CS601 quiz 2 2022

Topic 124 to 204

ORANGE MONEY TEAM

Instruction:

It is to inform you that the Quiz No 2 of CS601 - Data Communications will be held on 8th to 10th March, 2022.

The quiz will consist of M.C.Q based questions from the content covered in Week/Lecture 9 to Week /Lecture 14 OR Topic 124 to 204.

1. **In _____ each station is allocated a time slot during which it can send data**

   TDMA…….confirm

2. **Data link layer receives services from the _ layer**

   Physical…..confirm

3. **The message 110 sent by a source is received by a destination as 111. This is _____ type of error.**

   Single-bit

4. **In order to resolve link layer address of the next mode, the first generated ARP request is always in _____ mode**

   Unicast

5. **High level data link control defines _ types of frames to deal with the transfer modes**

Three …..confirm

6. **In _____, each station is forced to send only at the beginning of the time slot.**

Slotted ALOHA

7. **If we increase the data rate of a transmission over noisy channel, fixed noise duration will cause ___ number of bits being impacted by the noise.**

Less

8. **If we decrease the data rate of a transmission over noisy channel, fixed noise duration will cause ___ number of bits being impacted by the noise.**

More

9. **Payload field of the PPP frame is of variable size and it can carry maximum data up to _____.**

1500 bytes…confrim

10. **PAP and CHAP are used by __ as Authentication Protocols.**

PPP……confirm

11. **In each character protocol each character of frame is encoded using ____ coding system .**

Bit-oreinted

12. **IN MAC, when nodes use a multi-point or broadcast link, we need a _____ to coordinate access to the link.**

Multiple-access protocol/……confirm

13. **The orginal Etherrnet technology with the data rate of 10 MBps is called_____?**

Standard Ethernet….confirm

14. **_____ uses fiber-optic cable**

10base-F….confirm

15. One of the most common protocols for point-to-point access is _____.

PPP……confirm

16. _____ is an Authentication Protocol, which uses two-step process to authenticate user information.

PAP……confirm

17. 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

More…..confirm

18. For carrier sense Multiple Access/Collision Detection (CSMA/CD), we need a restriction on the

frame size….confirm

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

Both flow and error control……confirm

20. In____ type of error, two or more bits in the data unit will be changed

Burst….confirm

21. In hexadecimal notation of Ethernet address, each byte is separated by _____ symbol.

Colon….confirm

22. In a linear block code, the _____ of any two valid codewords creates another valid codeword.

XOR…..confirm

23. In the _____ method, the stations in a network are organized in a logical ring.

Token-passing….confirm

24. Which one of the following is not a Channelization Protocol?

CSMA……confirm

25. In order to find the location of two errors in an eight bit stream, we have to see _____ different combinations.

28….confirm

26. In ethernet frame, both destination and sender addresses are of length

6 byte….confirm

27. If we need to correct a single error in an 8-bit data unit, we need to consider _____ possible error locations

16…..confirm

28. In _____ each station sends a frame whenever it has a frame to send.

Slotted ALoHA…..confirm

29. _____ is the process of converting digital data to digital signals.

Line coding…..confirm

30. In case of higher data rate, the number of impacted bits will be _____.

Higher

31. In _ protocol, the sender sends one frame at a time and wants for an acknowledgment before sending the next one.

Stop-and-wait

32. In block coding we divide our message into blocks of K bits called as _____.

Data words….confirm

33. CDMA stands for _____.

Code division Multiple Access…..confirm

34. ____ is not a function of data link control.

Modulation…..confirm

35. CHAP is an Authentication Protocol, which uses _____ process to authenticate user information.

Three-way……confirm from net

36. In the context of Ethernet address, the source address is always a _____ address.

Unicast…confirm

37. In the context of Ethernet address, the destination address is always a _____ address.

Unicast, multicast, broadcast….confirm

38. _____ transmission technology (based on Ethernet) provides a data rate of 1 billion bits per second.

Gigabit Ethernet….confirm

39. Fast Ethernet has a data rate of ____ Mbps.

100…..confirm

40. In random access method, when two or more than two nodes transmit at the same time when

All the nodes in collision survives

41. Data link layer is divided into _____ sub layers

Two…..confirm

42. If the harming distance between sent and received code word is _____ then it shows that received data is corrupted.

(Is not equal to)0….confirm

43. In order to find hamming distance between two pair of words, _____ logical operation is used.

XOR….confirm

44. Ethernet address is of ___ bytes

6….confirm

45. In _____ a station monitors the medium after it sends a frame to see if the transmission was successful.

CSMA/CD……confirm

46. For carrier sense Multiple Access/Collision Detection (CSMA/CD), we need a restriction on the _____.

Frame size…confirm

47. Ethernet address is of _____ bytes

6

48. What was the main drawback in the aloha random access method

All options

49. In telephone, network POP stands for

Point-of presence

50. Possession of token gives the station the right to _____.

Send the data

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

Previous station physical

52. _____ uses thin coaxial cable.

10 base 5

53. MAC stands for ____

Media access control

54. In the context of Ethernet implementations maximum medium length of 10 base-F

2000

55. Transmission technology based on Ethernet provides a data rate of 1 billion bits per second.

Standard Ethernet

56. Works with topologies in which one device is designated as a primary station and the other devices are secondary stations

Polling

57. MAC address is of _____.

48 bits

58. The type of aloha which improves the efficiency of pure aloha is.

Slotted aloha

59. A personal computer or workstation on an Ethernet network must have _____ card

NIC….confirm

60. Which one of the following is a Random access protocol?

ALOHA

61. In which controlled access method all data exchange must be made through primary device even when the ultimate destination is a secondary device

Polling

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

FDMA

63. In pure aloha the vulnerable time is ___ the frame transmission time

Two times

64. DSl stands for _____.

Digital subscriber line

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

Standard ethernet

66. Which of the following is a correct controlled access method

All options

67. When we represent the data in CDMA if a station Is idle then it sends

0….confirm

68. In telephone, network POP stands for _____.

Point of presence

69. What was the main drawback in the aloha random access method

All options

70. _transmission technology based on Ethernet provide a data rrate of 1 billion bits per second

Gigabit Ethernet

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

Polling

72. In telephone, network POP stands for

Point of presence

73. Mac address is of _____

48 bits

74. In _____ collision are avoided by deferring transmission even if the channel is idle

The interframe space…..confrim

75. POTS stand for _?

Plain old telephone system……confirm

76. In Ethernet frame both destination and sender addresses are of length

6 byte

77. In _____ each band is reserved for a specific station and it belongs to the station all the time

FDMA

78. The original Ethernet technology with a data rate of 10MBps is called

Standard Ethernet

79. The _ method has the highest chance of collision because two or more stations may find the line idle and send their frames immediately

1 persistent method

80. IN allocated a time slot during which it can send data each station is

TDMA

81. In which controlled access method al data exchanges must be made through primary device even when the ultimate destination is a secondary device

Polling

82. CDMA stands for

Code data multiply access

83. Works with topologies in which one device is designated as a primary station and the other device are secondary stations

Polling

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

Previous station's physical address

1. VCI address is _____ address in virtual circuit approach.

1. Private
2. Variable
3. Local
4. **Global**

2. Traditionally MANs have been implemented using one of the 2 technologies, Circuit Switching and Packet Switching

1. true
2. **false**

3. In the _____ method, the stations in a network are orgamized in a logical ring.

1. **Token-passing**
2. Polling
3. Reservation
4. None of the given

4. Like 10 Base 5, 10 Base 2 is a _____ topology LAN.

1. Ring
2. Mesh
3. Star
4. **Bus**

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

    1. Same as
    2. Three times
    3. **Two times**
    4. Four times

6. **The transmission medium that carries the message is referred to as the _____.**

    1. send and receive device
    2. **communication channel**
    3. protocol
    4. gateways

7. **Analog signals are refers to be _____**

    1. **Continuous**
    2. Discrete

8. **There are _____ types of serial transmission.**

    1. 3
    2. 4
    3. **2**
    4. None of the given

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

    1. **Shannon**
    2. Nyquist
    3. Propagation
    4. Greedy

10. There are three types of Hubs that exist. Which of the following options correctly describes these three?

1. Passive, dormant, special
2. Active , dormant , passive
3. Passive, Active, Turbo
4. **Passive, Active, Intelligent**

11. _____ is the rate of change with respect to time.

