

CS601-Data Communication

From: UPDATED BOOK

Solved MCQS for Midterms papers

Solved by JUNAID MALIK and Team



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1)The original Ethernet technology with the data rate of 10Mbps is called_____?

a)Standard Ethernet

b)First Ethernet

C)Gigabit Ethernet

d)10 gigabit Ethernet

2)In pure ALOHA, vulnerable time is_____the frame transmission time.

a)same as

b)two times

c)three times

d)four times

3)Collisions in CSMA/CA are avoided through_____.

a)The interframe space

b)The contention window

c)Acknowledgement

d)All of the given

4)Which one of the following is a correct controlled access method?

a)Reservation

b)polling

c) token passing

d) all of the given

5)_____Works with topologies in which one device is designated as a primary station and other devices are secondary stations.

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a)polling

b)token

c) reservation

d) none of the given

6)In _____ Each band is reserved for a specific station, time and it belongs to the station all the time.

a)FDMA

b)TDMA

c)CDMA

d)CSMA

7)In _____ each station is forced to send a frame only at the beginning of time slot.

a)Pure Aloha

b) slotted Aloha

c) Fragmented Aloha

d) none of the given

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

a)TDI

b)NIC

c)PCI

d)None of the given

9)In the context of Ethernet implementations, maximum medium length of 10 Base F was _____ meters.

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a)500

b)1000

c)2000

d)150

10)What was the main drawback in Aloha Random-Access method?

a)Redundancy in data

b) inconsistent data rate

c) potential collision

d) all of the given

11)MAC address is of _____.

a)24 bits

b)36 bits

c)42 bits

d)48 bits

12)Collisions in CSMA/CA are avoided through _____.

a)The interframe space

b)Acknowledgements

c)The contention window

d)all of the given

13)Posts stand for

a)Plain old telephone set

b) plain old telephone service

c) plain old time sharing

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d) Plain old telephone system

14) _____ Random access method was initially designed for a radio wireless LAN but it can be used on any shared medium now.

a) FDMA

b) CDMA/CD

c) CDMA/CA

d) ALOHA

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

a) Pure ALOHA

b) slotted ALOHA

c) Fragmented ALOHA

d) none of the given

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

a) Contention window

b) interframe window

c) fragmented window

d) collided window

17) Normally the value of K_{max} in pure ALOHA is _____ .

a) 10

b) 15

c) 25

d) 30

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

a) Reservation

b) polling

c) Port forwarding

d) token passing

19) A personal computer or workstation on an Ethernet network must have _____ card

a) TDI

b) NIC

c) PCI

d) none of the given

20) Which of the following is a Random-Access protocol?

a) CDMA/CA

b) ALOHA

c) CDMA/CD

d) TDMA

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

a) 10Base-T Ethernet

b) standard ethernet

c) Fast Ethernet

d) Gigabit Ethernet

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22) In Ethernet the source address field in the MAC frame is the _____ address.

a) Sender's logical

b) Previous station's physical

c) Next destination's physical

d) sender's service port

23) _____ was used as the medium in 10 Base-T.

a) thick coaxial cable

b) I thin coaxial cable

c) Twisted pair cable

d) two mode fiber cable

24) In telephone network POP stand for _____ ?

a) Pride Of Place

b) Point Of Presence

c) Post order protocol

d) Proof Of Purchase

25) MAC address is of

a) 24 bits

b) 36 bits

c) 42 bits

d) 48 bits

26) In Ethernet frame, both destination and sender addresses are of length _____.

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a)1byte

b)2 byte

c)4 byte

d)6 byte

27)When we represent the data in CDMA, if a ststement is idle then it sends _____ .

a)0

b)1

c)-1

d)infinity

28)_____ use fiber optic cable.

a)10Base 5

b)10Base2

c)10Base-T

d)10BBase-F2

29)_____ Uses thick coaxial cable.

a)10 Base2

b)10Base5

c)10Base-T

d)10 Base-F

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

a)NDMA

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b)FDMA

c)TDMA

d)CDMA

40)In _____ a station monitors the medium after it sends a frame to see if the transmission is successful.

a)CSMA/CD

b)CSMA/CA

c)CSMA

d)None of the given

41)Ethernet address is if _____ bytes.

a)4

b)6

c)8

d)12

42)Fast Ethernet has data rate of _____ Mbps.

a)10

b)100

c)1000

d)10000

43)In context of Ethernet address the source address is always a _____ address.

a)Unicast

b)Multicast

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c)Broad-cast

d)128 bit address

44)In Hexadecimal notation of Ethernet address, each byte is separated by _____ symbol .

