

# **Cs601 Mid term**

**Topic 1 to 113 cover in this quiz**

**Orange Monkey Team**

1. In \_\_\_\_\_ medium signals are normally broadcast through free space and thus are available to anyone who has a device capable of receiving them.

Wireless...confirm

2. Voltage controlled oscillator (VCO) generates

Carrier signal....confirm

3. In \_\_\_\_\_ the instantaneous change in the carrier frequency is proportional to the derivative of the amplitude of the modulating signal

Amplitude modulation....confirm

4. At the application layer, object/information is in the form of \_\_\_\_\_.

Message...confirm

5. \_\_\_\_\_ is the first step in PCM technique

Sampling...confirm

6. Communication between two user in a cellular (Mobile) network is an example of \_\_ communication

Full duplex....confirm

7. Transmission medium are of \_\_\_\_\_ types.

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**ORANGE MONKEY TEAM**

Two....confirm

8. A frequency is called \_\_\_\_ if sine wave changes with time  
Infinte frequency...confirm

9. A frequency is called \_\_\_\_ if sine wave does not change with time  
Zero frequency ....confirm

10. Open system interconnection (OSI) has \_\_ number of layers.

7...confirm

11. In unidirectional antenna, the common point where all the lines intersect each other is \_\_\_\_.  
Focus...confirm

12. To calculate the data rate for noisy channel \_\_\_\_ formula is used.  
Shannon....confirm

13. Television broadcast where user can only view the information sent in the form of video is an example of \_\_\_\_\_ communication.  
Simplex

14.  $N = S * r$  is the formula for finding  
Baud rate.....confirm

15. TCP/IP protocol suit has \_\_\_\_\_ layers.  
5....confirm

16. Unit of phase is \_\_\_\_\_.  
Degree....confirm

17. For a noiseless channel theoretical formula to calculate the data rate was developed by.  
Nyquist.....confirm

18. In context of bandwidth-delay product the cross section of the pipe represents the \_\_\_\_\_.

Bandwidth...confirm

19. Uni polar Polar and Bipolar are types of \_\_\_\_\_ coding scheme.

Line...confirm

20. In \_\_\_\_\_ scheme the voltages are on both sides of the time axis and voltage level for 0 can be positive and the voltage level for 1 can be negative.

Polar....confirm

21. In \_\_\_\_\_ transmission medium start and stop bits are used

Asynchronous....confirm from net

22. In layered architecture of network logical connection between layers means.

They are connected in peers.....confirm

23. OSI stands for \_\_\_\_\_.

Open system interconnection....confirm

24. Quadrature Amplitude Modulation is the mechanism of \_\_\_\_\_ conversion.

Digital to analog...confirm

25. Writing used for transmission modes depends upon \_\_\_\_\_.

Data stream...confirm

26. The maximum bandwidth required for QAM transmission is the same as that required for \_\_\_\_\_ and \_\_\_\_\_ transmission.

ASK, PSK

27. In optical fiber cable the ratio of the diameter of their core to the diameter of their cladding, both expressed in \_\_\_\_\_.

**Micrometers...confirm**

**28. Radio waves are propagated in \_\_\_\_\_ whenever they are transmitted by an antenna.**

**All direction ...confirm from net**

**29. \_\_\_\_\_ component of data communication governs the overall communication on the network.**

**Transmission medium...confirm**

**30. In binary ASK, the peak amplitude of one signal level is 0 and the other is the same as the \_\_\_\_\_.**

**Amplitude**

**31. In \_\_\_\_\_ scheme, all the signal levels are on one side of the time axis, either above or below.**

**Unipolar...confirm from net**

**32. Simple sine wave can be used to send.**

**Amplitude**

**33. Paging system in data communication uses \_\_\_\_\_ waves.**

**Radio waves...confirm from net**

**34. Multipoint channel can be shared in \_\_\_\_\_ manner.**

**Both temporal and spartial...confirm**

**35. \_\_\_\_\_ is an example of multipoint topology**

**Bus...confirm**

**36. Bandwidth can be measured in \_\_\_\_\_.**

**Bps...confirm**

37. In \_\_\_\_\_ encoding scheme, we use three levels positive negative and zero

Bipolar...confirm from net

38. Header size \_\_\_\_\_ while moving down the layers at sending side

Decreases

39. \_\_\_\_\_ signals have limited number of discrete value

Digital....confirm

40. \_\_\_\_\_ is a block coding method

NRZ-1....confirm

41. Technique that allows the simultaneous transmission of multiple signals across a single data link, is known as \_\_\_\_\_.