1. Voltage
2. Time
3. Frequency
4. **Amplitude**

12. To control and manage the transfer of data, a protocol called Point to Point Protocol (PPP) is used at the _____ layer.

1. Physical
2. **Network**
3. Presentation
4. Data link

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

1. **0.5**
2. 0.6
3. 0.3
4. 0.2

14. _____ relatively measures the strength of two signals.

1. Signal rate
2. Bit rate
3. Decibel
4. **Pulse Rate**

15. Central Hub in a Tree is an _____.

1. **Active hub**
2. passive hub

16. At the CRC generator, _____ added to the data unit before the divisional process.

1. **0s are**
2. 1s are
3. a polynomial is
4. a CRC remainder is

17. A broadcast signal is received by the orbiting satellites which rebroadcasts _____.

1. to the resender
2. to the sender
3. to the atmosphere
4. **none of the given**

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

1. Duplicated
2. Blocked
3. Cleaned
4. **Escaped**

19. In _____, a signal is directed straight from antenna to antenna.

1. **Line of sight propagation**
2. Ground propagation
3. Space propagation
4. Tropospheric propagation

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

1. Two dimentional Parity check.
2. CRC
3. **Simple Parity Check**
4. Checksum

21. The term _____means that only one bit of a given data unit is changed from 1 to 0 or from 0 to 1.

1. Packet Error
2. Burst Error
3. **Single Bit Error**
4. Character Error

22. Flow control is needed to prevent _____.

1. Bit errors
2. Overflow of the sender buffer
3. **Overflow of the receiver buffer**
4. Collision between sender and receiver

23. Transmission Control Protocol is a(n) _____ layer protocol.

1. Transport
2. Application
3. Session
4. **Network**

24. A fiber -optic cable transmit signals in the form of _____.

1. **Light**
2. Sound
3. Wave
4. None of the given

25. Possession of TOKEN gives the station the right to _____.

1. Modify the data
2. **Send the data**
3. Delete the data
4. Receive the data

26. The inversion of the level at 1 bit is called as _____.

1. NRZ-L
2. **NRZ-I**
3. RZ
4. None of the given.

27. What was the main draw back in ALOHA Random-Access method?

1. Redundancy in Data
2. Potential Collision
3. Inconsistent Data rate
4. **All of the given**

28. Data is transmitted using light through a _____ cable.

1. twisted pair
2. **fiber-optic**
3. coaxial
4. microwave

29. In _____, each station sends a frame whenever it has a frame to send.

1. **Slotted ALOHA**
2. Fragmented ALOHA
3. Pure ALOHA
4. None of the given

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

1. 1,2,3 only

2. 6,5,7 only
3. 5,4,3 only
4. 6,5,4,3,2 only

31. Is there any difference between Data communication and telecommunication are network?

1. Yes
2. No

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

1. CHAP
2. PAP
3. LCP
4. ICMP

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

1. Application Layer
2. Data Link Layer
3. Transport Layer
4. Network Layer

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

1. Amplitude, Frequency
2. Amplitude, phase
3. Frequency, Phase
4. Amplitude, Samples

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

1. Checksum
2. Cyclic Redundancy Check (CRC)
3. Longitudinal Red Check (LRC)

4. Vertical Redundancy Check (VRC)

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

1. True
2. **False**

37. The most common type of connector used by coaxial cable is _____.

1. **BNC**
2. RJ-45
3. RJ-11
4. RJ-57

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

1. 1
2. 2
3. **0**
4. 4

39. What is the period of a Sine wave having frequency of 10 Hz?

1. 0.2
2. **0.1**
3. 0.5
4. 0.3

40. In _____, both peak amplitude and frequency remains constant as the phase changes.

1. **PSK**
2. QAM
3. Both PSK & QAM
4. None of the given

41. There are _____types of guided media.

1. 2

2. 3
3. 4
4. 5

42. _____ is responsible for governing node to node communication.

1. Application Layer
2. Session Layer
3. Data Link layer
4. Presentation Layer

43. TROPOSHERE is the layer of atmosphere above the troposhere but below space

1. True
2. False

44. Terminal, microprocessor, computer, printer or any other device that generates or consumes digital data is known as _____

1. DCE
2. DTE
3. DCE & DTE
4. None of the given

45. Normally the value of Kmax in pure ALOHA is _____.

1. 25
2. 10
3. 15
4. 30

46. Sampling means measuring _____ of signal at equal intervals

1. Amplitudes
2. Frequencies
3. Phases

4. None of the given

47. A sine wave is _____.

1. periodic and discrete
2. aperiodic and discrete
3. **periodic and continuous**
4. aperiodic and continuous

48. The inversion of the level represents a 1 bit in _____ encoding

1. **NRZ-I**
2. NRZ-L
3. RZ
4. Manchester

49. To make sure that source does not overwhelm destination by sending data faster than it can be handled and processed is called?

1. Addressing & Routing
2. Exchange Management
3. **Flow Control**
4. Recovery

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

1. true
2. **false**

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

1. **Polling**
2. Reservation
3. Token Passing
4. Port Forwarding

52. If a digital signal has "L" number of levels. _____ is the number of bits required to represent each level.

1. **Log L**
2. Log Base 2 L
3. L Square
4. Log(2*L)

53. _____ category of coaxial cable is used for Cable TV.

1. RG-58
2. RG-59
3. **RG-11**
4. RG-47

54. The level of signal is always positive in NRZ encoding.

1. true
2. **false**

55. Radio is an example of _____ signal conversion.

1. **Analog to analog**
2. Analog to digital
3. Digital to Digital
4. Digital to analog

56. Analog To Analog Conversion Methods include _____.

1. **AM, PM and FM**
2. AM, FSK and PM
3. AM, PM and QAM
4. None of the given

57. The original Ethernet technology with the data rate of 10 Mbps is called _____?

1. **Standard Ethernet**

2. Fast Ethernet
3. Gigabit Ethernet
4. 10 Gigabit Ethernet

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

1. Amplitude
2. **Segmentation**
3. Phase
4. Frequency

59. By using _____ system, change in the file contents during file transmission can be avoided.

1. Routing
2. Flow Control
3. **Error Detection and Correction**
4. Congestion Control

60. In order to find the location of two errors in an eight bit stream, we have to see _____ different combinations.

1. **28**
2. 16
3. 8
4. 4

61. In CSMA/CA, _____ is the amount of time divided into slots.

1. Interframe Window
2. **Contention Window**
3. Fragmented Window
4. Collided Window

62. _____ is used in the Stop-and-Wait protocol to overcome the issue of duplication.

