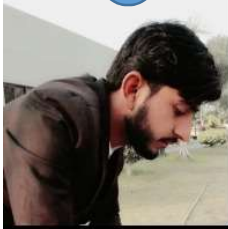


CS601-Data Communication

From: UPDATED BOOK

Solved MCQS for Final terms papers

Solved by JUNAID MALIK and Team



AL-Junaid Institute

Contact no: 03041659294



LMS Handling

Subject Enrollment

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Website Link
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Final project CS619

- 1) SRS
(Software Requirement's
Specification)
- 2) DD
(Design Document)
- 3) Test phase + viva
- 4) Viva preparation
- 5) Final Deliverable

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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.

- $(11111111)_2$
- $(10000001)_2$
- Single
- $(01111110)_2$

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
- N-series
- V-series

Question No 36

The maximum data rate in the uploading direction is still _____.

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

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 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**

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

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

2. _____ are used to exchange session management and control between connected devices.

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

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

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

4. In Block code we divide our message into blocks of K bits called as _____

- ▶ Password
- ▶ Code word

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- ▶ Data words
 - ▶ Cross words
5. DLC in Data Link Layer stand for _____
- ▶ Demand Link coordination
 - ▶ Data Line Code
 - ▶ Data Link Control
 - ▶ Divide Line Communication
6. _____ is responsible for governing node to node Communication.
- ▶ Data Link Layer
 - ▶ Session Layer
 - ▶ Presentation Layer
 - ▶ Application Layer
7. 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
8. Error correction is more _____ than the error detection.
- ▶ Useless
 - ▶ Informal
 - ▶ Difficult
 - ▶ Easy
9. Stop-and-Wait protocol is used for _____
- ▶ Flow control Only
 - ▶ Neither flow nor error control
 - ▶ Both flow and error control
10. _____ is not a function of Data Link control
- ▶ Framing
 - ▶ Error Control
 - ▶ Flow Control
 - ▶ Modulation
11. Payload field of the PPP frame is of variable Size and it can carry maximum Data up to _____
- ▶ 10 Bytes
 - ▶ 500 Bytes
 - ▶ 100 Bytes
 - ▶ 1500 Bytes
12. In Block Coding Scheme, number of Code word is always _____ data words.
- ▶ Equal to
 - ▶ same as
 - ▶ Greater Than
 - ▶ Less than

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13. High-Level Data Link Control(HDLC) defines ___ types of frames to deal with the transfer modes.

- ▶ Three
- ▶ Two
- ▶ Four
- ▶ Six

14. Congestion control is a feature of _____ layer(S)

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

15. Error detection and correction are the services provided by _____ Layer.

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

16. IN Linear Block codes, ___ of two valid code words creates another valid code word.

- ▶ AND
- ▶ OR
- ▶ XOR
- ▶ NOR

17. Stop-and-Wait protocol is used for _____

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

18. CHAP is an Authentication protocol, which uses _____ process to authenticate user information.

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

19. Data link layer is divided into _____ sub Layer

- ▶ Seven
- ▶ Two
- ▶ Five
- ▶ Three

20. 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

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21. _____ is not a function of Data Link Control.

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

22. The _____ is the number of single elements sent per unit time.

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

23. In ASK, both _____ and _____ remain constant.

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

24. In an analog hierarchy to carry voice channels, a group can carry _____ voice channels.

- ▶ 60
- ▶ 12
- ▶ **20**
- ▶ 10

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

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

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

- ▶ **0.2**
- ▶ 0.1
- ▶ 0.5
- ▶ 0.3

27. 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

28. Analog To Analog Conversion Methods include _____.

- ▶ **AM, PM and FM**
- ▶ AM, FSK and PM
- ▶ AM, PM and QAM
- ▶ None of the given

29. Signals travel through fiber optic cable are in the form of _____.

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▶ **Light**

- ▶ Bits
- ▶ Electromagnetic
- ▶ Bytes

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

- ▶ **≠ 0**
- ▶ = 0
- ▶ ≠ 1
- ▶ = 1

31. 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**

32. _____ is normally used where speed is priority in data transfer.