Multiplexing....confirm

42. Simultaneous transmission of multiple signals across a single data link is called.

Multiplexing...confirm

43. Minimum bandwidth required for Manchester line coding scheme is \_\_\_\_\_.

1Mhz...confirm

44. AMI is a popular \_\_\_\_\_ encoding method.

Bi-polar....confirm

45. TCP/IP was presented by \_\_\_\_\_ in a research paper

Vin Cerf and bob Kahn...confirm

46. Among the following cables given below \_\_\_\_\_ cable has the cost as compared to others.

Medium....confirm

47. Among the following cables given below \_\_\_\_\_ cable has the lowest cost as compared to others.

Coaxial cable...confirm

48. Among the following cables given below \_\_\_\_\_ cable has the highest cost as compared to others.

Fiber optic cable...confirm

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

$n-1$ ....confirm

50. A twisted pair cable consists of \_\_\_\_\_ conductors

2 ....confirm

51. Packets travel in \_\_\_\_\_ layer of TCP/IP protocol suite  
Network ....confirm from net

52. HDB3 falls under which coding scheme?

Bipolar...confirm

53. According to the Nyquist theorem, the sampling rate must be at least \_\_\_\_\_ times the highest frequency contained in the signal.

2.....confirm

54. \_\_\_\_\_ protocol suite is being used by the modern internet communication

TCP/IP...confirm

55. LF (low frequency) band is used in \_\_\_\_\_ propagation

Ground....confirm

56. \_\_\_\_\_ is a type of serial transmission in which data bits are transmitted as a continuous stream in time with a master clock, start bits, stop bits and gaps are not used. Transmitter and receiver time is sync.

Synchronous....confirm

57. Identify the correct formula to calculate Propagation time.

Propagation time= Distance/ propagation speed....confirm

58. The communication of the application, transport and network layer is \_\_\_\_\_

Physical...confirm

59. Frames travel in \_\_\_\_\_ layer of TCP/IP Protocol suite.

Data link

60. Manchester encoding scheme achieves the same level of synchronization as \_\_\_\_\_.

RZ.....confirm

61. In Manchester and differential Manchester encoding schemes, the signal rate is \_\_\_\_\_ than that of NRZ.

Double...confirm from net

62. In a bidirectional communication each layer performs two \_\_\_\_\_ tasks in each direction.

Opposite...confirm

63. \_\_\_\_\_ is composed of thousands of interconnected networks expanded over large geographical area.

Local area network

64. Time taken by a periodic signal to complete one cycle is called.

Period...confirm from net

65. There are \_\_\_ common scrambling techniques

Two ....confirm

66. The bipolar encoding scheme was developed as an alternative of \_\_\_\_.

NRZ...confirm from net

67. FSK stands for \_\_\_\_\_.

Frequency shift keying....confirm

68. In \_\_\_ encoding scheme, the voltage level oscillates between a positive and a negative value although it may remain at zero level between the two values.

Polar...confirm from net

69. \_\_\_\_\_ is an example of transmitter.

Modem

70. The material used for conduction in twisted pair cable is \_\_\_\_\_.

Copper

71. RG-11 having impedance of 50 ohm is used in \_\_\_\_\_ Ethernet

Thin....confirm

72. \_\_\_\_\_ encoding scheme is somewhat a combination of the RZ and NRZ-I scheme

Manchester encoding...confirm from net

73. \_\_\_\_\_ has less electromagnetic interference as compared to other guided medium.

Unshielded Twisted Pair

74. Electromagnetic waves ranging in frequencies between \_\_\_\_\_ are called microwaves.

1 to 300 GHz

75. Switch is a \_\_\_\_\_ layer devices

Data link...confirm

76. \_\_\_\_\_ is Shannon capacity formula to determine highest theoretically data rate for a noisy channel.

Capacity = Bandwidth \*  $\log_2(1+SNR)$ ...confirm

77. \_\_\_\_\_ is the range of frequencies contained in a composite signal.

Bandwidth...confirm

78. In PCM technique Quantization is an \_\_\_\_\_ process

Un-balanced

79. In Ring topology, each node has a point to point dedicated link with.

Exactly 2 nodes...confirm

80. In \_\_\_\_\_ modulation process is used by the transmitting devices to shift their data to a specific carrier frequency for multiplexing.

Fdm...confirm

81. Five stations will have \_\_\_\_\_ full duplexed dedicated links among them to be connected in a Mesh topology.

10...confirm

82. Which of the following technique(s) is used for Analog-to-Digital Conversion.

Both Pulse Code Modulation(PCM) and Delta Modulation(DM)...confirm

83. The human voice normally frequency range from \_\_\_\_\_.

0 to 3000Hz

84. The layer of TCP/IP protocol suite which is on the top is known as \_\_\_\_\_ layer.

Application...confirm

85. In \_\_\_\_\_ type of error, two or more bits in the data unit will be changed.

Burst....confirm

86. \_\_\_\_\_ is the process of converting digital data to digital signal.

Line coding.....confrim

87. Manchester encoding scheme uses and inversion at the \_\_\_\_\_ of each bit.

Middle....confirm

88. FF:FF:FF:FF:FF:FF is a \_\_\_\_\_ link layer address.

Broadcast.....confrim

89. A3 34 45 11 92 F1 is a \_\_\_\_\_ link layer address.

Data, unicast....confirm

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

3.....confirm

91. \_\_\_\_\_ is the number of bits sent in 1 second

Bit rate(bps)...confirm

92. \_\_\_\_\_ Time required to send 1 single bit.