1. Frame sequencing

2. Acknowledgement numbering
3. Counter and Timer reset
4. **Frame sequencing and Acknowledgement numbering**

63. Which one of the following is a correct-access method?

1. Polling
2. Token Passing
3. **Reservation**
4. All of the given

64. In the encoding where positive to negative transition is one and vice versa is zero.

1. Manchester
2. Differential Manchester
3. All of the given
4. **None of given**

65. If the window size is 63 in go-back N ARQ then what is the range of sequence number?

1. **0 to 63**
2. 0 to 64
3. 1 to 63
4. 1 to 64

66. Following characteristics fully describe _____,
Amplitude
Period/Frequency
Phase

1. **Sine Waves**
2. Digital Signals
3. Aperiodic Signals
4. None of the given

67. Digitizing an Analog Signal is called _____.

1. Analog-to-Digital Conversion
2. Digital-to-Digital Conversion
3. Digital-to-Analog Conversion
4. None of the given

68. At the CRC checker, _____ means that the data unit is damaged.

1. A string of 0s
2. A string of 1s
3. A string of alternating 1s and 0s
4. A nonzero remainder

69. Which one of the following is a Random-Access protocol?

1. TDMA
2. CDMA/CD
3. ALOHA
4. CDMA/CA....all option are correct

70. Which one of the following is a COntrolled-Access protocol?

Reservation, Polling, Token passing....confirm

71. Which one of the following is a Channelization protocol?

FDMA,TDMA,CDMA....confirm

72. Human voice is example of _____ signal.

1. Digital
2. Analog
3. Discrete
4. None of the given

73. In statistical time division multiplexing, number of slots in frame are less than _____.

1. Output data rate
2. **Input lines**
3. Input frequency
4. Multiplexed T lines

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

1. **'NULL**
2. Cable
3. DSL
4. None of the given

75. If we need to correct a single error in an 8-bit data unit, we need to consider _____ possible error locations.

1. **16**
2. 2
3. 4
4. 8

76. Asynchronous TDM is efficient only when the size of the time slot is kept relatively _____.

1. **Large**
2. Small
3. Medium
4. Zero

77. The _____ protocol uses both flow and error control.

1. TCP/IP
2. HDLC
3. ICMP
4. **Stop-and-Wait**

78. In _____, each station is allocated a time slot during which it can send data.

1. CDMA
2. NDMA
3. **TDMA**
4. FDMA

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

1. Fault bits
2. Port numbers
3. **Redundant bits**
4. Process IDs

80. _____ is correct formula to determine the total number of ports needed for one system connected in a mesh network.

1. N+1
2. N-1
3. **N(N+1)**
4. NxN

81. _____ is sometimes called the bit rate.

1. signal rate
2. modulation rate
3. **Data rate**
4. pulse rate

82. Collisions in CSMA/CA are avoided through _____.

1. The Interframe Space
2. The Contention Window
3. Acknowledgements
4. **All of the given**

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

1. **RG-58**

2. RG-59
3. RG-1
4. RG-47

84. Which one is not the function of data link layer?

1. **Line discipline**
2. Flow control
3. Error control
4. Network control

85. Session layer is responsible for _____.

1. Reassembly of data
2. **Maintaining the connection**

86. _____ mode of serial transmission guarantees fixed rate of data.

1. Synchronous
2. Asynchronous
3. **Isochronous**
4. Metasochronous

87. Data Link layer provides services to the _____ layer.

1. Application
2. Transport
3. **Network**
4. Session

88. The _____ is the number of signal elements sent per unit time.

1. Data rate
2. **Signal rate**
3. Bit rate
4. Period

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

1. Physical
2. **Direct**
3. Indirect
4. Tangible

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

1. **0.2**
2. 0.1
3. 0.5
4. 0.3

91. A sine wave is defined by _____ characteristics.

1. 2
2. **3**
3. 4
4. 5

92. 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.

1. Constant
2. **More**
3. Less
4. Zero

93. S-frames in High-Level Data Link Control (HDLC) are only used to transfer _____ information.

1. User data
2. **Control**
3. Redundant
4. Original

94. The _____ generates the data and passes it along with any control information to a _____.

1. **DTE, DCE**
2. DCE, DTE
3. DTE, DTE
4. DCE, DCE

95. The type of ALOHA which improves the efficiency of Pure ALOHA is _____.

1. **Slotted ALOHA**
2. Upper ALOHA
3. Integrated ALOHA
4. Lower ALOHA

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

1. 0.2
2. 0.1
3. **0.5**
4. 0.3

97. WDM stands for _____.

1. Wideband De-Modulation
2. Worst Data Manipulation
3. **Wavelength Division Multiplexing**
4. None of the given

98. Latency is made of _____ components.

1. **Two**
2. Three
3. Four
4. Five

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

1. Physical
2. Direct
3. Indirect

4. Tengible

100. In line discipline after the data transmission, the sending system finishes with an _____ frame.

1. EOT
2. EKT
3. ENT
4. ESP

101. _____ of a signal is the collection of all the component frequencies it contains.

1. Time domain
2. Frequency domain
3. Frequency spectrum
4. None of the given

102. RZ stands for _____.

1. Return to Z
2. Retire a Zero
3. Return ot Zero
4. None of the given

103. In _____ each band is reserved for a specific ststion, and it belongs to the station all the time.

1. FDMA
2. CDMA
3. TDMA
4. CSMA

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

1. Encapulation
2. De-encapulation
3. Packetizing
4. Framing

105. In Block coding we divide our message into blocks of k bits called as _____.

1. Code words
2. **Data words**
3. Passwords
4. Cross words

106. In circuit switched networks we have low efficiency but minimal _____.

1. Delay
2. **Speed**
3. Throughput
4. Errors

107. Error correction is more _____ than the error detection.

1. Easy
2. Useless
3. Informal
4. **Difficult**

108. AM signal requires _____ the BW of original signal

1. **Twice**
2. Half
3. Same
4. Three Times

109. Asynchronous transmission is _____.

1. **Slow**
2. Fast
3. Costly
4. None effective

110. The Internet is _____.

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

111. Time division multiplexing is used in _____ systems.

1. Analog
2. Hybrid
3. **Digital**
4. Automated

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

1. Two
2. Three
3. Four
4. **Five**

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

1. Exactly 4
2. Exactly 8
3. Exactly 32
4. **Any**

114. At the Application layer, object/information is in the form of _____.

1. Message
2. **Packet**
3. Segment
4. Frame

115. POST stand for _____?

1. Plain Old Telephone Set
2. Plain Old Time Sharing

3. Plain Old Telephone System
4. Plain Old Telephone Service

116. Which of the following statement is correct?

1. Digital signals are less prone to Noise
2. Digital signals are highly prone to Noise
3. Analog Signals are less prone to Noise
4. Digital signals are not affected by Noise

117. In selective-reject ARQ, only the specific damaged or lost frame is _____.

1. Retransmitted
2. Forwarded
3. Selected
4. Rejected

118. In ASK correct formula for calculating the bandwidth ia as _____.

1. B=(1+d)S
2. B=(1*d)S
3. B=(d-1)S
4. B=(d-5)S

119. Encoding digital data into digital signals is called _____.

1. Analog-to-Digital Conversion
2. Digital-to-Digital Conversion
3. Digital-to-Analog Conversion
4. None of the given

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

1. ≠ 0
2. = 0
3. ≠ 1

4. = 1

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

1. **FSK, PSK**
2. PSK, FSK
3. ASK, PSK
4. ASK, FSK

122. PSK is susceptible to the noise degradation.

1. True
2. **False**

123. _____ works with topologies in which one drvice is designated as a primary station and the other devices are secondary stations.

1. Reservation
2. **Polling**
3. Token
4. None of the given

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

1. Virtual LANs
2. **Two adjacent nodes**
3. Ethernet links
4. Source and destination PCs

125. CDMA stands for _____.

1. Carrier Division Multiple Access
2. Carrier Data Multiple Access
3. Code Data Multiple Access
4. **Code Division Multiple Access**

126. If users must take turns using the link, then it is called Spatial Sharing.

1. true
2. **false**

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

1. Physical
2. **Network**
3. Presentation
4. Data link

128. In _____ a dedicated communication path is established between two stations through the nodes of the network

1. **Circuit switching**
2. Packet switching

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

1. **Light**
2. Bits
3. Electromagnetic
4. Bytes

130. _____ contains a repeater.

1. **Active hub**
2. Passive hub

131. In frequency shift keying, _____ remain(s) constant.

1. Frequency
2. Amplitude
3. Both Amplitude and Phase
4. **Both Phase and Frequency**

132. _____ is/are un-reliable protocol(s).

1. IP and TCP
2. UDP
3. **IP and UDP**
4. TCP

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

1. Framing
2. **Modulation**
3. Error Control
4. Flow Control

134. Each computer on the Internet has a unique numeric address called a(n) _____.

1. domain address
2. protocol address
3. **IP address**
4. Web address

135. dB is negative if a signal is _____.

