



**CS-601 Data Communication  
Update MCQS For Quiz-2 File.**

**Solve By Vu Topper RM**

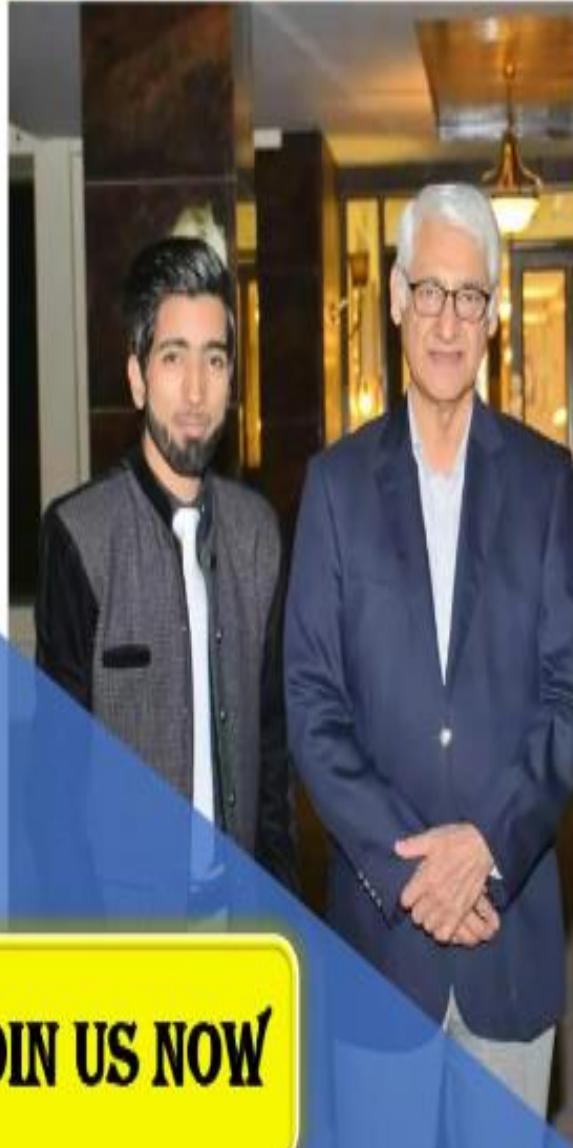


**80 To 100% Marks**

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**Rizwan Manzoor**

**0322-4021365**

**Question No:1** (Marks:1) **Vu-Topper RM**  
TCP/IP was presented by \_\_\_\_\_ in a research paper.  
**Vin Cerf and bob Kahn**

**Question No:2** (Marks:1) **Vu-Topper RM**  
HDB3 falls under which coding scheme?  
**Bipolar**

**Question No:3** (Marks:1) **Vu-Topper RM**  
Line coding scheme is roughly divide into \_\_\_\_\_ broad categories.? **Five**

**Question No:4** (Marks:1) **Vu-Topper RM**  
A frequency is called \_\_\_\_\_, if the rate of change in sine wave Is  
Instantaneous.  
**Infinite frequency**

**Question No:5** (Marks:1) **Vu-Topper RM**  
The bipolar encoding scheme was developed as an alternative of \_\_\_\_\_.  
**NRZ**

**Question No:6** (Marks:1) **Vu-Topper RM**  
In \_\_\_\_\_ TCP/IP was declared as the official protocol of internet. **1983**

**Question No:7** (Marks:1) **Vu-Topper RM**  
If 32 bits are sent in two seconds then bitrate for that signal is  
\_\_\_\_\_.  
**16 bps**

**Question No:8** (Marks:1) **Vu-Topper RM**  
Relatively measures the strength of two signals.  
**Decibel**

**Question No:9** (Marks:1) **Vu-Topper RM**  
In \_\_\_\_\_ data moves faster and timing errors are less frequent  
because the transmitter and receiver time is synced.  
**Synchronous**

**Question No:10**

**(Marks:1)**

**Vu-Topper RM**

PSK is \_\_\_\_\_ susceptible to noise as compared to ASK.

**False**

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**Question No:11**

There are \_\_\_\_\_ components of data communication system. **5**

**Question No:12**

**(Marks:1)**

**Vu-Topper RM**

Which one of following is a scrambling coding technique?

