Presence**

Question No 93

What does LATA stand for \_\_\_\_\_

- Local Area Transmission Arena
- Local-Access Transit Access
- Local-Areas Transport Areas
- **Local-Access Transport Areas**

Question No 94

Unipolar encoding scheme is not supported over the medium having \_\_\_\_\_.

- The capability of handling DC component
- Low speed
- High speed
- **No capability of handling DC component**

Question No 95

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

- ▶ Phase
  - ▶ Wavelength
  - ▶ Bandwidth
  - ▶ **Voltage**

Question No 96

Transmission Control Protocol is a(n) \_\_\_\_\_ layer protocol

- Application
- Network
- Session
- **Transport**

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Question No 97

In \_\_\_\_\_ each station is allotted a time slot during which it can send data

- NDMA
- CDMA
- **TDMA**
- FDMA

Question No 98

In \_\_\_\_\_ collisions are avoided by deferring transmission even if the channel is idle

- The Slotted Frame
- The Deployment Frame
- The Contention Window
- **The Interframe Space**

Question No 99

In the context of Ethernet Implementations, maximum medium length of 10 Base-F was \_\_\_\_\_ meters.

- 500
- 1000
- **2000**
- 150

Question No 100

Collisions in CSMA/CA are avoided through \_\_\_\_\_

- The Interframe Space
- The Contention Window
- Acknowledgments
- **All of the given**

Question No 101

The extra bits added with the original data for error detection/correction are called

- ▶ Process IDs
- ▶ **Redundant bits**
- ▶ Fault bits
- ▶ Port Number

Question No 102

\_\_\_\_\_ are used to exchange session management and control between connected devices.

- ▶ **U-frames**
- ▶ N-frames
- ▶ S-frames
- ▶ I-frames

Question No 103

The message 1110 sent by source is received by a destination as 1011. This is \_\_\_\_\_ types of err.

- ▶ **Hamming**



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- ▶ Single-Bit
- ▶ Uni-Bit
- ▶ **Brust**

Question No 104

In Block code we divide our message into blocks of K bits called as \_\_\_\_\_

- ▶ Password
- ▶ Code word
- ▶ **Data words**
- ▶ Cross words

Question No 105

DLC in Data Link Layer stand for \_\_\_\_\_

- ▶ Demand Link coordination
- ▶ Data Line Code
- ▶ **Data Link Control**
- ▶ Divide Line Communication

Question No 106

\_\_\_\_\_ is responsible for governing node to node Communication.

- ▶ **Data Link Layer**
- ▶ Session Layer
- ▶ Presentation Layer
- ▶ Application Layer

Question No 107

Go-Back-N protocol is one of the \_\_\_\_\_ Layer protocol, which is used to control the flow of data during the transmission

- ▶ Presentation
- ▶ Network
- ▶ **Data Link**
- ▶ Physical

Question No 108

Error correction is more \_\_\_\_\_ than the error detection.

- ▶ Useless
- ▶ Informal
- ▶ **Difficult**
- ▶ Easy

Question No 109

Stop-and-Wait protocol is used for \_\_\_\_\_

- ▶ Flow control Only
- ▶ Neither flow nor error control

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- ▶ Both flow and error control

Question No 110

\_\_\_\_\_ is not a function of Data Link control

- ▶ Framing
- ▶ Error Control
- ▶ Flow Control
- ▶ Modulation

Question No 111

Payload filed of the PPP frame is of variables Size and it can carry maximum Data up to \_\_\_\_\_

- ▶ 10 Bytes
- ▶ 500 Bytes
- ▶ 100 Bytes
- ▶ 1500 Bytes

Question No 112

In Block Coding Scheme, number of Code word is always \_\_\_\_\_ data wods.

- ▶ Equal to
- ▶ same as
- ▶ Greater Then
- ▶ Less then

Question No 113

High-Level Data Link Control(HDLC) defines \_\_types of frames to deal with the transfer modes.