1. **Attenuated**
2. Distorted
3. Amplified
4. Noisy

136. We can have _____ different groups with a 4 bit block.

1. 4
2. **8**
3. 16
4. 32

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

1. Path
2. Circuit
3. **Link**

4. Router

138. Error detection and correction are the services provided by _____ layer.

1. Data link layer
2. Application layer
3. Physical layer
4. Session layer

139. Which of the following sublyer resolves the contention for the shared media.

1. MAC
2. LLC
3. Physical
4. None of the given.

140. There are _____ basic categories of multiplexing.

1. 2
2. 3
3. 7
4. 5

141. Low pass channel has _____ bandwidth between two stations.

1. Dedicated
2. Shared
3. Multiplexed
4. Infinite

142. BSC supports _____ transmission using _____ flow control.

1. Full-duplex, Stop and wait ARQ
2. Half-duplex, Selective reject ARQ
3. Full-duplex, Selective reject ARQ
4. Half-duplex, Stop and wait ARQ

143. Quantization is a method of assigning _____ values in a specific range to sampled instances.

1. Negative
2. Positive
3. Binary
4. **Integral**

144. _____ encoding is almost obsolete today

1. Bipolar
2. **Unipolar**
3. Polar
4. None of the given

145. YMODEM has _____ Byte of data unit.

1. **1024**
2. 256
3. 128
4. 512

146. Like Data link layer, _____ is also responsible for Flow control.

1. **Transport Layer**
2. Session Layer

147. In CRC there is no error if the remainder at the receiver is _____.

1. Equal to the remainder at the sender
2. **Zero**
3. Nonzero
4. The quotient at the sender

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

1. **Serial data transmission**
2. Hybrid data transmission

3. Parallel data transmission
4. Both parallel and serial data transmission

149. In Block coding scheme, number of code words is always _____ data words.

1. Less than
2. **Equal to**
3. Greater than
4. Same as

150. A portion of the path that carries TX between a given pair of devices is known as _____.

1. Direct Point
2. Bridge
3. **Channel**
4. Access Point

151. What is the Bandwidth of a periodic signal if it is decomposed into 4 sine waves with frequencies 200, 400, 600 and 800?

1. 100
2. 500
3. 300
4. **600**

152. _____ is the process of converting digital data to digital signals.

1. CSMA/CD
2. CSMA/CA
3. **Line coding**
4. Segmentation

153. _____ transmission technology (based on Ethernet) provides a data rate of 1 billion bits per second.

1. Fast Ethernet

2. Standard Ethernet
3. Gigabit Ethernet
4. 10BASE-T Ethernet

154. Congestion Control is a feature of layer(s).

1. Data Link
2. Network
3. Transport
4. All mentioned

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

1. Same as
2. Two times
3. Three times
4. Four times

156. What is the Bandwidth of a periodic signal if it is decomposed into 4 sine waves with frequencies 300, 600, 900 and 1200?

1. 100
2. 900
3. 300
4. 600

157. _____ signal can take infinite levels of intensity over time.

1. Digital
2. Discrete
3. Analog
4. Logical

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

1. Local Area Network

2. Metropolitan Area Network
3. Wide Area Network
4. Home Based Network

159. Which layer is concerned with the syntax and semantics of info exchange between two systems?

1. Physical
2. Application
3. Session
4. Presentation

160. Time domain shows changes in _____.

1. time w.r.t signal amplitude
2. signal amplitude w.r.t time
3. time
4. All of the given

161. In ASK, Noise usually affects the _____.

1. Amplitude
2. Phase
3. Sample
4. Frequency

162. In analog transmission, the base signal is called the_____.

1. Carrier Signal
2. Analog signal
3. Digital signal
4. Modulated signal

163. Which of the following is most affected by noise?

1. PSK
2. ASK
3. FSK
4. QAM

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

1. True
2. **False**

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

1. Duplicated
2. Blocked
3. Cleaned
4. **Escaped**

166. Guard bands are used in _____ multiplexing technique, to avoid overlapping of frequency bands assigned to each user.

1. PDM
2. CSMA
3. TDM
4. **FDM**

167. DLC in Data Link Layer stands for _____.

1. Divide Line Communication
2. Data Line Code
3. **Data Link Control**
4. Demand Link Coordination

168. In Pulse Code Modulation (PCM), the sampling is dependent on _____.

1. Time
2. Amplitude
3. Frequency
4. **Signal Rate**

169. Digital signals are refered to be _____.

1. Continuous

2. Discrete
3. All of the given
4. None of the given

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

1. satellite
2. protocol
3. broadcast
4. network

171. Which error detection method uses one's complement arithmetic.

1. Cyclic Redundancy Check (CRC)
2. Longitudinal Red Check (LRC)
3. Checksum
4. Simple Parity Check

172. WDM stands for _____.

1. Wave Division Multiplexing
2. Wrong Division Multiplexing
3. Well Division Multiplexing
4. West Division Multiplexing

173. Analog refers to something that is continuous in _____.

1. Time
2. Space
3. Frequency
4. None of the given

174. What is the frequency of a sine wave if it completes one cycle in 5 seconds?

1. 0.5
2. 0.6

3. 0.3
4. 0.2

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

1. 60
2. 12
3. 20
4. 10

176. STP is more expensive than UTP and is less susceptible to noise.

1. True
2. False

177. Switch is a network device which operates on the _____ layer of the TCP/IP protocol suite.

1. Application
2. Transport
3. Presentation
4. Data link

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

1. I-frames
2. U-frames
3. S-frames
4. N-frames

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

1. Burst
2. Single-Bit
3. Uni-Bit
4. Hamming

1. In Go-Back-N ARQ, if 5 is the number of bits for the sequence number, then the maximum size of the receive window must be _____.

A) 1

B) 15

C) 16

D) 31

View Answer:
Answer: **Option A**
Solution:

2. In Go-Back-N ARQ, if frames 4, 5, and 6 are received successfully, the receiver may send an ACK _____ to the sender.

A) 6

B) 7

C) 5

D) any of the above

View Answer:
Answer: **Option B**
Solution:

3. The Stop-And-Wait ARQ, Go-Back-N ARQ, and the Selective Repeat ARQ are for _____ channels.

A) noiseless

B) noisy

C) either (a) or (b)

D) neither (a) nor (b)

View Answer:
Answer: **Option B**
Solution:

4. The _____Protocol, adds a simple error control mechanism to the _____Protocol.

A) Selective Repeat ARQ; Go-Back-N ARQ

B) Go-Back-N ARQ; Stop-and-Wait

C) Stop-and-Wait ARQ; Stop-and-Wait

D) none of the above

View Answer:
Answer: **Option C**

Solution:

5. In PPP, the _____ is responsible for establishing, maintaining, configuring, and terminating links.

A) PAP

B) CHAP

C) LCP

D) NCP

View Answer:
Answer: **Option C**
Solution:

6. HDLC is an acronym for _____.

A) Half-duplex digital link combination

B) Host double-level circuit

C) High-duplex line communication

D) High-level data link control

View Answer:
Answer: **Option D**
Solution:

7. In Selective Repeat ARQ, if 5 is the number of bits for the sequence number, then the maximum size of the receive window must be _____.

A) 1

B) 15

C) 16

D) 31

View Answer:
Answer: **Option C**
Solution:

8. In Go-Back-N ARQ, if 5 is the number of bits for the sequence number, then the maximum size of the send window must be _____.

A) 1

B) 15

C) 16

D) 31

View Answer:
Answer: **Option D**
Solution:

9. In Stop-and-Wait ARQ, the acknowledgment number always announces in _____ arithmetic the sequence number of the next frame expected.

A) modulo-m

B) modulo-2

C) modulo-4

D) none of the above

View Answer:
Answer: **Option B**
Solution:

10. In Selective Repeat ARQ, if 5 is the number of bits for the sequence number, then the maximum size of the send window must be _____.

A) 1

B) 15

C) 16

D) 31

View Answer:
Answer: **Option C**
Solution:

11. _____ control refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgment.