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

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

- ▶ True
- ▶ **False**

34. _____ is an Authentication Protocol, which is used by the PPP to authenticate passwords.

- ▶ CHAP
- ▶ **PAP**
- ▶ LCP
- ▶ ICMP

35. In Pure ALOHA, the vulnerable time is _____ the frame transmission time.

- ▶ Same as
- ▶ **Two times**
- ▶ Three times
- ▶ Four times

36. A broadcast signal is received by the orbiting satellites which broadcasts_.

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

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

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- ▶ Encapsulation
 - ▶ De-encapsulation
 - ▶ **Packetizing**
 - ▶ Framing
38. By using _____ system, change in the file contents during file transmission can be avoided.
- ▶ Routing
 - ▶ Flow Control
 - ▶ **Error Detection and Correction**
 - ▶ Congestion Control
39. Which of the following consist of just one redundant bit per data unit?
- ▶ Two dimensional Parity check.
 - ▶ CRC
 - ▶ **Simple Parity Check**
 - ▶ Checksum
40. 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
41. The extra bits added with the original data for error detection/correction are called _____.
- ▶ Fault bits
 - ▶ Port numbers
 - ▶ **Redundant bits**
 - ▶ Process IDs
42. Flow control is needed to prevent _____.
- ▶ Bit errors
 - ▶ Overflow of the sender buffer
 - ▶ **Overflow of the receiver buffer**
 - ▶ Collision between sender and receiver
43. The inversion of the level represents a 1 bit in _____ encoding
- ▶ **NRZ-I**
 - ▶ NRZ-L
 - ▶ RZ
 - ▶ Manchester
44. 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

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45. A sine wave is defined by _____ characteristics.

- ▶ 2
- ▶ **3**
- ▶ 4
- ▶ 5

46. Quadrature Amplitude Modulation (QAM) is the combination of _____ and _____.

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

47. 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

48. To calculate the data rate for noisy channel _____ formula is used.

- ▶ **Shannon**
- ▶ Nyquist
- ▶ Propagation
- ▶ Greedy

49. 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

50. A _____ modem is used to connect two DTEs directly.

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

51. Time division multiplexing is used in _____ systems.

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

52. In OSI model headers are added at layer _____.

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

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▶ 6,5,4,3,2 only

53. Line Configuration refers to the way two or more devices attach to a _____.

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

54. A sine wave is _____.

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

55. The logical connection between the peer layers is _____ connection.

- ▶ Physical
- ▶ Direct
- ▶ Indirect
- ▶ **Tangible**

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

- ▶ **0.5**
- ▶ 0.6
- ▶ 0.3
- ▶ 0.2

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

- ▶ True
- ▶ **False**

58. _____ category of coaxial cable is used for thin Ethernet.

- ▶ **RG-58**
- ▶ RG-59
- ▶ RG-1
- ▶ RG-47

59. Radio wave transmission utilizes _____ different types of propagation.

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

60. 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**

61. In selective-reject ARQ, only the specific damaged or lost frames _____.

- ▶ **Retransmitted**
- ▶ Forwarded
- ▶ Selected

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- ▶ Rejected
62. Error detection and correction are the services provided by _____ layer.
- ▶ **Data link layer**
 - ▶ Application layer
 - ▶ Physical layer
 - ▶ Session layer
63. The _____ generates the data and passes it along with any control information to a _____.
- ▶ **DTE, DCE**
 - ▶ DCE, DTE
 - ▶ DTE, DTE
 - ▶ DCE, DCE
64. Analog refers to something that is continuous in _____.
- ▶ **Time**
 - ▶ Space
 - ▶ Frequency
 - ▶ None of the given
65. Time domain shows changes in _____.
- ▶ time w.r.t signal amplitude
 - ▶ **signal amplitude w.r.t time**
 - ▶ time
 - ▶ All of the given
66. 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
67. Which level of the TCP/IP reference model routes data/information across a network channel?
- ▶ Application Layer
 - ▶ Data Link Layer
 - ▶ Transport Layer
 - ▶ **Network Layer**
68. There are _____ types of serial transmission.
- 3
 - 4
 - **2**
 - None of the given
69. Latency is made of _____ components.
- ▶ **Two**
 - ▶ Three