- ▶ Three
- ▶ Two
- ▶ Four
- ▶ Six

Question No 114

Congestion control is a feature of \_\_\_\_\_ layer(S)

- ▶ Transport
- ▶ All Mentioned
- ▶ Network
- ▶ Data Link

Question No 115

Error detection and correction are the services provided by \_\_\_\_\_ Layer.

- ▶ Physical Layer
- ▶ Application Layer
- ▶ Data Link Layer

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- ▶ Session Layer

Question No 116

IN Linear Block codes,\_\_\_of two valid code words creates another valid code word.

- ▶ AND
- ▶ OR
- ▶ XOR
- ▶ NOR

Question No 117

Stop-and-Wait protocol is used for\_\_\_\_\_

- ▶ Bothe flow and error control
- ▶ Error control Only
- ▶ Flow control Only
- ▶ Nether flow nor error control

Question No 118

CHAP is an Authentication protocol, which uses\_\_\_\_\_process to authenticate user information.

- ▶ Four way
- ▶ Three Way
- ▶ Two Way
- ▶ Five way

Question No 119

Data link layer is divided into\_\_\_\_\_sub Layer

- ▶ Seven
- ▶ Two
- ▶ Five
- ▶ Three

Question No 120

If we need to correct a single error in an 8-bit data unit, we need to consider\_\_\_\_\_possible error location.

- ▶ 16
- ▶ 2
- ▶ 8
- ▶ 4

Question No 121

\_\_\_\_\_is not a function of Data Link Control.

- ▶ Framing
- ▶ Modulation
- ▶ Flow control
- ▶ Error control

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Question No 122

The \_\_\_\_\_ is the number of single elements sent per unit time.

- ▶ **Single rate**
- ▶ Period
- ▶ Bit rate
- ▶ Data rate

Question No 123

In ASK, both \_\_\_\_\_ and \_\_\_\_\_ remain constant.

- ▶ Amplitude, Frequency
- ▶ Amplitude, phase
- ▶ **Frequency, Phase**
- ▶ Amplitude, Samples

Question No 124

In an analog hierarchy to carry voice channels, a group can carry \_\_\_\_\_ voice channels.

- ▶ 60
- ▶ 12
- ▶ **20**
- ▶ 10

Question No 125

Which of the following sublayer resolves the contention for the shared media.

- ▶ **MAC**
- ▶ LLC
- ▶ Physical
- ▶ None of the given.

Question No 126

What is the period of a Sine wave having frequency of 5 Hz?

- ▶ **0.2**
- ▶ 0.1
- ▶ 0.5
- ▶ 0.3

Question No 127

In CRC there is no error if the remainder at the receiver is \_\_\_\_\_.

- ▶ Equal to the remainder at the sender
- ▶ **Zero**
- ▶ Nonzero
- ▶ The quotient at the sender

Question No 128

Analog To Analog Conversion Methods include \_\_\_\_\_.

- ▶ **AM, PM and FM**
- ▶ AM, FSK and PM

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- ▶ AM, PM and QAM
- ▶ None of the given

Question No 129

Signals travel through fiber optic cable are in the form of

- \_\_\_\_\_.
- ▶ **Light**
  - ▶ Bits
  - ▶ Electromagnetic
  - ▶ Bytes

Question No 130

If the Hamming distance between sent and received code word is \_\_\_\_\_, then it shows that received data is corrupted.

- ▶ **≠ 0**
- ▶ = 0
- ▶ ≠ 1
- ▶ = 1

Question No 131

The flag in PPP is a byte that needs to be \_\_\_\_\_ whenever it appears in the data section of the frame.

- ▶ Duplicated
- ▶ Blocked
- ▶ Cleaned
- ▶ **Escaped**

Question No 132

\_\_\_\_\_ is normally used where speed is priority in datatransfer.

- ▶ **Serial data transmission**
- ▶ Hybrid data transmission
- ▶ Parallel data transmission
- ▶ Both parallel and serial data transmission

Question No 133

Baud rate is greater than or equal to the bit rate.

- ▶ True
- ▶ **False**

Question No 134

\_\_\_\_\_ is an Authentication Protocol, which is used by the PPP to authenticate passwords.