A) Flow

B) Error

C) Transmission

D) none of the above

View Answer:
Answer: **Option A**
Solution:

12. In the Go-Back-N Protocol, if the size of the sequence number field is 8, the sequence numbers are in _____ arithmetic,

A) modulo-256

B) modulo- 8

C) modulo-2

D) none of the above

View Answer:
Answer: **Option A**
Solution:

13. _____ control refers to methods of error detection and correction.

A) Flow

B) Error

C) Transmission

D) none of the above

View Answer:
Answer: **Option B**
Solution:

14. In a Go-Back-N ARQ, if the window size is 63, what is the range of sequence numbers?

A) 1 to 63

B) 1 to 64

C) 0 to 63

D) 0 to 64

View Answer:
Answer: **Option C**
Solution:

15. Both Go-Back-N and Selective-Repeat Protocols use a _____.

A) sliding window

B) sliding frame

C) sliding packet

D) none of the above

View Answer:
Answer: **Option A**
Solution:

16. In _____, the configuration is balanced. The link is point-to-point, and each station can function as a primary and a secondary.

A) ARM

B) ABM

C) NBM

D) NRM

View Answer:
Answer: **Option B**
Solution:

17. Byte stuffing means adding a special byte to the data section of the frame when there is a character with the same pattern as the _____.

A) trailer

B) flag

C) header

D) none of the above

View Answer:
Answer: **Option B**
Solution:

18. The _____ Protocol has neither flow nor error control.

A) Selective-Repeat ARQ

B) Go-Back-N ARQ

C) Stop-and-Wait

D) Simplest

View Answer:
Answer: **Option D**
Solution:

19. The most common protocol for point-to-point access is the Point-to-Point Protocol (PPP), which is a _____protocol.

A) byte-oriented

B) bit-oriented

C) character-oriented

D) none of the above

View Answer:
Answer: **Option A**
Solution:

20. For Stop-and-Wait ARQ, for 10 data packets sent, _____ acknowledgments are needed.

A) less than 10

B) more than 10

C) exactly 10

D) none of the above

View Answer:
Answer: **Option C**
Solution:

21. _____framing uses two categories of protocols: character-oriented and bit-oriented.

A) Standard

B) Fixed-size

C) Variable-size

D) None of the above

View Answer:
Answer: **Option C**
Solution:

22. _____ control refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgment.

A) Flow

B) Error

C) Transmission

D) none of the above

View Answer:
Answer: **Option A**
Solution:

23. In a _____ protocol, the data section of a frame is a sequence of characters.

A) bit-oriented

B) character-oriented

C) either (a) or (b)

D) none of the above

View Answer:

Answer: **Option B**
Solution:

24. In _____ framing, there is no need for defining the boundaries of frames.

A) standard

B) fixed-size

C) variable-size

D) none of the above

View Answer:
Answer: **Option B**
Solution:

25. The _____Protocol has both flow control and error control.

A) Stop-and-Wait

B) Selective-Repeat ARQ

C) Go-Back-N ARQ

D) both (b) and (c)

View Answer:
Answer: **Option D**
Solution:

26. In _____, the station configuration is unbalanced. We have one primary station and multiple secondary stations.

A) ARM

B) NBM

C) NRM

D) ABM

View Answer:
Answer: **Option C**
Solution:

27. In a _____ protocol, the data section of a frame is a sequence of bits.

A) bit-oriented

B) byte-oriented

C) either (a) or (b)

D) none of the above

View Answer:
Answer: **Option A**
Solution:

28. In _____ framing, we need a delimiter (flag) to define the boundary of two frames.

A) standard

B) fixed-size

C) variable-size

D) none of the above

View Answer:
Answer: **Option C**
Solution:

29. High-level Data Link Control (HDLC) is a _____ protocol for communication over point-to-point and multipoint links.

A) byte-oriented

B) bit-oriented

C) character-oriented

D) none of the above

View Answer:
Answer: **Option B**
Solution:

30. Bit stuffing means adding an extra 0 to the data section of the frame when there is a sequence of bits with the same pattern as the _____.

A) trailer

B) flag

C) header

D) none of the above

View Answer:
Answer: **Option B**
Solution:

31. In the _____Protocol, if no acknowledgment for a frame has arrived, we resend all outstanding frames.

A) Go-Back-N ARQ

B) Selective-Repeat ARQ

C) Stop-and-Wait ARQ

D) none of the above

View Answer:
Answer: **Option A**
Solution:

32. The Simplest Protocol and the Stop-and-Wait Protocol are for _____ channels.

A) noiseless

B) noisy

C) either (a) or (b)

D) neither (a) nor (b)

View Answer:
Answer: **Option A**
Solution:

33. The _____Protocol has flow control, but not error control.

A) Selective-Repeat ARQ

B) Stop-and-Wait

C) Simplest

D) Go-Back-N ARQ

View Answer:
Answer: **Option B**
Solution:

34. In Stop-and-Wait ARQ, we use sequence numbers to number the frames. The sequence numbers are based on _____arithmetic.

A) modulo-m

B) modulo-2

C) modulo-4

D) none of the above

View Answer:
Answer: **Option B**
Solution:

35. In the _____ Protocol, the sender sends its frames one after another with no regard to the receiver.

A) Simplest

B) Selective-Repeat ARQ

C) Stop-and-Wait

D) Go-Back-N ARQ

View Answer:
Answer: **Option A**
Solution:

36. _____control in the data link layer is based on automatic repeat request, which is the retransmission of data.

A) Flow

B) Error

C) Transmission

D) none of the above

View Answer:
Answer: **Option B**
Solution:

37. In PPP, _____ is a three-way hand-shaking authentication protocol in which the password is kept secret; it is never sent online.

A) PAP

B) LCP

C) NCP

D) CHAP

View Answer:
Answer: **Option D**
Solution:

38. In PPP, _____ is a simple authentication procedure with a two-step process:

A) CHAP

B) PAP

C) LCP

D) NCP

View Answer:
Answer: **Option B**
Solution:

39. In the _____ protocol we avoid unnecessary transmission by sending only frames that are corrupted.

A) Selective-Repeat ARQ

B) Stop-and-Wait ARQ

C) Go-Back-N ARQ

D) none of the above

View Answer:
Answer: **Option A**
Solution:

40. In _____ protocols, we use _____.

A) byte-oriented; bit stuffing

B) bit-oriented; bit stuffing

C) character-oriented; bit stuffing

D) none of the above

View Answer:
Answer: **Option B**
Solution:

41. In the _____ Protocol, the sender sends one frame, stops until it receives confirmation from the receiver, and then sends the next frame.

A) Simplest

B) Stop-and-Wait

C) Selective-Repeat ARQ

D) Go-Back-N ARQ

View Answer:
Answer: **Option B**
Solution:

42. Stop-and-Wait ARQ is a special case of Go-Back-N ARQ in which the size of the send window is ___.

A) 1

B) 2

C) 8

D) none of the above

View Answer:
Answer: **Option A**
Solution:

43. ARQ stands for _____.

A) Acknowledge repeat request

B) Automatic retransmission request

C) Automatic repeat quantization

D) Automatic repeat request

View Answer:
Answer: **Option D**
Solution:

44. _____ in the data link layer separates a message from one source to a destination, or from other messages going from other sources to other destinations.