**B8ZS**

**Question No:13**

**(Marks:1)**

**Vu-Topper RM**

In NRZ-I the signal is inverted if \_\_\_\_\_ is encountered. **1**

**Question No:14**

**(Marks:1)**

**Vu-Topper RM**

If a digital transmission system is sending five bits in every half a second, the bitrate of the system will be \_\_\_\_\_.

**5 bps**

**Question No:15**

**(Marks:1)**

**Vu-Topper RM**

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

**Network**

**Question No:16**

**(Marks:1)**

**Vu-Topper RM**

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

**BitRate=2\*Bandwidth\*log2 L**

**Question No:17**

**(Marks:1)**

**Vu-Topper RM**

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

**Question No:18**

**(Marks:1)**

**Vu-Topper RM**

When data is sent using \_\_\_\_\_, multiple data bits are transmitted over multiple channels at the same time.

**parallel transmission**

**Question No:19**

**(Marks:1)**

**Vu-Topper RM**

In Binary ASK, the peak amplitude of one signal level is 0 and the other is the same as the \_\_\_\_\_ of the carrier.

**Amplitude**

**Question No:20**

**(Marks:1)**

**Vu-Topper RM**

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

**RG-58**

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**Question No:21**

**(Marks:1)**

**Vu-Topper RM**

Time taken by a periodic signal to complete one cycle is called \_\_\_\_\_ period.

**Question No:22**

**(Marks:1)**

**Vu-Topper RM**

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

**BNC**

RJ-11

RJ-57

RJ-45

**Question No:23**

**(Marks:1)**

**Vu-Topper RM**

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

**Digital to analog**

Analog to Analog

Analog to digital

Digital to digital

**Question No:24**

**(Marks:1)**

**Vu-Topper RM**

QAM stands for \_\_\_\_\_ .

**Quadrature Amplitude Modulation**

**Question No:24**

**(Marks:1)**

**Vu-Topper RM**

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

**Twice**

**Question No:25**

**(Marks:1)**

**Vu-Topper RM**

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

**Modem**

**Question No:27**

**(Marks:1)**

**Vu-Topper RM**

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

Microwaves

Radio waves

Simple waves

**Infrared waves**

**Question No:28**

**(Marks:1)**

**Vu-Topper RM**

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

Worst Data Manipulation

Wideband De-Modulation

Wideband Division Multiplexing

**Wavelength Division Multiplexing**

Voltage controlled oscillator(VCO) generates \_\_\_\_\_ .

Carrier Signals

**Periodic signals** **Google**

Signal elements

Composite Signals

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

**Network** **Google**

Physical

Datalink

Application

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**29**

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

**Local area network WAN**

**Question No:30**

**(Marks:1)**

**Vu-Topper RM**

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

**Amplitude**

**Question No:31**

**(Marks:1)**

**Vu-Topper RM**

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

**Periodic**

**Question No:32**

**(Marks:1)**

**Vu-Topper RM**

The baud rate is \_\_\_\_\_ to the bit rate.

**Measure**

**Question No:33**

**(Marks:1)**

**Vu-Topper RM**

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

**Wavelength**

**Question No:34**

**(Marks:1)**

**Vu-Topper RM**

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

**Copper**

**Question No:35**

**(Marks:1)**

**Vu-Topper RM**

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

**Shannon**

**Question No:36**

**(Marks:1)**

**Vu-Topper RM**

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

**All direction**

Left direction

Right direction

Only up and down direction

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**Question No:37**

**(Marks:1)**

**Vu-Topper RM**

**Vu-Topper RM**

In \_\_\_\_\_ topology, each computer/station is attached to other through a central device.

**Star topology**

**Question No:38**

**(Marks:1)**

**Vu-Topper RM**

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

**Input Voltage**

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**39**

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

**Discrete**

**Question No:40**

**(Marks:1)**

**Vu-Topper RM**

\_\_\_\_\_ is the heart of block coding.