- ▶ CHAP
- ▶ **PAP**
- ▶ LCP
- ▶ ICMP

Question No 135

In Pure ALOHA, the vulnerable time is \_\_\_\_\_ the frame transmission time.

- ▶ Same as

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- ▶ **Two times**
- ▶ Three times
- ▶ Four times

Question No 136

A broadcast signal is received by the orbiting satellites which rebroadcasts\_.

- ▶ to the resender
- ▶ to the sender
- ▶ to the atmosphere
- ▶ **none of the given**

Question No 137

In TCP/IP protocol suite, the process of adding header at each layer on sending side is known as\_\_\_\_\_.

- ▶ Encapsulation
- ▶ De-encapsulation
- ▶ **Packetizing**
- ▶ Framing

Question No 138

By using \_\_\_\_\_ system, change in the file contents during file transmission can be avoided.

- ▶ Routing
- ▶ Flow Control
- ▶ **Error Detection and Correction**
- ▶ Congestion Control

Question No 139

Which of the following consist of just one redundant bit per data unit?

- ▶ Two dimensional Parity check.
- ▶ CRC
- ▶ **Simple Parity Check**
- ▶ Checksum

Question No 140

If duration of noise is decreased during a transmission over noisy channel, fixed data rate of the channel will cause \_\_\_\_\_ number of bits being impacted by the noise.

- ▶ Constant
- ▶ **More**
- ▶ Less
- ▶ Zero

Question No 141

The extra bits added with the original data for error detection/correction are called\_\_\_\_\_.

- ▶ Fault bits
- ▶ Port numbers
- ▶ **Redundant bits**
- ▶ Process IDs

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Question No 142

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 143

The inversion of the level represents a 1 bit in\_\_\_\_\_encoding

- ▶ **NRZ-I**
- ▶ NRZ-L
- ▶ RZ
- ▶ Manchester

Question No 144

The term\_\_\_\_\_means that only one bit of a given data unit is changed from 1 to 0 or from 0 to 1.

- ▶ Packet Error
- ▶ Burst Error
- ▶ **Single Bit Error**
- ▶ Character Error

Question No 145

A sine wave is defined by\_\_\_\_\_characteristics.

- ▶ 2
- ▶ **3**
- ▶ 4
- ▶ 5

Question No 146

Quadrature Amplitude Modulation (QAM) is the combination of \_\_\_\_\_and\_\_\_\_\_.

- ▶ **FSK, PSK**
- ▶ PSK, FSK
- ▶ ASK, PSK
- ▶ ASK, FSK

Question No 147

If we need to correct a single error in an 8-bit data unit, we need to consider\_\_\_\_\_possible error locations.

- ▶ **16**
- ▶ 2
- ▶ 4
- ▶ 8

Question No 148

To calculate the data rate for noisy channel\_\_\_\_\_formula is used.

- ▶ **Shannon**
- ▶ Nyquist

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- ▶ Propagation
- ▶ Greedy

Question No 149

GO-BACK-N protocol is one of the \_\_\_\_\_ layer protocols, which is used to control the flow of data during the transmission.

- ▶ Physical
- ▶ **Network**
- ▶ Presentation
- ▶ Data link

Question No 150

A \_\_\_\_\_ modem is used to connect two DTEs directly.

- ▶ **NULL**
- ▶ Cable
- ▶ DSL
- ▶ None of the given

Question No 151

Time division multiplexing is used in \_\_\_\_\_ systems.

- ▶ Analog
- ▶ Hybrid
- ▶ **Digital**
- ▶ Automated

Question No 152

In OSI model headers are added at layer \_\_\_\_\_.

- ▶ 1,2,3 only
- ▶ 6,5,7 only
- ▶ 5,4,3 only

▶

**6,5,4,3,2 only**

Question No 153

Line Configuration refers to the way two or more devices attach to a \_\_\_\_\_.

- ▶ Path
- ▶ Circuit
- ▶ **Link**
- ▶ Router

Question No 154

A sine wave is \_\_\_\_\_.

- ▶ periodic and discrete
- ▶ aperiodic and discrete
- ▶ **periodic and continuous**
- ▶ aperiodic and continuous

Question No 155

The logical connection between the peer layers is \_\_\_\_\_ connection.