A) Controlling

B) Framing

C) Digitizing

D) none of the above

View Answer:
Answer: **Option B**
Solution:

45. Data link control deals with the design and procedures for _____ communication.

A) node-to-node

B) process-to-process

C) host-to-host

D) none of the above

View Answer:
Answer: **Option A**
Solution:

46. In _____ protocols, we use _____.

A) bit-oriented; character stuffing

B) character-oriented; bit stuffing

C) character-oriented; byte stuffing

D) none of the above

View Answer:
Answer: **Option C**

1. In ASK, both _____ and _____ remain constant.
    1. Amplitude, Frequency
    2. Amplitude, phase
    3. **Frequency, Phase**
    4. Amplitude, Samples

2. In an analog hierarchy to carry voice channels, a group can carry _____ voice channels.
    1. 60
    2. 12
    3. **20**
    4. 10

3. Which of the following sublyer resolves the contention for the shared media.
    1. **MAC**
    2. LLC
    3. Physical
    4. None of the given.
4. What is the period of a Sine wave having frequency of 5 Hz?
    1. **0.2**
    2. 0.1
    3. 0.5
    4. 0.3
5. In CRC there is no error if the remainder at the receiver is _____.
    1. Equal to the remainder at the sender
    2. **Zero**
    3. Nonzero
    4. The quotient at the sender
6. Analog To Analog Conversion Methods include _____.
    1. **AM, PM and FM**
    2. AM, FSK and PM
    3. AM, PM and QAM
    4. None of the given
7. Signals travel through fiber optic cable are in the form of _____.
    1. **Light**
    2. Bits
    3. Electromagnetic
    4. Bytes
8. If the Hamming distance between sent and received code word is _____, then it shows that received data is corrupted.
    1. **≠ 0**
    2. = 0
    3. ≠ 1
    4. = 1

9. The flag in PPP is a byte that needs to be _____ whenever it appears in the data section of the frame.
    1. Duplicated
    2. Blocked
    3. Cleaned
    4. **Escaped**
10. _____ is normally used where speed is priority in data transfer.
    1. **Serial data transmission**
    2. Hybrid data transmission
    3. Parallel data transmission
    4. Both parallel and serial data transmission
11. Baud rate is greater than or equal to the bit rate.
    1. True
    2. **False**
12. _____ is an Authentication Protocol, which is used by the PPP to authenticate passwords.
    1. CHAP
    2. **PAP**
    3. LCP
    4. ICMP
13. In Pure ALOHA, the vulnerable time is _____ the frame transmission time.
    1. Same as
    2. **Two times**
    3. Three times
    4. Four times
14. A broadcast signal is received by the orbiting satellites which rebroadcasts _____.
    1. to the resender
    2. to the sender
    3. to the atmosphere
    4. **none of the given**
15. In TCP/IP protocol suite, the process of adding header at each layer on sending side is known as _____.
    1. Encapulation
    2. De-encapulation
    3. **Packetizing**

4. Framing

16. By using _____ system, change in the file contents during file transmission can be avoided.
    1. Routing
    2. Flow Control
    3. **Error Detection and Correction**
    4. Congestion Control
17. Which of the following consist of just one redundant bit per data unit?
    1. Two dimentional Parity check.
    2. CRC
    3. **Simple Parity Check**
    4. Checksum
18. 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.
    1. Constant
    2. **More**
    3. Less
    4. Zero
19. The extra bits added with the original data for error detection/correction are called _____.
    1. Fault bits
    2. Port numbers
    3. **Redundant bits**
    4. Process IDs
20. Flow control is needed to prevent _____.
    1. Bit errors
    2. Overflow of the sender buffer
    3. **Overflow of the receiver buffer**
    4. Collision between sender and receiver
21. The inversion of the level represents a 1 bit in _____ encoding
    1. **NRZ-I**
    2. NRZ-L
    3. RZ
    4. Manchester

22. The term _____means that only one bit of a given data unit is changed from 1 to 0 or from 0 to 1.
    1. Packet Error
    2. Burst Error
    3. **Single Bit Error**
    4. Character Error
23. A sine wave is defined by _____ characteristics.
    1. 2
    2. **3**
    3. 4
    4. 5
24. Quadrature Amplitude Modulation (QAM) is the combination of _____ and _____.
    1. **FSK, PSK**
    2. PSK, FSK
    3. ASK, PSK
    4. ASK, FSK

25. To calculate the data rate for noisy channel _____ formula is used.
    1. **Shannon**
    2. Nyquist
    3. Propagation
    4. Greedy
26. GO-BACK-N protocol is one of the _____ layer protocols, which is used to control the flow of data during the transmission.
    1. Physical
    2. **Network**
    3. Presentation
    4. Data link
27. A _____ modem is used to connect two DTEs directly.
    1. '**NULL**
    2. Cable
    3. DSL
    4. None of the given

28. Time division multiplexing is used in _____ systems.
    1. Analog
    2. Hybrid
    3. **Digital**
    4. Automated
29. In OSI model headers are added at layer _____.
    1. 1,2,3 only
    2. 6,5,7 only
    3. 5,4,3 only
    4. **6,5,4,3,2 only**
30. Line Configuration refers to the way two or more devices attach to a _____.
    1. Path
    2. Circuit
    3. **Link**
    4. Router
31. A sine wave is _____.
    1. periodic and discrete
    2. aperiodic and discrete
    3. **periodic and continuous**
    4. aperiodic and continuous
32. The logical connection between the peer layers is _____ connection.
    1. Physical
    2. Direct
    3. Indirect
    4. **Tengible**
33. What is the frequency of a sine wave if it completes one cycle in 2 seconds?
    1. **0.5**
    2. 0.6
    3. 0.3
    4. 0.2
34. In Synchronous TDM, Time slots are not same in number as input devices.
    1. True
    2. **False**

35. _____ category of coaxial cable is used for thin Ethernet.
    1. **RG-58**
    2. RG-59
    3. RG-1
    4. RG-47
36. Radio wave transmission utilizes _____ different types of propagation.
    1. Two
    2. Three
    3. Four
    4. **Five**
37. BSC supports _____ transmission using _____ flow control.
    1. Full-duplex, Stop and wait ARQ
    2. Half-duplex, Selective reject ARQ
    3. Full-duplex, Selective reject ARQ
    4. **Half-duplex, Stop and wait ARQ**
38. In selective-reject ARQ, only the specific damaged or lost frame is _____.
    1. **Retransmitted**
    2. Forwarded
    3. Selected
    4. Rejected
39. Error detection and correction are the services provided by _____ layer.
    1. **Data link layer**
    2. Application layer
    3. Physical layer
    4. Session layer
40. The _____ generates the data and passes it along with any control information to a _____.
    1. **DTE, DCE**
    2. DCE, DTE
    3. DTE, DTE
    4. DCE, DCE
41. Analog refers to something that is continuous in _____.

1. **Time**
2. Space
3. Frequency
4. None of the given

42. Time domain shows changes in _____.
    1. time w.r.t signal amplitude
    2. **signal amplitude w.r.t time**
    3. time
    4. All of the given
43. Mr. Asif while sitting in Lahore is talking with his friend in Dubai through Skype is an example of _____.
    1. Local Area Network
    2. **Metropolitan Area Network**
    3. Wide Area Network
    4. Home Based Network
44. Which level of the TCP/IP reference model routes data/information across a network channel?
    1. Application Layer
    2. Data Link Layer
    3. Transport Layer
    4. **Network Layer**
45. There are _____ types of serial transmission.
    1. 3
    2. 4
    3. **2**
    4. None of the given
46. Latency is made of _____ components.
    1. **Two**
    2. Three
    3. Four
    4. Five
47. Like 10 Base 5, 10 Base 2 is a _____ topology LAN.
    1. Ring
    2. Mesh
    3. Star
    4. **Bus**
48. _____ is the rate of change with respect to time.
    1. Voltage

2. Time
3. Frequency
4. **Amplitude**

49. Two or more computers connected so that they can communicate with each other and share information is called a _____.
    1. satellite
    2. protocol
    3. broadcast
    4. **network**

•

Permalink Reply by + M.Tariq Malik on January 1, 2021 at 5:12pm

1. Which error detection method consists of a parity bit for each unit as well as an entire data unit of parity bits?
    1. Checksum
    2. Cyclic Redundancy Check (CRC)
    3. **Longitudinal Red Check (LRC)**
    4. Vertical Redundancy Check (VRC)
2. Central Hub in a Tree is an _____.
    1. **Active hub**
    2. passive hub
3. Time domain plot show changes in signal phase with respect to time.
    1. true
    2. **false**
4. _____ is an Authentication Protocol, which uses two-step process to authenticate user information.
    1. CHAP
    2. LCP
    3. **PAP**
    4. ICMP
5. CHAP is an Authentication Protocol, which uses _____ process to authenticate user information.
    1. Two-way
    2. **Three-way**
    3. Four-way