**Substitution      Google**

**Question No:41**

**(Marks:1)**

**Vu-Topper RM**

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

**Three**

**Question No:42**

**(Marks:1)**

**Vu-Topper RM**

In transmission impairments \_\_\_\_\_ noise occurs from other sourcelike

**Induced**

**Question No:43**

**(Marks:1)**

**Vu-Topper RM**

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

**TDM**

**Question No:44**

**(Marks:1)**

**Vu-Topper RM**

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

**Question No:**  
**One to many**

**(Marks:1)**

**Vu-Topper RM**

**Question No:45**

**(Marks:1)**

**Vu-Topper RM**

In TDM based digital hierarchy used by the Telephone companies, DS-0 is a single digital channel of

**64 kbps**

32 kbps

128 kbps

1.544 Mbps

**Question No:46**

**(Marks:1)**

**Vu-Topper RM**

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

**Network**

**Question No:47**

**(Marks:1)**

**Vu-Topper RM**

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

**Narrow**

**Question No:48**

**(Marks:1)**

**Vu-Topper RM**

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

**Degree**

A switched network consists of a series of interlinked \_\_\_\_\_ called switches.

Root

**Nodes** **Google**

Points

System

**Question No:50**

**(Marks:1)**

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

**TCP**

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**Question No:** (Marks:1) **Vu-Topper RM**

**Question No:51** (Marks:1) **Vu-Topper RM**  
Parabolic antenna is used for \_\_\_\_\_ communication.  
**Microwave** **Vu-Topper RM**

**Question No:52** (Marks:1) **Vu-Topper RM**  
Token Ring was devised by \_\_\_\_\_.  
**IBM**

**Question No:53** (Marks:1) **Vu-Topper RM**  
Induced noise Cable TV networks use \_\_\_\_\_ cables.  
**Coaxial**

**Question No:54** (Marks:1) **Vu-Topper RM**  
\_\_\_\_\_ signal is represented by the discrete values.  
**Digital**

**Question No:55** (Marks:1) **Vu-Topper RM**  
Electromagnetic waves ranging in frequencies between 3 kHz and 1 GHz are called \_\_\_\_\_.  
**Radio waves**

**Question No:56** (Marks:1) **Vu-Topper RM**  
Most commonly used connector for twisted pair cable is \_\_\_\_\_.  
**RJ-45**

**Question No:57** (Marks:1) **Vu-Topper RM**  
Binary Amplitude Shift Keying is also called as:  
**On-Off Keying**

**Question No:58** (Marks:1) **Vu-Topper RM**  
\_\_\_\_\_ is a multiplexing technique which shifts each signal to a different carrier frequency.  
**FDM**

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

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**Vu Topper RM**

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**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**59**

**Vu-Topper RM**

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

ITU

**FCC**

ANSI

NASA

**Question No:60**

**(Marks:1)**

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

**1**

**Question No:61**

**(Marks:1)**

**Vu-Topper RM**

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

**TCP/IP**

**Question No:62**

**(Marks:1)**

**Vu-Topper RM**

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

**Distortion**

**Question No:63**

**(Marks:1)**

**Vu-Topper RM**

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

**Segment**

**Question No:64**

**(Marks:1)**

**Vu-Topper RM**

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

**Sampling**

**Question No:65**

**(Marks:1)**

**Vu-Topper RM**

A frequency is called \_\_\_\_\_ if sine wave does not change with time

**Zero frequency**

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**Question No:66**

**(Marks:1)**

**Vu-Topper RM**

**Vu-Topper RM**

Open system interconnection (OSI) has \_\_ number of layers 7

**Question No:67**

**(Marks:1)**

**Vu-Topper RM**

$N = S \cdot r$  is the formula for finding

**Baud rate**

**Question No:68**

**(Marks:1)**

**Vu-Topper RM**

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

Watts

Bauds

**Degree**

Bits per second

**Question No:69**

**(Marks:1)**

**Vu-Topper RM**

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

**Bandwidth**

**70**

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

**Open system interconnection**

**Question No:71**

**(Marks:1)**

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

**Data stream**

**Question No:72**

**(Marks:1)**

**Vu-Topper RM**

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

**1Mhz**

**Question No:73**

**(Marks:1)**

**Vu-Topper RM**

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

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**Two**

Five

Four

Three

**Vu-Topper RM**

**Question No:74**

**(Marks:1)**

**Vu-Topper RM**

Packets travel in \_\_\_\_\_ layer of TCP/IP protocol suit  
**Network**

**Question No:75**

**(Marks:1)**

**Vu-Topper RM**

\_\_\_\_\_ protocol suit is being used by the modern internet communication  
**TCP/IP**