Bit interval...confirm

93. \_\_\_\_\_ are used to transport user data and control information relating to user data

Information frames(I-frames).....confirm

94. \_\_\_\_\_ are used only to transport control information

Supervisory frames(S-frames).....confirm

95. \_\_\_\_\_ are reserved for system Management

Unnumbered frames(U-frames).....confirm

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

U-frames....confirim

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

XOR....confirim

98. Data Link layer receives services from the \_\_\_\_\_ layer.  
Physical

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

Bit rate.....confirim

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

Broadcast

101. In Block coding we divide our message into blocks of k bits called as \_\_\_\_\_.

Data words.....confirm

102. To control and manage the transfer of data, a protocol called point to point (PPP) is used at the \_\_\_\_\_ layer

## Data Link

103. In character oriented protocol, each character of frame is encoded using \_\_\_\_ coding system.

ASCII

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

Data link layer ....confirm from net

105. \_\_\_\_\_ is used in the stop-and-wait protocol to overcome the issue of duplication.

Frame sequencing and Acknowledgment numbering...confirm from net

106. Stop-and-weight protocol is used for \_\_\_\_\_.

Both flow and error control....confirm

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

Difficult...confirm from net

108. Payload field of the PPP frame is of variable size and it can carry maximum data up to \_\_\_\_\_.

1500 bytes....confirm from net

109. 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 from net

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

PPP...confirm

111. In linear Block codes \_\_\_\_\_ of two valid code words creates another valid code word.

XOR...confirm

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

Presentation

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

false

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

6,5,4,3,2 only

115. \_\_\_\_\_ works with topologies in which one device is designated as a primary station and the other devices are secondary stations.

Polling

116. Signals travel through fiber optic cable are in the form of \_\_\_\_\_.

Light...confirm from net

117. PSK is susceptible to the noise degradation.

False

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

0.2

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

Line discipline

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

Data link layer

121. \_\_\_\_\_ is not a function of Data Link Control.

Modulation

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

Two adjacent nodes

123. The inversion of the level represents a 1 bit in \_\_\_\_\_ encoding

NRZ-I

124. Guard bands are used in \_\_\_\_\_ multiplexing technique, guard bands to avoid overlapping of frequency bands assigned to each user.

FDM...confirm

125. The \_\_\_\_\_ protocol uses both flow and error control.

Stop-and-Wait

126. Each computer on the Internet has a unique numeric address called a(n) \_\_\_\_\_.

IP address

127. WDM stands for \_\_\_\_\_.

Wave Division Multiplexing

128. A fiber -optic cable transmit signals in the form of \_\_\_\_\_.

Light

129. CDMA stands for \_\_\_\_\_.

Code Division Multiple Access

130. Quantization is a method of assigning \_\_\_\_\_ values in a specific range to sampled instances.

Integral

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

True

132. In circuit switched networks we have low efficiency but minimal \_\_\_\_\_.

Delay....confirm

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

Network Layer

134. A portion of the path that carries TX between a given pair of devices is known as \_\_\_\_\_.

Channel

135. Digital signals are referred to be \_\_\_\_\_.

Discrete

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

**Half-duplex, Stop and wait ARQ**

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

**Amplitude**

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

**Standard Ethernet**

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

**16**

140. In Pulse Code Modulation (PCM), the sampling is dependent on \_\_\_\_\_.

**Amplitude...confirm**

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

**Redundant bits**

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

**MAC**

143. PAP and CHAP are used by \_\_\_\_\_ as Authentication Protocols

**PPP...confirm**

144. Media Access Control (MAC) and Data link (DLC) constitute \_\_\_\_\_ layer

Data Link....confirm

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

Slotted ALOHA

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

0.1

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

No

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

Packetizing

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

$N-1$

150. Following characteristics fully describe \_\_\_\_\_,

Amplitude

Period/Frequency

Phase

Sine Waves

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

0.2

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

NRZ-I

153. In \_\_\_\_\_, both peak amplitude and frequency remains constant as the phase changes.

PSK

154. At the CRC generator, \_\_\_\_\_ added to the data unit before the divisional process.

0s are

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

Two times

156. In Block coding we divide our message into blocks of k bits called as \_\_\_\_\_.

Data words

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

Time

158. \_\_\_\_\_ of a signal is the collection of all the component frequencies it contains.

Frequency spectrum

159. \_\_\_\_\_ encoding is almost obsolete today

Unipolar

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

ASK

161. In \_\_\_\_\_, a signal is directed straight from antenna to antenna.

Line of sight propagation

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

Network

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

false

164. \_\_\_\_\_ signal can take infinite levels of intensity over time.

Analog....confirm from net

165. \_\_\_\_\_ is sometimes called the bit rate.

Data rate...confirm from net

166. \_\_\_\_\_ contains a repeater.