a)Question mark

b)Colon

c)Underscore

d)Hash

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

a)10

b)15

c)25

d)30

46)Possession of TOKEN gives the station the right to _____ .

a)Send data

b)receive data

c)delete data

d)modify data

47)In _____ collision are avoided by differing transmission even if the channel is idle.

a)slotted frame

b)The deployment frame

c)The contention window

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d)The interframe space

48)DSL stand for _____

a)digital subscribers line

b)digital switched line

c)data subscribers line

d) data switched line

49)_____ is the correct formula to calculate the total number of one system needed to connect in a mesh network.

a) $N(N+1)$

b) $N-1$

c) $N+1$

d) $N \times N$

50)In transmission impairment _____ noise occurs from the random motion of electrons in a wire.

a)Induced noise

b)Thermal noise

c)Impulse noise

d)Cross talk

51)Identify the correct formula to calculate propagation time.

a)propagation time = distance/propagation speed

b)propagation time = Bandwidth/propagation speed

c)propagation time =delay /propagation speed

d)propagation time = throughput/propagation speed

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50) parabolic antenna is used for _____ communication.

a) micro wave

b) light wave

c) infrared wave

d) radio wave

51) At the application layer the object/information is in the form _____.

a) message

b) frame

c) segment

d) packet

52) During transmission _____ is the effect of one wire on the other .

a) Induced noise

b) Thermal noise

c) Crosstalk

d) impulse noise

53) If a digital transmission system is sending five bits in every half a second the bit rate of that system will be _____

a) 10Hz

b) 0.2bps

c) 5bps

d) 10bps

54) Two stations are connected via secure link in which messages are encrypted from source to the destination . This encrypted message is called _____.

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- a)message
- b)plain text
- c)protocol
- d)cipher text**

55)QAM stand for _____.

- a)Quadrature amplitude modulation**
- b) Quadrature amplitude modifier
- c) Quadrature amplitude modulator
- d) Quadrature amplifier modulation

56)In _____ topology each computer is attached with other through a central device

- a)Star**
- b)mesh
- c)bus
- d)Ring

57)When two peoples are talking with each other in a room then the transmission medium between them is _____.

- a)No medium required
- b)Air**
- c)wireless medium
- d)cable

58)In baseband transmission, a digital signal is transmitted as _____

- a)digital signal**

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b) multiplexed signal

c) analog signal

d) modulate signal

59) In optical fiber a glass or a plastic core is surrounded by a _____.

a) insulator

b) outer conductor shield

c) Cladding

d) inner conductor shield

60) _____ signal completes certain pattern in specific amount of time .

a) A Periodic

b) periodic

c) non periodic

d) wavelength

61) The address of transport layer are in the form of _____.

a) Logical address

b) name

c) port numbers

d) link layer address

62) Which digital multiplexing technology is use to allow several connections to share the high bandwidth of a link?

a) FDM

b) ADM

c) TDM

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d)WDM

63)In bidirectional communication each layer perform two _____ tasks in each direction.

a)opposite

b)similar

c)identical

d)complimentary

64)AMI is a popular _____ encoding method.

a)Polar

b)Bi-polar

c)Unipolar

d)substitution

65)In pulse code modulation the term sampling can also be referred as _____.

a)Pulse amplitude modulation

b)pulse line modulation

c)pulse frequency modulation

d) pulse sampling modulation

66)Time taken by a periodic signal to complete one cycle is called _____.

a)period

b)routing

c)multiplexing

d)wavelength

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67) _____ does not happen until all the data transferred and all the resources are freed.

a) Tear down

b) acknowledgment

c) switching

d) resource allocation

68) _____ is the example of multipoint topology.

a) Mesh

b) Ring

c) Bus

d) Hub

69) A local telephone network use _____ network .

a) Line switched

b) bit switched

c) circuit switched

d) packet switched

70) _____ is the process of converting binary data to a digital signal.

a) ASK

b) QAM

c) Line coding

d) FSK

71) _____ category of coaxial cable is used for thick Ethernet.

a) RG-11

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b)RG-58

c)RG-47

d)RG-58

72) _____ has less magnetic interface as compared to other guided medium.

a)Unshielded twisted pair

b)Shielded twisted pair

c)Fiber optic

d)Coaxial

73) _____ relatively measure the strength of two signals.

a)decibel

b)signal rate

c)pulse rate

d)bit rate

78) _____ layer is responsible for creating datagrams .

a)physical

b)session

c)network

d)data link

79) Two PCs and one printer are connected in a network within a room, it is an example of _____

a)LAN

b)MAN

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c)WAN

d)SONET

80)In _____ encoding scheme we use three levels positive, zero and negative.