**Question No:76**

**(Marks:1)**

**Vu-Topper RM**

Frames travel in \_\_\_\_\_ layer of TCP/IP Protocol suite.  
**Data link**

**Question No:77**

**(Marks:1)**

**Vu-Topper RM**

There are \_\_\_ common scrambling technique  
**Two**

**Question No:78**

**(Marks:1)**

**Vu-Topper RM**

FSK stands for \_\_\_\_\_.  
**Frequency shift keying**

**Question No:79**

**(Marks:1)**

**Vu-Topper RM**

RG-11 having impedance of 50 ohm is used in \_\_\_\_\_ Ethernet  
**Thin**

Fast

Thick

None of these

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**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**Vu-Topper RM**

**Question No:80**

**(Marks:1)**

**Vu-Topper RM**

Switch is a \_\_\_\_\_ layer devices

**Data link**

**81**

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

**Un-balanced**

**Question No:82**

**(Marks:1)**

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

**Application**

**Question No:83**

**(Marks:1)**

**Vu-Topper RM**

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

**Middle**

**Question No:84**

**(Marks:1)**

**Vu-Topper RM**

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

**3**

**Question No:85**

**(Marks:1)**

**Vu-Topper RM**

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

**Information frames**

**Question No:86**

**(Marks:1)**

**Vu-Topper RM**

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

**U-frames**

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**Vu-Topper RM**

**Question No:87**

**(Marks:1)**

**Vu-Topper RM**

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

**Bit rate**

**Question No:88**

**(Marks:1)**

**Vu-Topper RM**

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

**Difficult**

**Question No:89**

**(Marks:1)**

**Vu-Topper RM**

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

**PPP**

**Question No:90**

**(Marks:1)**

**Vu-Topper RM**

Traditionally MANs have been implemented using one of the 2 technologies,

Circuit Switching and Packet Switching **False**

**Question No:**

**(Marks:1)**

**Vu-Topper RM**

**91**

Which one is not the function of data link layer?

**Line discipline**

**Vu-Topper RM**

**Question No:92**

**(Marks:1)**

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

**Modulation**

**Question No:93**

**(Marks:1)**

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

**Stop-and-Wait**

**Vu-Topper RM**

**Question No:94**

**(Marks:1)**

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

**DSSS**

**Vu-Topper RM**

**Question No:95**

**(Marks:1)**

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

**Delay**

Error

Speed

Throughput

**Vu-Topper RM**

**Question No:96**

**(Marks:1)**

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

**Discrete**

**Vu-Topper RM**

**Question No:97**

**(Marks:1)**

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

**Standard Ethernet**

**Vu-Topper RM**

**Question No:1**

**(Marks:1)**

**Vu-Topper RM**

**Question No:98**

**(Marks:1)**

**Vu-Topper RM**

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

**Redundant bits**

**Question No:99**

**(Marks:1)**

**Vu-Topper RM**

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

**Slotted ALOHA**

**Question No:100**

**(Marks:1)**

**Vu-Topper RM**

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

**Packetizing**

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**01**

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

**0.2**

**Question No:102**

**(Marks:1)**

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

**Two times**

**Question No:103**

**(Marks:1)**

**Vu-Topper RM**

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

**Time**

**Question No:104**

**(Marks:1)**

**Vu-Topper RM**

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

**Unipolar**

**Question No:105**

**(Marks:1)**

**Vu-Topper RM**

Which of the following is most affected by noise?