Active hub

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

UDP

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

Shared...confirm from net

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

Burst

170. TROPOSHERE is the layer of atmosphere above the troposphere but below space

False

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

Two times

172. Asynchronous transmission is \_\_\_\_\_.

Slow

173. Radio is an example of \_\_\_\_\_ signal conversion.

Analog to analog

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

Longitudinal Red Check (LRC)

175. Session layer is responsible for \_\_\_\_\_.

Maintaining the connection

176. 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

177. S-frames in High-Level Data Link Control (HDLC) are only used to transfer \_\_\_\_\_ information.

Control

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

**Frequency, Phase**

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

**Digital-to-Digital Conversion**

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

**Network**

181. In ASK correct formula for calculating the bandwidth is as \_\_\_\_\_.

$$B=(1+d)S....confirm$$

182. The type of ALOHA which improves the efficiency of Pure ALOHA is \_\_\_\_\_.

**Slotted ALOHA**

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

**Polling**

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

**DTE, DCE**

185. \_\_\_\_\_ is used in the Stop-and-Wait protocol to overcome the issue of duplication.

**Frame sequencing and Acknowledgement numbering**

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

**Network**

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

a global network of computers networks

188. We can have \_\_\_\_\_ different groups with a 4 bit block.

8

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

AM, PM and FM

190. DLC in Data Link Layer stands for \_\_\_\_\_.

Data Link Control

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

600

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

RG-58....confirm

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

RG-8, RG-9, RG-11 .....confirm

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

RG-8, RG-9, RG-11 .....confirm

195. \_\_\_\_\_ category of coaxial cable is used for Cable TV

RG59....confirm

196. In \_\_\_\_\_, each station is allocated a time slot during which it can send data.

**TDMA**

197. \_\_\_\_\_ transmission technology (based on Ethernet) provides a data rate of 1 billion bits per second.

**10BASE-T Ethernet**

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

false

199. dB is negative if a signal is \_\_\_\_\_.

Attenuated

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

Segmentation...confirm

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

900

202. Asynchronous TDM is efficient only when the size of the time slot is kept relatively \_\_\_\_\_.

Large

203. A sine wave is defined by \_\_\_\_\_ characteristics.

3

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

Data link

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

0

205. 4Collisions in CSMA/CA are avoided through \_\_\_\_\_.

All of the given

206. Human voice is example of \_\_\_\_\_ signal.

Analog

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

signal amplitude w.r.t time

208. Normally the value of Kmax in pure ALOHA is \_\_\_\_\_.

15

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

Active hub

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

Retransmitted

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

false

212. At the CRC checker, \_\_\_\_\_ means that the data unit is damaged.

**A nonzero remainder**

**213. Digitizing an Analog Signal is called \_\_\_\_\_.**

**Analog-to-Digital Conversion**

**214. WDM stands for \_\_\_\_\_.**

**Wavelength Division Multiplexing**

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

**All of the given**

**216. YMODEM has \_\_\_\_\_ Byte of data unit.**

**1024**

**217. Like Data link layer, \_\_\_\_\_ is also responsible for Flow control.**

**a. Transport Layer**

**218. In Block coding scheme, number of code words is always \_\_\_\_\_ data words.**

**Equal to**

**219. RZ stands for \_\_\_\_\_.**

**Return of Zero**

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

**Link**

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

**Escaped**

222. At the Application layer, object/information is in the form of \_\_\_\_\_.

**Packet**

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

**Single Bit Error**

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

**0.5**

225. POST stand for \_\_\_\_\_?

**Plain Old Telephone Service**

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

**Flow Control**

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

**Log base 2 L....confirm**

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

**Amplitude**

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

28

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

CSMA

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

Reservation

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

Error Detection and Correction

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

Five

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

none of the given

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

0.5

236. \_\_\_\_\_ mode of serial transmission guarantees fixed rate of data.

Isochronous...confirm from net

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

**Digital....confirm from net**

238. The most common type of connector used by coaxial cable is \_\_\_\_\_.

**BNC**

239. Which of the following statement is correct?

**Digital signals are less prone to Noise**

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

**12(4khz)....confirm**

241. In an analog hierarchy to carry 12 voice channels, 5 group \_\_\_\_\_

**48kHz....confirm**

242. In an analog hierarchy to carry 60 voice channels, a 10 super group \_\_\_\_\_ bandwidth

**240kHz....confirm**

243. In an analog hierarchy to carry 600 voice channels, a 6 Master group \_\_\_\_\_

**2.52Mhz....confirm**

244. In an analog hierarchy to carry 3600 voice channels, a Jumbo group \_\_\_\_\_

**16,984MHz .....confirm**

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

EOT

246. Data is transmitted using light through a \_\_\_\_\_ cable.

fiber-optic

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

Network

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

$\neq 0$

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

Data Link layer

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

Metropolitan Area Network

251. In frequency shift keying, \_\_\_\_\_ remain(s) constant.

Both Peak amplitude and Phase ...confirm

252. In Amplitude shift keying, \_\_\_\_\_ remain(s) constant.

Both frequency and phase...confirm

253. In Phase shift keying, \_\_\_\_\_ remain(s) constant.

Both peak amplitude and frequency...confirm

254. Analog signals are refers to be \_\_\_\_\_

Continuous

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

False

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

Input lines.....confirm

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

U-frames

258. Terminal, microprocessor, computer, printer or any other device that generates or consumes digital data is known as \_\_\_\_\_

DTE

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

Passive, Active, Intelligent

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

Simple Parity Check

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

None of given option

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

**Difficult**

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

**0 to 63**

264. \_\_\_\_\_ is normally used where speed is priority in data transfer.