4. Five-way

6. No matter whether the link is dedicated or broadcast, data link control (DLC) layer provides services between _____.
    1. Virtual LANs
    2. **Two adjacent nodes**
    3. Ethernet links
    4. Source and destination PCs
7. Encoding digital data into digital signals is called _____.
    1. Analog-to-Digital Conversion
    2. **Digital-to-Digital Conversion**
    3. Digital-to-Analog Conversion
    4. None of the given
8. _____ encoding is almost obsolete today
    1. Bipolar
    2. **Unipolar**
    3. Polar
    4. None of the given
9. The Internet is _____.
    1. software for sending e-mail around the world
    2. a government-owned agency that links computers
    3. **a global network of computers networks**
    4. a specialised form of local area network
10. PSK is susceptible to the noise degradation.
    1. True
    2. **False**
11. Low pass channel has _____ bandwidth between two stations.
    1. **Dedicated**
    2. Shared
    3. Multiplexed
    4. Infinite
12. In ASK, Noise usually affects the _____.
    1. **Amplitude**
    2. Phase
    3. Sample
    4. Frequency

13. The flag in PPP is a byte that needs to be _____ whenever it appears in the data section of the frame.
    1. Duplicated
    2. Blocked
    3. Cleaned
    4. **Escaped**
14. Which of the following is not a characteristic of a sine wave?
    1. Amplitude
    2. **Segmentation**
    3. Phase
    4. Frequency
15. In statistical time division multiplexing, number of slots in frame are less than _____.
    1. Output data rate
    2. **Input lines**
    3. Input frequency
    4. Multiplexed T lines
16. If a digital signal has "L" number of levels. _____ is the number of bits required to represent each level.
    1. **Log L**
    2. Log Base 2 L
    3. L Square
    4. Log(2*L)
17. _____ is responsible for governing node to node communication.
    1. Application Layer
    2. Session Layer
    3. **Data Link layer**
    4. Presentation Layer
18. The original Ethernet technology with the data rate of 10 Mbps is called _____?
    1. **Standard Ethernet**
    2. Fast Ethernet
    3. Gigabit Ethernet
    4. 10 Gigabit Ethernet
19. What is the period of a Sine wave having frequency of 2 Hz?

1. 0.2
2. 0.1
3. **0.5**
4. 0.3

20. In line discipline after the data transmission, the sending system finishes with an _____ frame.
    1. **EOT**
    2. EKT
    3. ENT
    4. ESP
21. Each computer on the Internet has a unique numeric address called a(n) _____.
    1. domain address
    2. protocol address
    3. **IP address**
    4. Web address
22. In even parity check code, the value of syndrome is _____ if the number of 1s is even.
    1. 1
    2. 2
    3. **0**
    4. 4
23. TROPOSHERE is the layer of atmosphere above the troposhere but below space
    1. True
    2. **False**
24. The logical connection between the peer layers is _____ connection.
    1. Physical
    2. **Direct**
    3. Indirect
    4. Tangible
25. We can have _____ different groups with a 4 bit block.
    1. 4
    2. **8**
    3. 16
    4. 32

26. In analog transmission, the base signal is called the_____.
    1. **Carrier Signal**
    2. Analog signal
    3. Digital signal
    4. Modulated signal
27. Traditionally MANs have been implemented using one of the 2 technologies, Circuit Switching and Packet Switching
    1. true
    2. **false**
28. In _____ a dedicated communication path is established between two stations through the nodes of the network
    1. **Circuit switching**
    2. Packet switching
29. If the window size is 63 in go-back N ARQ then what is the range of sequence number?
    1. **0 to 63**
    2. 0 to 64
    3. 1 to 63
    4. 1 to 64
30. WDM stands for _____.
    1. Wideband De-Modulation
    2. Worst Data Manipulation
    3. **Wavelength Division Multiplexing**
    4. None of the given
31. At the CRC checker, _____ means that the data unit is damaged.
    1. A string of 0s
    2. A string of 1s
    3. A string of alternating 1s and 0s
    4. **A nonzero remainder**
32. The level of signal is always positive in NRZ encoding.
    1. true
    2. **false**
33. There are _____ basic categories of multiplexing.
    1. 2

2. **3**
3. 7
4. 5

34. _____ are used to exchange session management and control information between connected devices.
    1. I-frames
    2. **U-frames**
    3. S-frames
    4. N-frames
35. At the CRC generator, _____ added to the data unit before the divisional process.
    1. **0s are**
    2. 1s are
    3. a polynomial is
    4. a CRC remainder is
36. Checksum is an error-detection technique that can be applied to a message of _____ length.
    1. Exactly 4
    2. Exactly 8
    3. Exactly 32
    4. **Any**
37. The _____ protocol uses both flow and error control.
    1. TCP/IP
    2. HDLC
    3. ICMP
    4. **Stop-and-Wait**
38. S-frames in High-Level Data Link Control (HDLC) are only used to transfer _____ information.
    1. User data
    2. **Control**
    3. Redundant
    4. Original
39. Which of the following statement is correct?
    1. **Digital signals are less prone to Noise**
    2. Digital signals are highly prone to Noise
    3. Analog Signals are less prone to Noise
    4. Digital signals are not affected by Noise

40. Quantization is a method of assigning _____ values in a specific range to sampled instances.
    1. Negative
    2. Positive
    3. Binary
    4. **Integral**
41. To control and manage the transfer of data, a protocol called Point to Point Protocol (PPP) is used at the _____ layer.
    1. Physical
    2. **Network**
    3. Presentation
    4. Data link
42. _____ is sometimes called the bit rate.
    1. signal rate
    2. modulation rate
    3. **Data rate**
    4. pulse rate
43. In circuit switched networks we have low efficiency but minimal _____.
    1. Delay
    2. **Speed**
    3. Throughput
    4. Errors
44. In _____, both peak amplitude and frequency remains constant as the phase changes.
    1. **PSK**
    2. QAM
    3. Both PSK & QAM
    4. None of the given
45. The inversion of the level at 1 bit is called as _____.
    1. NRZ-L
    2. **NRZ-I**
    3. RZ
    4. None of the given.
46. Which error detection method uses one's complement arithmetic.

1. Cyclic Redundancy Check (CRC)
2. Longitudinal Red Check (LRC)
3. **Checksum**
4. Simple Parity Check

47. The transmission medium that carries the message is referred to as the _____.
    1. send and receive device
    2. **communication channel**
    3. protocol
    4. gateways
48. What is the Bandwidth of a periodic signal if it is decomposed into 4 sine waves with frequencies 200, 400, 600 and 800?
    1. 100
    2. 500
    3. 300
    4. **600**
49. _____ is the process of converting digital data to digital signals.
    1. CSMA/CD
    2. CSMA/CA
    3. **Line coding**
    4. Segmentation
50. Session layer is responsible for _____.
    1. Reassembly of data
    2. **Maintaining the connection**

1. Error correction is more _____ than the error detection.
    1. Easy
    2. Useless
    3. Informal
    4. **Difficult**
2. In order to find the location of two errors in an eight bit stream, we have to see _____ different combinations.
    1. **28**

2. 16
3. 8
4. 4

3. If users must take turns using the link, then it is called Spatial Sharing.
    1. true
    2. **false**
4. _____ is used in the Stop-and-Wait protocol to overcome the issue of duplication.
    1. Frame sequencing
    2. Acknowledgement numbering
    3. Counter and Timer reset
    4. **Frame sequencing and Acknowledgement numbering**