**ASK**

**Question No:1**

**(Marks:1)**

**Vu-Topper RM**

**Vu-Topper RM**

**Question No:106**

**(Marks:1)**

**Vu-Topper RM**

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

**Data rate**

**Question No:107**

**(Marks:1)**

**Vu-Topper RM**

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

**Active hub**

**Question No:108**

**(Marks:1)**

**Vu-Topper RM**

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

**Slow**

**Question No:109**

**(Marks:1)**

**Vu-Topper RM**

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

**Frequency, Phase**

**Question No:110**

**(Marks:1)**

**Vu-Topper RM**

We can have \_\_\_\_\_ different groups with a 4 bit block. 8

**Question No:111**

**(Marks:1)**

**Vu-Topper RM**

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

**Data Link Control**

**12**

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

**TDMA**

**Question No:113**

**(Marks:1)**

**Vu-Topper RM**

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

**Large**

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**Question No:1**

**(Marks:1)**

**Vu-Topper RM**

**Question No:114**

**(Marks:1)**

**Vu-Topper RM**

Human voice is example of \_\_\_\_\_ signal  
**Analog**

**Question No:115**

**(Marks:1)**

**Vu-Topper RM**

Normally the value of Kmax in pure ALOHA is \_\_\_\_\_.  
**15**

**Question No:116**

**(Marks:1)**

**Vu-Topper RM**

YMODEM has \_\_\_\_\_ Byte of data unit.  
**1024**

**Question No:117**

**(Marks:1)**

**Vu-Topper RM**

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

**Question No:118**

**(Marks:1)**

**Vu-Topper RM**

Which one of the following is not a Channelization Protocol?  
**CSMA**

**Question No:120**

**(Marks:1)**

**Vu-Topper RM**

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

**Question No:121**

**(Marks:1)**

**Vu-Topper RM**

The transmission medium that carries the message is referred to as the \_\_\_\_\_.  
**Communication channel**

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Which error detection method uses one's complement arithmetic  
**Checksum**

**Question No:123** (Marks:1) **Vu-Topper RM**  
Like 10 Base 5, 10 Base 2 is a \_\_\_\_\_ topology LAN.  
**Bus**

**Question No:124** (Marks:1) **Vu-Topper RM**  
There are \_\_\_\_\_ types of serial transmission  
**2**

**Question No:125** (Marks:1) **Vu-Topper RM**  
\_\_\_\_\_ and \_\_\_\_\_ are the two types of addressing in virtual circuit approach.  
**Local, Global**

**Question No:126** (Marks:1) **Vu-Topper RM**  
\_\_\_\_\_ relatively measures the strength of two signals. **Decibel**

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

Internet Society (ISOC)  
Internet Architecture Board (IAB)  
**IETF**  
IRTF

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

**Pulse Amplitude Modulation**  
Pulse sample Modulation  
Pulse line modulation  
Pulse Frequency Modulation

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

**Thermal noise**

- Impulse noise
- Cross talk
- Induced noise

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

**bits per second    bps**

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

Amplitude and Frequency

**Amplitude**

- Frequency and Amplitude
- Phase

A variation of AMI encoding is called as \_\_\_\_\_.

**Pseudoternary**

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

Frequency

**Amplitude**

- Time period
- None

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

- 1
- 2
- 3

4

For a noiseless channel, theoretical formula to calculate the data rate was developed by \_\_\_\_\_.

**Nyquist**

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

Amplitude

**Segmentation**

Phase

Frequency

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

**Polar**

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

**Nyquist Bit Rate**

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

**Two different**

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

**Opposite**

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.

Bus

Ring

Star  
**Mesh**

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

**Unipolar**

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

Proposed Standard

Draft Standard

**Internet Draft**

Internet Standard

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

Synchronous

**Asynchronous**

Isochronous

Metachronous

Manchester and differential Manchester encoding schemes are subtypes of \_\_\_\_\_ encoding scheme.

**Double**

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

**Asynchronous**

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

Quality phase shift key

Queuing phase shift key  
**Quadrature phase shift key**  
Quality physical shift key

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

**Synchronous**

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

Phase modulation

**Frequency modulation**

Amplitude modulation

Quadrature modulation

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

**Bit**

Byte

Signal

Decibel

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

**Exactly 2 nodes**

Simple sine wave can be used to send ----- .

**Amplitude**

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

One

**Two**

Three

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Four

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

Dedicated

**Shared**

Multiplexed

Infinite

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

**Bits**

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

Them on the transmission medium.

Application

**Physical**

Network

Transport

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

**Nyquist Bit Rate**

A frequency is called \_\_\_\_\_ if sine wave does not change with time

**Zero frequency**

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

**ASK, PSK**

In \_\_\_\_\_ transmission mode(s), multiple bits are sent simultaneously.