**Hybrid transmission**

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

**False**

266. In analog transmission, the base signal is called the \_\_\_\_\_.

**Carrier Signal**

267. In \_\_\_\_\_ a dedicated communication path is established between two stations through the nodes of the network

**Circuit switching**

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

**CDMA/CD**

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

**NULL**

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

**Escaped**

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

PAP

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

Zero

273. VCI address is \_\_\_\_\_ address in virtual circuit approach.

Global...confirm from net

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

PAP

275. Possession of TOKEN gives the station the right to \_\_\_\_\_.

Send the data

276. The transmission medium that carries the message is referred to as the \_\_\_\_\_.

communication channel

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

Four....confirm

278. Sampling means measuring \_\_\_\_\_ of signal at equal intervals

Amplitudes

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

Checksum

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

Shannon.....confirm

281. To calculate the data rate for noiseless channel \_\_\_\_\_ formula is used.

Nyquist....confirm

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

Any

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

FDMA

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

Overflow of the receiver buffer

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

FSK, PSK

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

Bus

287. In the \_\_\_\_\_ method, the stations in a network are organized in a logical ring.

Token-passing

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

network

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

Direct....confirm from net

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

Contention Window

291. \_\_\_\_\_ relative measures the strength of two signals.

Decibal ....confirm

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

periodic and continuous

293. There are \_\_\_\_\_ types of guided media.

3

294. AM signal requires \_\_\_\_\_ the BW of original signal

Twice

295. CHAP is an Authentication Protocol, which uses \_\_\_\_\_ process to authenticate user information.

Three-way

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

2

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

3

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

All mentioned

299. Most commonly used connector for twisted pair cable is \_\_\_\_\_.

RJ-45....confirm from net

300. \_\_\_\_\_ does not happen until all the data is transferred and all of the resources are freed.

Switching

301. A local telephone network use \_\_\_\_\_ network.

Circuit switched...confirm from net

302. Microwaves are \_\_\_\_\_.

Unidirectional ....confrim

303. \_\_\_\_\_ have established standards for using these signals for communication between devices such as keyboards, mice, PCs and printers

**Infrared waves...confirm from net**

**304. Datagram approach and virtual circuit approach are two popular approaches which lead us to \_\_\_\_\_.**

**Circuit switching....confirm**

**305. In circuit switching when two end devices 'A' and 'B' connects with each other they send \_\_\_\_ request.**

**Acceptance**

**306. In optical fiber a glass or plastic core is surrounded by a \_\_\_\_\_.**

**Cladding...confirm**

**307. \_\_\_\_\_ are used for multicast communication, such as radio and television.**

**Radio waves...confirm**

**308. DLC in data link layer stands for \_\_\_\_\_**

**Data Link control....confirm**

**309. In virtual Circuit network all packets follow \_\_\_\_\_ path**

**Dedicated**

**310. Multi mode technology has \_\_\_\_\_ main types for light propagating.**

**Two**

**311. If the message is going to pass through a packet-switched network. It can be divided into packets of \_\_\_\_\_.**

Both fix and variable size

312. According to state, fewer than \_\_\_\_\_ crossbar points can be used at once.

25%

313. \_\_\_\_\_ and \_\_\_\_\_ are the two types of addressing in virtual circuit approach.

Local, Global

314. Cable TV networks use \_\_\_\_\_ cables

Coaxial....confirm from net

315. The size of the packet is determined by the network and \_\_\_\_\_.

Governing Protocol

316. In circuit switching total delay is combination of connection time. Data transfer time and \_\_\_\_\_

Connection tear down time

317. Which one of the following is not among the required phases for the actual communication in a circuit-switched network?

Protocol

318. Electromagnetic waves ranging in frequencies between 1 and 300 GHz are called \_\_\_\_\_.

Microwaves

319. 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

320. In case of higher data rate, the number of impacted bits will be \_\_\_\_\_.

Higher

321. In baseband transmission, a digital signal is transmitted as \_\_\_\_\_.

Analog signal....confirm from net

322. \_\_\_\_\_ Cable is used in wavelength division multiplexing.

Fiber optic....confirm from net

323. The \_\_\_\_\_ technique expands the bandwidth of a signal by replacing each data bit with n bits using a spreading code.