- ▶ Physical
- ▶ Direct
- ▶ Indirect



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▶ **Tengible**

Question No 155

What is the frequency of a sine wave if it completes one cycle in 2 seconds?



**0.5**

0.6

0.3

0.2

Question No 156

In Synchronous TDM, Time slots are not same in number as input devices.

▶ True

▶ **False**

Question No 157

\_\_\_\_\_ category of coaxial cable is used for thin Ethernet.

▶ **RG-58**

▶ RG-59

▶ RG-1

▶ RG-47

Question No 157

Radio wave transmission utilizes \_\_\_\_\_ different types of propagation.

▶ Two

▶ Three

▶ Four

▶ **Five**

Question No 158

BSC supports \_\_\_\_\_ transmission using \_\_\_\_\_ flow control.

▶ Full-duplex, Stop and wait ARQ

▶ Half-duplex, Selective reject ARQ

▶ Full-duplex, Selective reject ARQ

▶ **Half-duplex, Stop and wait ARQ**

Question No 159

In selective-reject ARQ, only the specific damaged or lost frame is \_\_\_\_\_

▶ **Retransmitted**

▶ Forwarded

▶ Selected

▶ Rejected

Question No 160

Error detection and correction are the services provided by \_\_\_\_\_ layer.

▶ **Data link layer**

▶ Application layer

▶ Physical layer

▶ Session layer

Question No 161

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

- ▶ **DTE, DCE**
- ▶ DCE, DTE
- ▶ DTE, DTE
- ▶ DCE, DCE

Question No 162

Analog refers to something that is continuous in \_\_\_\_\_.

- ▶ **Time**
- ▶ Space
- ▶ Frequency
- ▶ None of the given

Question No 163

Time domain shows changes in \_\_\_\_\_.

- ▶ time w.r.t signal amplitude
- ▶ **signal amplitude w.r.t time**
- ▶ time
- ▶ All of the given

Question No 164

Mr. Asif while sitting in Lahore is talking with his friend in Dubai through Skype is an example of \_\_\_\_\_.

- ▶ Local Area Network
- ▶ **Metropolitan Area Network**
- ▶ Wide Area Network
- ▶ Home Based Network

Question No 165

Which level of the TCP/IP reference model routes data/information across a network channel?

- ▶ Application Layer
- ▶ Data Link Layer
- ▶ Transport Layer
- ▶ **Network Layer**

Question No 166

There are \_\_\_\_\_ types of serial transmission.

- ▶ 3
- ▶ 4
- ▶ **2**
- ▶ None of the given

Question No 167

Latency is made of \_\_\_\_\_ components.

- ▶ **Two**
- ▶ Three
- ▶ Four
- ▶ Five

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Question No 168

Like 10 Base 5, 10 Base 2 is a \_\_\_\_\_ topology LAN.

- ▶ Ring
- ▶ Mesh
- ▶ Star
- ▶ **Bus**

Question No 169

\_\_\_\_\_ is the rate of change with respect to time.

- a. Voltage
- b. Time
- c. Frequency
- d. **Amplitude**

Question No 169

Two or more computers connected so that they can communicate with each other and share information is called a \_\_\_\_\_.

- ▶ satellite
- ▶ protocol
- ▶ broadcast
- ▶ **network**

Question No 170

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

- ▶ Checksum
- ▶ Cyclic Redundancy Check (CRC)
- ▶ **Longitudinal Red Check (LRC)**
- ▶ Vertical Redundancy Check (VRC)

Question No 171

Central Hub in a Tree is an \_\_\_\_\_.

- ▶ **Active hub**
- ▶ passive hub

Question No 172

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

- ▶ true
- ▶ **false**

Question No 172

\_\_\_\_\_ is an Authentication Protocol, which uses two-step process to authenticate user information?

- ▶ CHAP
- ▶ LCP
- ▶ **PAP**
- ▶ ICMP

Question No 173

CHAP is an Authentication Protocol, which uses \_\_\_\_\_ process to

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authenticate user information.