a)polar

b)nonpolar

c)bipolar

d)multilevel

81)Which one of the following is not a bipolar encoding level?

a)Negative

b)one

c)positive

d)zero

82)According to stats fewer than _____ crossbar point can used at once.

a)14%

b)100%

c)30%

d)25%

83)TCP/IP protocol suite consists of _____ layers.

a)3

b)5

c)6

d)7

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84) In single crossbar switch only _____ row(s) or column(s) is/are active at a time while others are not active .

a) four

b) two

c) one

d) three

85) We can have combination of _____ codes with a 5 bit code.

a) 4

b) 16

c) 32

d) 8

86) Bi polar uses _____ voltage level.

a) one

b) two

c) three

d) four

87) In statistical time division multiplexing, number of slots in frame are less than _____

a) output data rate

b) input lines

c) input frequency

d) multiplexed T lines

88) The communication at the Application, Transport and network layer is _____.

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a)logical

b)physical

c)real

d)rational

89)If a digital signal has 'L' number of levels _____ is the number of bits required to represent each level.

a)log L

b)Log Base 2 L

c)L square

d)Log (2*L)

90)Coaxial cables are categories by their _____ ratings.

a)EIA

b)FM

c)RG

d)AM

91)In frequency domain plot, which value is plot on Y axis.

a)time

b)frequency

c)amplitude

d)wavelength

92)A fiber optic cable transmit signal in the form of _____.

a)light

b)sound

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c)wave

d) none of the given

93)In frequency modulation the frequency of the oscillator changes according to the _____.

a)output voltage

b)output frequency

c)input voltage

d)output phase

94)Routing is a function of _____ layer.

a)network

b)physical

c)transport

d)datalink

95)BFSK stand for _____.

a)Baud frequency shift key

b)Binary frequency shift key

c)Barrier frequency shift key

d)Bridge frequency shift key

96)There are _____ basic categories of multiplexing .

a)2

b)3

c)5

d)7

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97) Most commonly used connector for twisted pair cable is _____.

a) RJ-11

b) RJ-45

c) RJ-54

d) RJ-44

98) _____ technique does not follow analog to analog conversion.

a) QAM

b) AM

c) FM

d) PM

99) In TDM based digital hierarchy used by the telephone companies, DS-0 is a single digital channel of _____.

a) 1,544 Mbps

b) 128 kbps

c) 64 kbps

d) 32 kbps

100) A telephone line analog signal has got the bandwidth of _____.

a) 8 kHz

b) 2 kHz

c) 16 kHz

d) 4 kHz

101) In _____ TDM slots are dynamically allocated to the connected stations to improve bandwidth efficiency.

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a) synchronous

b) statistical

c) Isochronous

d) none of the given

102) _____ Is composed of thousands of interconnected network expanded over large geographical areas.

a) LAN

b) MAN

c) the internet

d) home network

103) We quantize the sampling out put into certain levels based on range of _____ and required accuracy.

a) frequency

b) amplitude

c) time period

d) none

104) In serial data transmission _____ data transmission mode can be cheap but slower.

a) synchronous

b) Asynchronous

c) Isochronous

d) metaschrounous

105) In pulse code modulation technique technique, which approach will be the most appropriate for sampling _____

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- a)over sampling
- b)under sampling
- c)Nyquist sampling**
- d)Analog sampling

106)_____ signal is represented by the discrete values.

- a)analog
- b)digital**
- c)both
- d)continuous

107)Which of the following techniques is use for analog to digital conversion?

- a)PCM
- b)DM
- c)both PCM and DM**
- d)BDM

108)_____ category of coaxial cable is used for thin Ethernet .

- a)RG-58**
- b)RG-59
- c)RG-40
- d)RG-1

109)Unipolar encoding scheme uses _____ voltage level.

- a)one
- b)two**

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c)three

d)four

110)In _____ scheme all the signal levels are on the side of time axis, either above or below .

a)polar

b)bipolar

c)unipolar

d)multiplexed coding

111)_____ mode of serial transmission guarantees fixed rate data.

a)synchronous

b)Asynchronous

c)Isochronous

d)Metaschrounous

112)electromagnetic waves ranging from 0z and 300GHz are called _____.

a)microwave

b)light wave

c)Infrared wave

d)radio wave

113)_____ is used where data speed is priority in data transfer.

a)serial data transmission

b)hybrid data transmission

c)parallel data transmission

d)both parallel and serial transmission

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114) In transmission impairment _____ occur from a signal with a high energy and with a short period of time.

a) impulse noise

b) thermal noise

c) induced noise

d) cross talk

115) In star based network comprising of four computer and one switch total number of cables needed will be _____.

a) 4

b) 5

c) 6

d) 3

116) The most upper layer of TCP/IP protocol suite is the _____.

a) application

b) transport

c) network

d) data link

117) In analogue hierarchy to carry voice channels, a group can carry _____ voice channels .

a) 60

b) 12

c) 20

d) 10

118) Bandwidth can be measured in _____.