DSSS...confirm from net

324. When the bandwidth of a link is greater than combined bandwidths of the

Frequency division....confirm from net

325. According to the Fourier analysis, frequencies obtained after decomposition of no period.

Continuous.....confirm from net

326. Router is a network device which operates on the \_\_ layer of the TCP/IP protocol.

Network...confirm from net

327. Uni polar, polar and bipolar are the types of \_\_\_\_\_

NRZ-I....confirm from net

328. According to stats, lower than \_\_\_\_\_ crossbar point can be used at once .

25%....confirm from net

329. In \_\_\_\_\_ TDM, slots are dynamically allocated to the connected stations to improve bandwidth efficiency.

Statistical...confirm from net

330. In star based network comprising of four computers and on switch, total number of cables needed will be \_\_\_\_\_

4...confirm from net

331. The conversion of analog sample of the signal into digital form is called \_\_\_\_\_ process.

Sampling and quantizing...confirm from net

332. On a communication link, different channels are separated by unused strips of bandwidth called as \_\_\_\_\_.

Guard band

333. \_\_\_\_\_ is an example of host in a network.

Computer...confirm from net

334. In \_\_\_\_\_ TDM, each input connection has an allotment in the output even if is not sending data.

Synchronous ...confirm

335. \_\_\_\_\_ coding scheme are useful for LAN but not for long ranges

Biphase...confirm

336. In \_\_\_\_\_ signal changes its shape or form.

Distortion...confirm

337. \_\_\_\_\_ Protocol suite is being used by the modern internet communication.

TCP/IP...confirm from net

338. in NRZ-1 the signal is inverted if \_\_\_\_\_ is encountered.

1...confirm from net

339. Simultaneous transmission of multiple signal across a single data link is called \_\_\_\_\_

Multiplexing..confirm from net

340. Two stations are connected via a secure link in which messages are encrypted from source to the destination message is called \_\_\_\_\_

Protocol

Which one of following is a scrambling coding technique?

- B8ZS

According to the Fourier analysis, frequencies obtained after decomposition of digital signals are \_\_\_\_\_.

Discrete

\_\_\_\_\_ is the heart of blocking code.

- Coding

Wireless transmission can be divided into \_\_\_\_\_ broad groups.

Three...confirm from net

Wiring used for transmission modes depends upon \_\_\_\_\_.

- Latency

If a digital transmission system is sending five bits in every half a second, the bit-rate of the system.

- 10 bps...confirm

If the message going to pass through a packet-switched network, it can be divided into packets of \_\_\_\_\_.

- Both fix and Variable size

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

12

In optical fiber a glass or plastic core is surrounded by a \_\_\_\_\_.

- Cladding

In transmission impairments \_\_\_\_\_ noise occurs from other source like

Induced...confirm

\_\_\_\_\_ is a digital process that allows connections to share the high bandwidth of a link.

- TDM

Bandwidth in hertz in the range of \_\_\_\_\_ contained in a composite signal.

- Frequencies

LAN stands for \_\_\_\_\_.

- Local Area Network

Demultiplexer is a \_\_\_\_\_ device.

- One to many

Mr. Asif while sitting in Lahore is linking with his friend in Dubai through Skype is a \_\_\_\_\_.

- Wide Area Network

In \_\_\_\_\_ modulation, frequency and amplitude remain constant.

- Amplitude

In TDM based digital hierarchy used by the Telephone companies, DS-1 is a single digital channel of \_\_\_\_\_.

- 1.544 Mbps...confirm

In TDM based digital hierarchy used by the Telephone companies, DS-2 is a single digital channel of \_\_\_\_\_.

6.312 Mbps...confirm

In TDM based digital hierarchy used by the Telephone companies, DS-3 is a single digital channel of \_\_\_\_\_.

44.376MBps...confirm

In TDM based digital hierarchy used by the Telephone companies, DS-4 is a single digital channel of \_\_\_\_\_.

274.176 MBps.....confirm

The bandwidth-delay product defines the number of bits that can fill the \_\_\_\_\_.

- Link

If a digital-signals has four levels, then we need \_\_\_\_\_ bits to represent each level.

- 2

Routing is a function of \_\_\_\_\_ layer.

- Network

\_\_\_\_\_ relatively measures the strength of two signals.

- Decibel

Taking off the header from the message is called \_\_\_\_\_.

- Encryption

In frequency domain plot, which value is replaced with frequency?

- Wavelength

\_\_\_\_\_ is the process of converting binary data to a digital signal.

- Line coding

Low pass channel with \_\_\_\_\_ bandwidth is not real and is used for theoretical modeling.

- Narrow or wide...both are confirm

Unit of phase is \_\_\_\_\_.

- Degree

BFSK stands for \_\_\_\_\_.

- Binary Frequency Shift Key

\_\_\_\_\_ is NOT an example of connecting device.

- TCP

Coaxial cables are categorized by their \_\_\_\_\_ ratings.

Radio Government (RG)...confirm  
Which one of the following is not among the required phases for the actual communication in a circuit switched network

- Protocol

A common bipolar encoding scheme is called \_\_\_\_\_.