- ▶ Two-way
- ▶ **Three-way**
- ▶ Four-way
- ▶ Five-way

Question No 174

No matter whether the link is dedicated or broadcast, data link control (DLC) layer provides services between \_\_\_\_\_.

- ▶ Virtual LANs
- ▶ **Two adjacent nodes**
- ▶ Ethernet links
- ▶ Source and destination PCs

Question No 175

Encoding digital data into digital signals is called \_\_\_\_\_.

- ▶ Analog-to-Digital Conversion
- ▶ **Digital-to-Digital Conversion**
- ▶ Digital-to-Analog Conversion
- ▶ None of the given

Question No 176

\_\_\_\_\_ encoding is almost obsolete today

- ▶ Bipolar
- ▶ **Unipolar**
- ▶ Polar
- ▶ None of the given

Question No 177

The Internet is \_\_\_\_\_.

- ▶ software for sending e-mail around the world
- ▶ a government-owned agency that links computers
- ▶ **a global network of computers networks**
- ▶ a specialised form of local area network

Question No 178

PSK is susceptible to the noise degradation.

- ▶ True
- ▶ **False**

Question No 179

Low pass channel has \_\_\_\_\_ bandwidth between two stations.

- ▶ **Dedicated**
- ▶ Shared
- ▶ Multiplexed
- ▶ Infinite

Question No 180

In ASK, Noise usually affects the \_\_\_\_\_.

- ▶ **Amplitude**
- ▶ Phase

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- ▶ Sample
- ▶ Frequency
- ▶ Infinite

Question No 181

The flag in PPP is a byte that needs to be \_\_\_\_\_ whenever it appears in the data section of the frame.

- ▶ Duplicated
- ▶ Blocked
- ▶ Cleaned
- ▶ **Escaped**

Question No 182

Which of the following is not a characteristic of a sine wave?

- ▶ Amplitude
- ▶ **Segmentation**
- ▶ Phase
- ▶ Frequency
- ▶ Infinite

Question No 183

In statistical time division multiplexing, number of slots in frame are less than \_\_\_\_\_.

- ▶ Output data rate
- ▶ **Input lines**
- ▶ Input frequency
- ▶ Multiplexed T lines
- ▶ Infinite

Question No 184

If a digital signal has "L" number of levels, \_\_\_\_\_ is the number of bits required to represent each level.

- ▶ **Log L**
- ▶ Log Base 2 L
- ▶ L Square
- ▶  $\log(2 \cdot L)$
- ▶ Infinite

Question No 185

\_\_\_\_\_ is responsible for governing node to node communication.

- ▶ Application Layer
- ▶ Session Layer
- ▶ **Data Link layer**
- ▶ Presentation Layer
- ▶ Infinite

Question No 186

The original Ethernet technology with the data rate of 10 Mbps is called \_\_\_\_\_?

- ▶ **Standard Ethernet**
- ▶ Fast Ethernet
- ▶ Gigabit Ethernet

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- ▶ 10 Gigabit Ethernet
- ▶ Infinite

Question No 187

What is the period of a Sine wave having frequency of 2 Hz?

- 0.2
- 0.1
- 0.5**
- 0.3

Question No 188

In line discipline after the data transmission, the sending system finishes with an \_\_\_\_\_

- ▶ **EOT**
- ▶ EKT
- ▶ ENT
- ▶ ESP
- ▶ Infinite

Question No 189

\_\_\_\_\_ are used for Multi cas communication, such as radio and Television.

- ▶ Microwaves
- ▶ **Radio Waves**
- ▶ Light waves
- ▶ Infrared Waves

Question No 190

POTS stand for \_\_\_\_\_?

- ▶ **Plain Old Telephone System**
- ▶ Plain Old Telephone Services
- ▶ Plain Old Time Sharing
- ▶ Plain Old Telephone Set

Question No 191

In \_\_\_\_\_, a station monitors the medium after it sends a frame to see if the transmission was successful.