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- ▶ Four
 - ▶ Five
70. Like 10 Base 5, 10 Base 2 is a _____ topology LAN.
- ▶ Ring
 - ▶ Mesh
 - ▶ Star
 - ▶ **Bus**
71. _____ is the rate of change with respect to time.
- a. Voltage
 - b. Time
 - c. Frequency
 - d. **Amplitude**
72. Two or more computers connected so that they can communicate with each other and share information is called a _____.
- ▶ satellite
 - ▶ protocol
 - ▶ broadcast
 - ▶ **network**
73. 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)
74. Central Hub in a Tree is an _____.
- ▶ **Active hub**
 - ▶ passive hub
75. Time domain plot show changes in signal phase with respect to time.
- ▶ true
 - ▶ **false**
76. _____ is an Authentication Protocol, which uses two-step process to authenticate user information.
- ▶ CHAP
 - ▶ LCP
 - ▶ **PAP**
 - ▶ ICMP
77. CHAP is an Authentication Protocol, which uses _____ process to authenticate user information.
- ▶ Two-way
 - ▶ **Three-way**
 - ▶ Four-way
 - ▶ Five-way

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78. 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
79. Encoding digital data into digital signals is called _____ .
- ▶ Analog-to-Digital Conversion
 - ▶ **Digital-to-Digital Conversion**
 - ▶ Digital-to-Analog Conversion
 - ▶ None of the given
80. _____ encoding is almost obsolete today
- ▶ Bipolar
 - ▶ **Unipolar**
 - ▶ Polar
 - ▶ None of the given
81. 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
82. PSK is susceptible to the noise degradation.
- ▶ True
 - ▶ **False**
83. Low pass channel has _____ bandwidth between two stations.
- ▶ **Dedicated**
 - ▶ Shared
 - ▶ Multiplexed
 - ▶ Infinite
84. In ASK, Noise usually affects the _____ .
- ▶ **Amplitude**
 - ▶ Phase
 - ▶ Sample
 - ▶ Frequency
85. 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**
86. Which of the following is not a characteristic of a sine wave?
- ▶ Amplitude
 - ▶ **Segmentation**
 - ▶ Phase

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- ▶ Frequency
87. In statistical time division multiplexing, number of slots in frame are less than ____.
- ▶ Output data rate
- ▶ **Input lines**
- ▶ Input frequency
- ▶ Multiplexed T lines
88. 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*L)
89. _____ is responsible for governing node to node communication.
- ▶ Application Layer
- ▶ Session Layer
- ▶ **Data Link layer**
- ▶ Presentation Layer
90. The original Ethernet technology with the data rate of 10 Mbps is called _____ ?
- ▶ **Standard Ethernet**
- ▶ Fast Ethernet
- ▶ Gigabit Ethernet
- ▶ 10 Gigabit Ethernet
91. What is the period of a Sine wave having frequency of 2 Hz?
- ▶ 0.2
- ▶ 0.1
- ▶ **0.5**
- ▶ 0.3
92. In line discipline after the data transmission, the sending system finishes with an _____
- ▶ **EOT**
- ▶ EKT
- ▶ ENT
- ▶ ESP
93. _____ are used for Multi cast communication, such as radio and Television.
- ▶ Microwaves
- ▶ **Radio Waves**
- ▶ Light waves
- ▶ Infrared Waves