- AMI

A telephone line analog signal has got the bandwidth of \_\_\_\_\_.

4 kHz...confirm

In \_\_\_\_\_ systems, resources are allocated on demand.

- Circuit switching

A fiber-optic cable transmit signals in the form of \_\_\_\_\_.

- Light

Composite wave can be used to send \_\_\_\_\_.

- Frequency

Routing is the function of \_\_\_\_\_ layer.

- Network

A virtual-circuit network operates on \_\_\_\_\_ layer.

- Datalink

In TCP/IP model, the Physical Layer exchanges data in the form of \_\_\_\_\_.

- Bits...confirm

\_\_\_\_\_ signal completes certain pattern in a specific amount of time.

- Periodic

If a digital signal has four levels, the we need \_\_\_\_\_ bits to represent.

- 2

We can have combination of \_\_\_\_\_ possible codes with a 5-bit code.

- 32

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

- 3

Top most organization that provides support for the Internet Standard process is called \_\_\_\_\_.

- IETF

If the message is going to pass through a packet-switched network, it can be divided into packets of \_\_\_\_\_.

- Both-fix and variable size

\_\_\_\_\_ data moves faster and timing errors are less frequent because the transmitter and receiver time is synced.

Synchronous...confirm

In frequency modulation, the frequency of the oscillator changes according to the \_\_\_\_\_.

- **Input Voltage**

**Binary Amplitude Shift Keying also called as:**

- **On-Off Keying**

**Bi-polar uses \_\_\_\_\_ voltage levels.**

**Two**

**In serial data transmission \_\_\_\_\_ data transmission mode can be cheap but slower.**

- **Asynchronous**

**In star-based network comprising of four computers and one switch, total number of cable needed will be \_\_\_\_\_.**

- **4**

**Parabolic antenna is used for \_\_\_\_\_ communication.**

- **Microwave...confirm**

**In circuit switching total Delay is combination of Connection Time and \_\_\_\_\_.**

- **Connection tear down time**

**Datagram switching is done on \_\_\_\_\_.**

- **Network Layer**

**Token Ring was devised by \_\_\_\_\_.**

- **IBM...confirm**

**In TDM based digital hierarchy used by the Telephone companies, DS-0 is a digital channel of \_\_\_\_\_.**

- **64 kbps...confirm**

**\_\_\_\_\_ can be published using Request for Comments (RFCs).**

- **Internet Draft....confirm**

In transmission impairments \_\_\_\_\_ noise occurs from the random motion of electrons in a wire.

- Thermal noise...confirm

Which one of the following is among the required phases for the actual communication in a circuit switched network?

- Data transfer

According to the Fourier analysis, frequencies obtained after decomposition of non-periodic digital signals are \_\_\_\_\_.

- Bit length

The most common type of connector used by the coaxial cable is \_\_\_\_\_.

- BNC

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

Serial data transmission

\_\_\_\_\_ have established standards for using these signals for communication between devices such as keyboards, mice, PCs, and printers.

- Infrared waves

In case of Frequency shift key, the difference between two frequency is represented as \_\_\_\_\_.

- 2 delta....confirm

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

- RG-58

Cellular telephone uses \_\_\_\_\_ waves for communication.

Radio waves

\_\_\_\_\_ layer is responsible for the creating of the datagrams.

- Network

In virtual circuit approach when a frame enters a switch and when it leaves a switch its VCI always\_\_\_\_\_.

- Remain the same

According to stats, fewer than\_\_\_\_\_ crossbar points can be used at once.

- 25%

Data format used at Transport layer of TCP\IP protocol suit is called\_\_\_\_\_.

- Packet

A virtual circuit network operates on \_\_\_\_\_ layer.

- Application

If 32 bits are sent in two seconds then the bitrate for that signal is\_\_\_\_\_.

- 64 bps
- \_\_\_\_\_ normally used for long-distance data transfer.
- Both parallel and Serial data transmission

\_\_\_\_\_ is a block coding method.

- 8B\10B

TCP\IP was chosen to be the official protocol of internet\_\_\_\_\_.

- 1983

To measure the data rate \_\_\_\_\_ theoretically formula(s)Were developed.

- Four

In FSK, Baud rate is less than or equal to \_\_\_\_\_ rate.

Bit rate.....confirm

\_\_\_\_\_ signal is represented by the discrete values.

- Digital

Electromagnetic waves ranging in frequencies between 3 kHz and 1 GHz are called \_\_\_\_\_.

- Radio waves

Suppose a signal is amplitude then the value of decibel will be \_\_\_\_\_.

- Positive

\_\_\_\_\_ technique does not follow analog conversion.

- QAM

In Pulse Code Modulation (PCM), the sampling is dependent on \_\_\_\_\_.

- Amplitude

\_\_\_\_\_ is the sub type of Time Division Multiplexing Technique.

- Statistical TDM

Modulation of analog signal is needed if the medium is \_\_\_\_\_ in nature.