5. Asynchronous transmission is _____.
    1. **Slow**
    2. Fast
    3. Costly
    4. None effective
6. What is the frequency of a sine wave if it completes one cycle in 5 seconds?
    1. 0.5
    2. 0.6
    3. 0.3
    4. **0.2**
7. RZ stands for _____.
    1. Return to Z
    2. Retire a Zero
    3. **Return ot Zero**
    4. None of the given

8. In Pulse Code Modulation (PCM), the sampling is dependent on _____.
    1. Time
    2. Amplitude
    3. Frequency

4. **Signal Rate**

9. Terminal, microprocessor, computer, printer or any other device that generates or consumes digital data is known as _____
    1. DCE
    2. **DTE**
    3. DCE & DTE
    4. None of the given
10. dB is negative if a signal is _____.
    1. **Attenuated**
    2. Distorted
    3. Amplified
    4. Noisy
11. There are three types of Hubs that exist. Which of the following options correctly describes these three?
    1. Passive, dormant, special
    2. Active , dormant , passive
    3. Passive, Active, Turbo
    4. **Passive, Active, Intelligent**
12. Data is transmitted using light through a _____ cable.
    1. twisted pair
    2. **fiber-optic**
    3. coaxial
    4. microwave
13. In frequency shift keying, _____ remain(s) constant.
    1. Frequency
    2. Amplitude
    3. Both Amplitude and Phase
    4. **Both Phase and Frequency**
14. Human voice is example of _____ signal.
    1. Digital
    2. **Analog**
    3. Discrete
    4. None of the given

15. To make sure that source does not overwhelm destination by sending data faster than it can be handled and processed is called?
    1. Addressing & Routing
    2. Exchange Management
    3. **Flow Control**
    4. Recovery
16. _____ contains a repeater.
    1. **Active hub**
    2. Passive hub
17. In Block coding we divide our message into blocks of k bits called as _____.
    1. Code words
    2. **Data words**
    3. Passwords
    4. Cross words
18. Digital signals are refered to be _____.
    1. Continuous
    2. **Discrete**
    3. All of the given
    4. None of the given
19. DLC in Data Link Layer stands for _____.
    1. Divide Line Communication
    2. Data Line Code
    3. **Data Link Control**
    4. Demand Link Coordination
20. Digitizing an Analog Signal is called _____.
    1. **Analog-to-Digital Conversion**
    2. Digital-to-Digital Conversion
    3. Digital-to-Analog Conversion
    4. None of the given
21. What is the period of a Sine wave having frequency of 10 Hz?
    1. 0.2
    2. **0.1**
    3. 0.5
    4. 0.3

22. _____ relatively measures the strength of two signals.
    1. Signal rate
    2. Bit rate
    3. Decibel
    4. **Pulse Rate**
23. _____ is correct formula to determine the total number of ports needed for one system connected in a mesh network.
    1. N+1
    2. N-1
    3. **N(N+1)**
    4. NxN
24. In Block coding scheme, number of code words is always _____ data words.
    1. Less than
    2. **Equal to**
    3. Greater than
    4. Same as
25. Is there any difference between Data communication and telecommunication are network?
    1. Yes
    2. **No**
26. _____ mode of serial transmission guarantees fixed rate of data.
    1. Synchronous
    2. Asynchronous
    3. **Isochronous**
    4. Metasochronous
27. In the encoding where positive to negative transition is one and vice versa is zero.
    1. Manchester
    2. Differential Manchester
    3. All of the given
    4. **None of given**
28. Which of the following is most affected by noise?
    1. PSK
    2. **ASK**

3. FSK
4. QAM

29. The _____ is the number of signal elements sent per unit time.
    1. Data rate
    2. **Signal rate**
    3. Bit rate
    4. Period
30. Analog signals are refers to be _____
    1. **Continuous**
    2. Discrete
    3. Periodic
    4. Aperiodic
31. Guard bands are used in _____ multiplexing technique, to avoid overlapping of frequency bands assigned to each user.
    1. PDM
    2. CSMA
    3. TDM
    4. **FDM**
32. There are _____types of guided media.
    1. 2
    2. **3**
    3. 4
    4. 5
33. _____ of a signal is the collection of all the component frequencies it contains.
    1. Time domain
    2. Frequency domain
    3. **Frequency spectrum**
    4. None of the given
34. Data Link layer provides services to the _____ layer.
    1. Application
    2. Transport
    3. **Network**
    4. Session

35. Sampling means measuring _____ of signal at equal intervals
    1. **Amplitudes**
    2. Frequencies
    3. Phases
    4. None of the given
36. Which layer is concerned with the syntax and semantics of info exchange between two systems?
    1. Physical
    2. Application
    3. Session
    4. **Presentation**
37. _____ signal can take infinite levels of intensity over time.
    1. Digital
    2. Discrete
    3. **Analog**
    4. Logical
38. Radio is an example of _____ signal conversion.
    1. **Analog to analog**
    2. Analog to digital
    3. Digital to Digital
    4. Digital to analog
39. Which one is not the function of data link layer?
    1. **Line discipline**
    2. Flow control
    3. Error control
    4. Network control
40. The most common type of connector used by coaxial cable is _____.
    1. **BNC**
    2. RJ-45
    3. RJ-11
    4. RJ-57
41. In ASK correct formula for calculating the bandwidth ia as _____.
    1. **B=(1+d)S**
    2. B=(1*d)S

3. B=(d-1)S
4. B=(d-5)S

42. A portion of the path that carries TX between a given pair of devices is known as _____.
    1. Direct Point
    2. Bridge
    3. **Channel**
    4. Access Point
43. In _____, a signal is directed straight from antenna to antenna.
    1. **Line of sight propagation**
    2. Ground propagation
    3. Space propagation
    4. Tropospheric propagation
44. Collisions in CSMA/CA are avoided through _____.
    1. The Interframe Space
    2. The Contention Window
    3. Acknowledgements
    4. **All of the given**
45. A fiber -optic cable transmit signals in the form of _____.
    1. **Light**
    2. Sound
    3. Wave
    4. None of the given
46. _____ category of coaxial cable is used for Cable TV.
    1. RG-58
    2. RG-59
    3. **RG-11**
    4. RG-47
47. Asynchronous TDM is efficient only when the size of the time slot is kept relatively _____.
    1. **Large**
    2. Small
    3. Medium
    4. Zero

48. Following characteristics fully describe _____,
    Amplitude
    Period/Frequency
    Phase
    1. **Sine Waves**
    2. Digital Signals
    3. Aperiodic Signals
    4. None of the given
49. YMODEM has _____ Byte of data unit.
    1. **1024**
    2. 256
    3. 128
    4. 512
50. Congestion Control is a feature of layer(s).
    1. Data Link
    2. Network
    3. Transport
    4. **All mentioned**
51. The message 1110 sent by a source is received by a destination as 1011. This is _____ type of error.
    1. **Burst**
    2. Single-Bit
    3. Uni-Bit
    4. Hamming
52. Switch is a network device which operates on the _____ layer of the TCP/IP protocol suite.
    1. Application
    2. Transport
    3. Presentation
    4. **Data link**
53. AM signal requires _____ the BW of original signal
    1. **Twice**
    2. Half
    3. Same
    4. Three Times
54. At the Application layer, object/information is in the form of _____.

1. Message
2. **Packet**
3. Segment
4. Frame

55. What is the Bandwidth of a periodic signal if it is decomposed into 4 sine waves with frequencies 300, 600, 900 and 1200?
    1. 100
    2. **900**
    3. 300
    4. 600
56. Like Data link layer, _____ is also responsible for Flow control.
    1. **Transport Layer**
    2. Session Layer
57. _____ is not a function of Data Link Control.
    1. Framing
    2. **Modulation**
    3. Error Control
    4. Flow Control
58. VCI address is _____ address in virtual circuit approach.
    1. Private
    2. Variable
    3. Local
    4. **Global**
59. STP is more expensive than UTP and is less susceptible to noise.
    1. **True**
    2. False
60. WDM stands for _____.
    1. **Wave Division Multiplexing**
    2. Wrong Division Multiplexing
    3. Well Division Multiplexing
    4. West Division Multiplexing

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