- ▶ CSMA
- ▶ None of Given
- ▶ **CSMA/CA**
- ▶ CSMA/CD

Question No 192

DSL stand For

- ▶ **Digital Subscribe Line**
- ▶ Data Subscribe Line
- ▶ Data Switched Line
- ▶ Digital Switched Line

Question No 193

In Ethernet frame, both destination and sender addresses are of length \_\_\_\_\_.

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- ▶ 2 byte
- ▶ 4 byte
- ▶ 6 byte
- ▶ 5 byte

Question No 193

Data Link layer provides services to the \_\_\_\_\_ layer.

- ▶ Network
- ▶ Transport
- ▶ Application
- ▶ Session

Question No 194

\_\_\_\_\_ is/are un-reliable protocol(s).

- ▶ TCP
- ▶ IP and TCP
- ▶ IP and UDP
- ▶ UDP

Question No 195

When we represent the data in CDMA, if a station is idle then it sends \_\_\_\_\_.

- ▶ -1
- ▶ 1
- ▶ Infinity
- ▶ 0

Question No 196

In the context of Ethernet address, the source address is always a \_\_\_\_\_ address.

- ▶ Multicast
- ▶ Broadcast
- ▶ Unicast
- ▶ 128 Broad Cast

Question No 197

\_\_\_\_\_ is the process of converting digital data to digital signals.

- ▶ Line Coding
- ▶ Multicast
- ▶ Broadcast
- ▶ Unicast

Question No 198

In even parity check code, the value of syndrome is \_\_\_\_\_ if the number of 1s is even.

- ▶ 4
- ▶ 0
- ▶ 1
- ▶ 2

Question No 199

In \_\_\_\_\_ each band is reserved for a specific station, and it belongs to the station all the time.

- ▶ FDMA

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- ▶ TDMA
- ▶ CSMA
- ▶ CDMA

Question No 200

MAC address is of\_\_\_\_\_.

- ▶ 48 bits or 64 bits
- ▶ 24 bits
- ▶ 36 bits
- ▶ 42 bits

Question No 201

Checksum is an error-detection technique that can be applied to a message of\_\_\_\_\_ length.

- ▶ Exactly 8
- ▶ Exactly 4
- ▶ Exactly 32
- ▶ Any

Question No 202

A personal computer or workstation on an Ethernet network must have\_\_\_\_\_ card.

- ▶ None of the Given
- ▶ TDI
- ▶ PCI
- ▶ NCI

Question No 203

One of the most common protocols for point-to-point access is\_\_\_\_\_.

- ▶ PPP
- ▶ IP
- ▶ UDP
- ▶ TCP

Question No 204

In order to find Hamming distance between two pair of words,\_\_\_\_\_logical operation is used.

- ▶ NAND
- ▶ XOR
- ▶ AND
- ▶ OR

Question No 205

In order to resolve link layer address of the next node, the first generated ARP request is always in\_\_\_\_\_mode.

- ▶ Multicast
- ▶ Unicast
- ▶ Multiplex
- ▶ Broadcast

Question No 206

\_\_\_\_\_transmission technology (based on Ethernet) provides a data rate of 1 billion bits per



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second.

- ▶ Gigabit Ethernet
- ▶ Standard Ethernet
- ▶ 10BASE-T Ethernet
- ▶ Fast Ethernet

Question No 207

The message 1110 sent by a source is received by a destination as 1011. This is \_\_\_\_\_ type of error.

- ▶ Hamming
- ▶ Single-Bit
- ▶ Uni-Bit
- ▶ Burst

Question No 208

a3:34:45:11:92:F1 is a \_\_\_\_\_ link layer address.

- ▶ Unicast OR Data Both are correct
- ▶ Broadcast
- ▶ Multicast
- ▶ Multiplexer

Question No 209

In which controlled-access method all data exchanges must be made through primary device even when the ultimate destination is a secondary device?

- ▶ Port Forwarding
- ▶ Reservation
- ▶ Polling
- ▶ Token Passing

Question No 210

\_\_\_\_\_ was used as the medium in 10 Base-T.

- ▶ Twisted Cable
- ▶ Thick Coaxial Cable
- ▶ Thin Coaxial Cable
- ▶ Two Mode Fiber Cable

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