- Bandpass

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

ASK-FSK

There \_\_\_\_\_ components of data communication system.

5...confirm

QPSK stands for \_\_\_\_\_.

- Quadrature phase shift key

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

- Shannon

Binary Amplitude Shift Keying(ASK) is also called as:

- On-Off Keying....confirm

Some manufacturers provide a special port called the \_\_\_\_\_.

- IrDA

To calculate the data rate for noiseless channel \_\_\_\_\_ formula is used.

- Nyquist

Two PCs and one printer are connected in a network within a room, it is an example of \_\_\_\_\_.

- LAN...confirm from net

Analog the following cables given, \_\_\_\_\_ cable provides highest bandwidth and less attenuation.

- Fiber optical

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

- Shannon

In circuit switched networks we have low efficiency but minimal \_\_\_\_\_.

- Delay

Polar encoding scheme uses \_\_\_\_\_ voltage level.

- 2....confirm

TCP/IP protocol suit consists of \_\_\_\_\_ layers.

- 5.....confirm

Bandwidth in hertz is the range of \_\_\_\_\_ contained in a composite signal.

- Frequencies....confirm

\_\_\_\_\_ is an example of a host in a network.

- Computer

Set of rules to be followed for effective communication is called \_\_\_\_\_.

- Protocol

\_\_\_\_\_ is NOT an example of a connecting device.

- TCP

When an antenna transmits radio waves, they are propagated in \_\_\_\_\_.

- Only up and down direction

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

- One

\_\_\_\_\_ and \_\_\_\_\_ are the two types of addressing in virtual circuit approach.

- Local, Global

In transmission implements \_\_\_\_\_ noise occurs from the effect of one wire on the other

- Cross talk...confirm

In computer network the stations are connected to each other in such a way that each station is connected to every other station through dedicated links. This makes \_\_\_\_\_.

- Bus

In scrambling coding scheme, the number of pulses replacing the bits will be \_\_\_\_\_?

- Equal to pulses.....confirm

In the context of analog to analog signal conversation technique. "PM" Stands for \_\_\_\_\_.

- Phase modulation

\_\_\_\_\_ relatively measurement the strength of two signals.

- Decibel

Datagram approach and circuit approach are two popular approaches which lead us to\_\_\_\_\_.

- Packet switching

In virtual circuit approach when frame enters a switch and when it leaves a switch its VCI always\_\_\_\_\_.

- Remain the Same

\_\_\_\_\_ means loss of energy in signal.

**Attenuation**

A local telephone network use \_\_\_\_\_ network.

**Circuit switched**

In Amplitude Shift Keying, \_\_\_\_\_ of the signal is/are changed.

- Amplitude

In frequency domain plot, which value is plot on Y-axis?

- Amplitude....confirm

In pulse code modulation the term sampling can also be referred as \_\_\_\_\_.

- Pulse Amplitude Modulation

In analog transmission of digital data, the required bandwidth is always proportional to the signal rate expect in \_\_\_\_\_ a digital to analog conversion technique.

- ASK

WDM stands for\_\_\_\_\_.

- Wavelength Division Multiplexing

\_\_\_\_\_ does not follows analog to analog conversion.

- QAM

On a communication link, different channels are separated by unused strips of bandwidth called as \_\_\_\_\_.

Guard band

- 

\_\_\_\_\_ layer converts frames coming from Data Link Layer into bits and sends

Them on the transmission medium.

- Physical

Wavelength binds the \_\_\_\_\_ of a simple sine wave to the propagation speed of the medium.

Period of the frequency

book page 61

The bandwidth delay product defines the number of bits that can fill the \_\_\_\_\_.

Network

The size of the packet determined by the network and \_\_\_\_\_.

Governing protocol

To improve the performance of line coding \_\_\_\_\_ coding was.....?

- Block coding...confirm

Which one of the following is not a sampling technique?

- Neutral sampling

\_\_\_\_\_ is normally used where speed is priority in data transfer.

Hybrid transmission

In a computer network, five stations are connected to each other in such a way that each station is connected to every other station through dedicated links. This makes \_\_\_\_\_ topology.

**Mesh...confirm**

Some manufacturer provide a special port called the \_\_\_\_\_ port that allows a wireless keyboard to communicate with a PC.

- IrDA

Current technology supports \_\_\_\_\_ modes for propagation of light.

- Two

We quantize the sampling output into certain levels based on range of \_\_\_\_\_ and required accuracy.

- Amplitude....confirm

\_\_\_\_\_ is the Nyquist bit rate formula for noiseless channel.

- $BitRate=2*Bandwidth*log_2 L$ ...confirm

A frequency is called \_\_\_\_\_, if the rate of change in sine wave Is Instantaneous.

- Infinite frequency book page 59

Which multiplexing technique involves signals composed of light beams?

- WDM....confirm

\_\_\_\_\_ is a multiplexing technique which shifts each signal to a different carrier frequency.

- FDM...confirm

Entire band in United States is regulated by \_\_\_\_\_ authorities.

- FCC