## Parallel transmission

Block coding scheme contains \_\_\_\_\_ number of steps.

- 3
- 4
- 5
- 6

Which of following technique(s) is used for Analog-to-Digital Conversion?

**Pulse Code modulation (PCM)**

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

$N*(N-1)$

Communication between two user in a cellular (Mobile) network is an example of \_\_ communication **Full duplex**

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**

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

Baud Frequency Shift Key

**Binary Frequency Shift Key**

Barrier Frequency Shift Key

Bridge Frequency Shift Key

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

Continuous

**Discrete**

Bit length

Homogeneous

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

0

1

Negative

**Positive**

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

**Bit rate**

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

**Wavelength**

Amplitude

Phase

Time

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

4

6

7

**8**

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

Noise

Delay  
**Attenuation**  
Distortion

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

Line  
Differential Manchester  
**NRZ-I**  
Block

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

**5 bps**  
10 Hz  
0.2 bps

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

Non-periodic

**Periodic**  
A Periodic  
Wavelength

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

**Shannon**  
Nyquist  
Propagation  
Greedy

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

- Synchronous
- Asynchronous
- **Isochronous**
- Metasochronous

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

- Packets
- Frames
- **Bits**
- Segments

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

- Analog
- **Digital**
- Both
- Continuous

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

- **AMI**
- NRZ
- RZ
- QAM

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

- Signal rate
- Bit rate
- **Decibel**
- Pulse rate

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

- Line
- Differential Manchester
- NRZ-I
- Block

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

**LAN**

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

**ASK**

NSK

FSK

PSK

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

**Period of the frequency book page 61**

The Full form of AMI encoding scheme is \_\_\_\_\_.

**Alternate mark inversion**

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

**Bi-polar**

A virtual-circuit network is a cross between a \_\_\_\_\_ network and a datagram network.

**Datalink**

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

240 kHz

240 Hz

120 kHz

**60kHz**

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Narrow bands of light in wave division multiplexing are denoted by \_?

$\Pi$

B

A

**Lambda  $\lambda$**

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

**Ground**

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

Line switched

**circuit switched**

bit switched

packet switched

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

**coaxial cables**

Which digital multiplexing technology is use to allow several connections to share the high bandwidth of a l

**TDM**

FDM

ADM

WDM

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

Meters

Millimeters

Centimeters

**Micrometers**

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

**Three**

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

Light TDM

Barrier TDM  
**Statistical TDM**  
Amplitude TDM

Simultaneous transmission of multiple signals across a single data link is called\_\_\_\_\_

**Multiplexing**  
Demultiplexing  
Modulation  
Demodulation

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

**Radio waves**  
light wave  
infrared waves  
microwaves

\_\_\_\_\_are used for multicast communications, such as radio and television.

**Radio waves**  
light wave  
infrared waves  
microwaves

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

**Digital**  
Analog  
Hybrid  
Automated

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

16kHz  
12kHz  
8kHz  
**4kHz**

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

**FDM**

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ADM  
DAM  
SDM

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

**Circuit switching**

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

**Light**

Waves

Sound

None of the given

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

Fixed size

Variable size

**Both fix and variable size**

None of the these

In circuit switching, when two end devices “A” and “B” connects with each other they send \_\_\_\_\_ request.

**Acceptance**

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

14%

**25%**

30%

100%

Virtual Circuit Identifier is the \_\_\_\_\_ of packet.

Length

Header

Size

**Address**

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

Axis

**Focus**

Origin

Center

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

**Governing Protocol**

Instructions

Switching time

Delay

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

**Dedicated**

Paging system in data communication uses \_\_\_\_\_ waves

**Radio waves**

light wave

infrared waves

microwaves

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

Remain same

Sometimes changes

**Remain the same**

Always changes

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

Statistical

Isochronous

**Synchronous**

None of the given

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

**Medium**

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

**Coaxial cable**

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

**Fiber optic cable**

In synchronous \_\_\_\_\_, the data flow of each input connection is divided into units, where each input occupies one input time slot.

FDM

**TDM**

WDM

DWDM

When the bandwidth of a link is greater than the combined bandwidths of the signals, we use \_\_\_\_\_ multiplexing.