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a)Bps

b)phase

c)lambda

d)decibel

119)Unit of phase is _____.

a)bits per second

b)watts

c)baud

d)degree

120)_____ is sometimes called the bit rate.

a)signal rate

b)modulation rate

c)data rate

d)pulse rate

121)In _____ data moves faster and timing errors are less frequent because the transmitter and receivers time is synced.

a)Isochronous

b)synchronous

c)Asynchronous

d)Metaschrounous

122)Manchester encoding scheme achieves the same level of synchronization as _____.

a)RZ

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b) differential Manchester

c) NRZ-1

d) NRZ

123) _____ is not the advantage of protocol layering.

a) Modularity

b) reduced complexity

c) reduced cost

d) none

124) In TCP/IP model physical layer exchange data in the form of _____.

a) Packet

b) frame

c) bits

d) segments

125) In amplitude shift keying _____ remains constant.

a) Phase

b) frequency and amplitude

c) frequency and phase

d) amplitude

126) Multimode technology has _____ main type of light propagating.

a) two

b) three

c) four

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d)five

127)Bandwidth in hertz is the range of _____ contained in a composite signal.

a)signal

b)frequencies

c)amplitude

d)phase

128)The size of the packet is determined by network and_____.

a)govern time

b)instructions

c)switching time

d)delay

129)_____ means loss of energy in signals.

a)attenuation

b)noise

c)delay

d)distortion

130)In circuit switching total delay is combination of connection time, data transfer time and_____.

a)connection tear down time

b)switching time

c)receiving time

d)acknowledgment time

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131) In circuit switched network we have low efficiency and minimal _____.

- a) speed
- b) delay**
- c) throughput
- d) errors

132) There is layer to layer connection between every peer station, this imaginary connection between each layer is termed as _____.

- a) Logical connection**
- b) Physical connection
- c) Practical connection
- d) None of the given

133) In virtual circuit approach when a frame enters a switch and when it leaves the circuit then its VCI _____.

- a) always changes
- b) remain same
- c) sometimes changes
- d) remain the same**

134) When data is received or sent using _____ the data bits are organized in a specific order, since only they can be sent or received one after another .

- a) parallel data transmission
- b) serial data transmission**
- c) hybrid data transmission
- d) both parallel and serial transmission

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135) Cellular telephone uses _____ waves for communication .

- a) light wave
- b) infrared waves
- c) microwaves
- d) Radio waves

136) According to the Fourier analysis frequencies obtained after decomposition of digital signals are _____.

- a) continuous
- b) discrete
- c) homogeneous
- d) bit length

137) _____ is a multiplexing technique which shift each signal to a different carrier frequency.

- a) FDM
- b) TDM
- c) WDM
- d) PDM

138) Packet switching operates on _____ layer.

- a) network layer
- b) physical layer
- c) data link layer
- d) application layer

139) When the bandwidth of a link is greater than the combined bandwidth of a signal we use _____ multiplexing .

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a)wavelength division

b)time division

c)frequency division

d)hybrid division

140)If 32 bits are sent in two seconds then the bitrate for that signal is _____.

a)8bps

b)16bps

c)32bps

d)64bps

141)_____ signal can take infinite level of intensity over time .

a)digital

b)discrete

c)analog

d)logical

142)Electromagnetic wave ranging in 3khz and 1gHz are called _____.

a)infrared waves

b)light wave

c) radio wave

d)microwave

143)Microwaves are _____.

a)unidirectional

b)bi directional

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c)Omni directional

d)all directional

144)A fiber optic cable transmits signals in the form of _____.

a)light

b)sound

c)wave

d)none of the given

145) Simultaneous transmission of multiple signals across a single data link is called _____.

a)Demultiplexing

b)multiplexing

c)modulation

d)demodulation

146)Multimode technology has _____ main type of light propagating .

a)two

b)three

c)four

d)five

147)Set of rules to be followed for effective communication is called _____.

a)Topology

b)protocol

c)switching

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d)Encryption

148)Which multiplexing technique involves signals composed of light beam?

a)FDM

b)TDM

c)WDM

d)PDM

149)Time division multiplexing technique is used in _____ system.

a)analog

b)hybrid

c)digital

d)automated

150)Which of the following technique is used for analog to digital conversion .

a)PCM

b)DM

c)BDM

d)both PC and DM

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