**Frequency division**

Time division

Hybrid division

Wavelength division

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

**Network**

Physical

Transport

Datalink

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

QAM

ASK

FSK

**Line coding**

\_\_\_\_\_ signals can take infinite levels of intensity over time.

Digital

Discrete

**Analog**

Logical

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

**Decreases**

Set of rules to be followed for effective network communication is called

\_\_\_\_\_.

**Protocol**

Datagram (packet) travels across \_\_\_\_\_ in a network.

**Switching**

During transmission, \_\_\_\_\_ is the effect of one wire on the other.

**Crosstalk**

Induced noise

Thermal noise

Thermal noise

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

**Link**

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

**Analog**

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

**Amplitude**

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

**Frequency**

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\_\_\_\_\_ is normally used for long-distance data transfer.

Both parallel and Serial data transmission

The conversion of \_\_\_\_\_ sample of the signal into \_\_\_\_\_ form is called quantizing process

**Sampling and quantizing**

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**

Latency is made of-----components.

Two

Five

**Four**

Three

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

**2**

4

6

8

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

**Both temporal and spartial.**

Communication between two users in a Cellular (Mobile) network is an example of \_\_\_\_\_ communication.

**Full duplex**

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

**Hybrid transmission**

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

**Latency**

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

- One
- Two**
- Six
- Five

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

**Log base 2L**

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

**Equal to pulses**

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

- 30
- 32**
- 34
- 36

When two people are talking to each other in a room then transmission medium between them is:

- Air**
- Cable
- Wireless medium
- No medium required

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

- ARZ
- RZ**
- ARZ1
- IMP

\_\_\_\_\_ 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**                      **Google**

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

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## **Radio Government (RG)**

Frequency modulation (FM)

Amplitude modulation (AM)

Electronic Industries Association (EIA)

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

Bi directional

**Unidirectional**

Multi directional

Omni directional

A virtual-circuit network is a cross between a \_\_\_\_\_ network and a datagram network.

**Circuit-switched**

Packet switched

Message switched

Both message and packet switched network

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

**FDM**      **Google**

TDM

PDM

CSMA

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

Statistical

Isochronous

**Synchronous**      **Google**

Asynchronous

Cable TV uses the \_\_\_\_\_ category of coaxial cable.

RG-47

RG-58

**RG-59**

RG-11

Connection setup means using \_\_\_\_\_ channels in circuit switched network.?

**Satellite**

Communication

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

Bi-pass

Low-pass

**Bandpass**

High-pass

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

PSK, FSK

**FSK, PSK**

ASK, FSK.

ASK, PSK

\_\_\_\_\_ is the scope of VCI variable in virtual circuit approach.

**Local**

Global

None of these

$N = S \times r$  is the formula for finding \_\_\_\_\_ .?

Bit rate

**Baud rate**

**Google**

Data element

Signal element

In \_\_\_\_\_ TDM, a round of data units from each input connection is collected into a frame.

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Statistical  
Non-Periodic  
**Synchronous**  
Asynchronous

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

Local  
**Global**  
Private  
Variable

Virtual-Circuit Networks and datagram networks are the sub categories of \_\_\_\_\_.

**Packet-switched networks**  
Circuit Switched Networks  
Message switched networks  
Both circuit and message switched networks

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

Light wave  
**Microwaves**  
Radio waves  
Infrared waves

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

Coaxial  
Fiber Optic  
**Shielded Twisted Pair**  
Unshielded Twisted Pair

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

12

10

20

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

**$B=(1+d)S$**

$B=(1*d)S$

$B=(d-1)S$

$B=(d-5)S$

Switching at the \_\_\_\_\_ layer in the traditional telephone network uses the circuit-switching approach.

Data Layer

Session Layer

**Physical Layer**

**Google**

Network Layer

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

**$2 \Delta$**

$4 \Delta$

$6 \Delta$

$2X5 \Delta$

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

Line switching

Packet switching

**Circuit switching**

Dynamic switching

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

**ASK, PSK**

FSK, ASK

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PSK, FSK  
FSK, QPSK

In circuit switching total Delay is combination of Connection Time,  
Data transfer time and \_\_\_\_\_.

Switching time

Receiving time

Acknowledgement time

**Connection tear down time**

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