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ASSIGNMENT-2

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CENTER NAME - C.S.C ACADEMY

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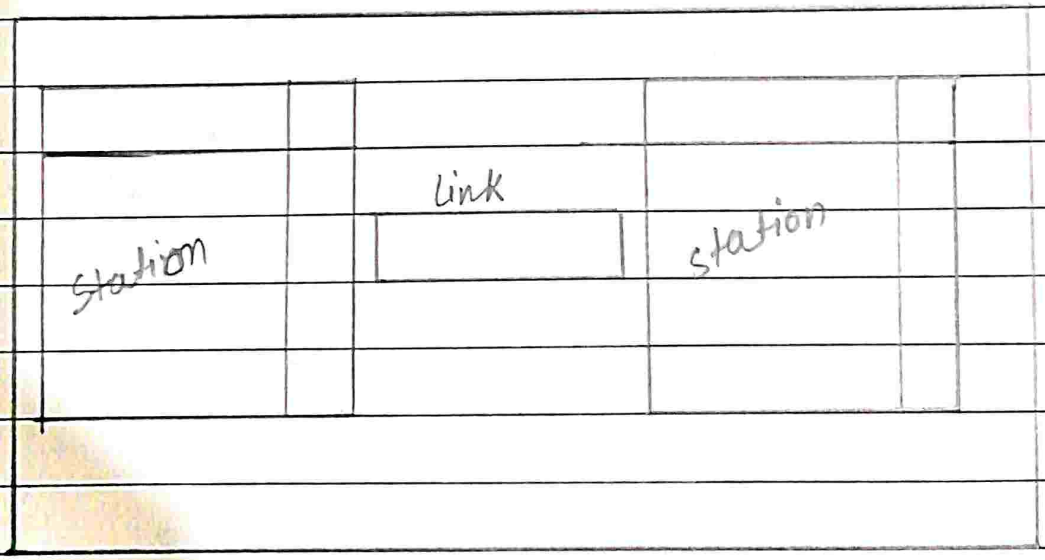
Data Communicoteon

Q.1 What are different - Types of netwarks ?

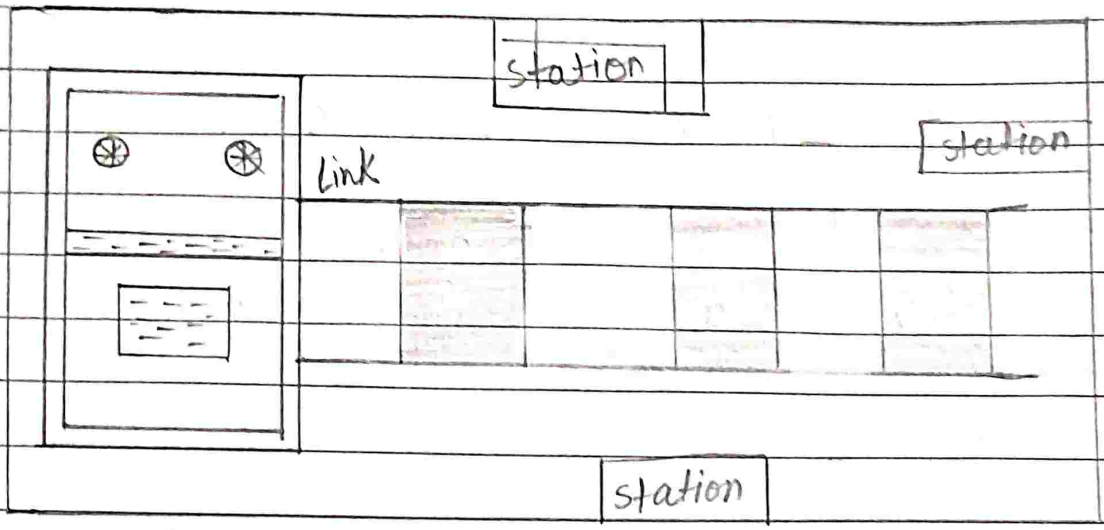
Ans A netwark is a set of devico often to as Connected by communicotion links to share the computing resources.

A node can be a Computer, printer, smart phone refrigeration, Car or ony other devico Capable of sending and/or recev data generted by other nodes on the netwarks.

Types of Connection -
Point to point
Point - to - multipoint
Point - to - point Vl. point - to - multipoint

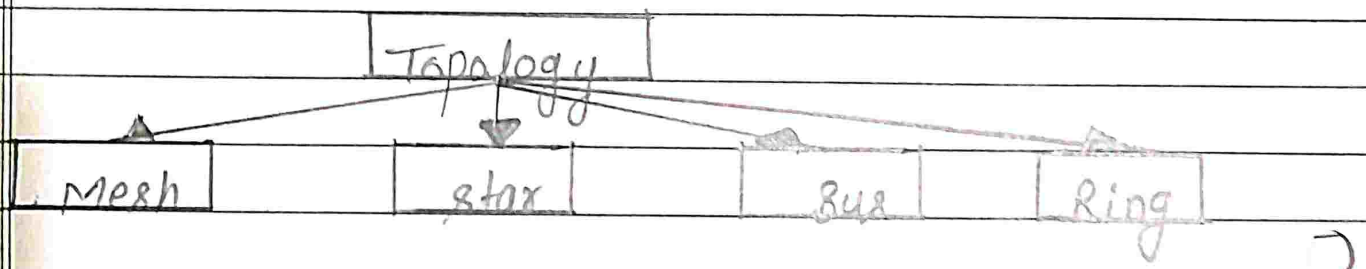


A point to - point

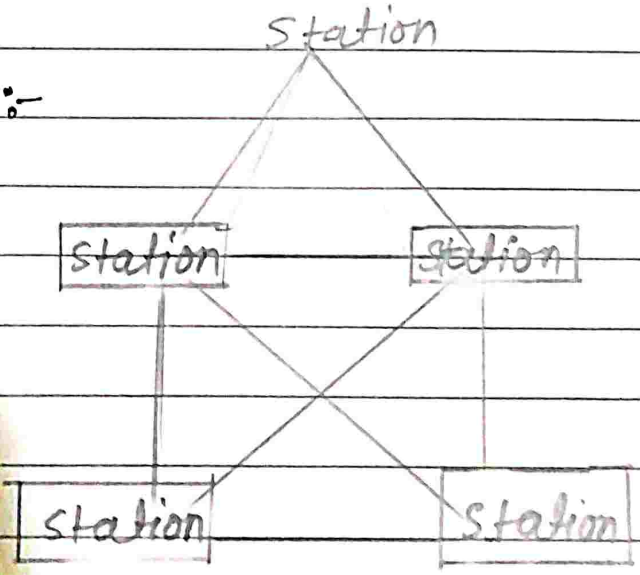


Mainframe

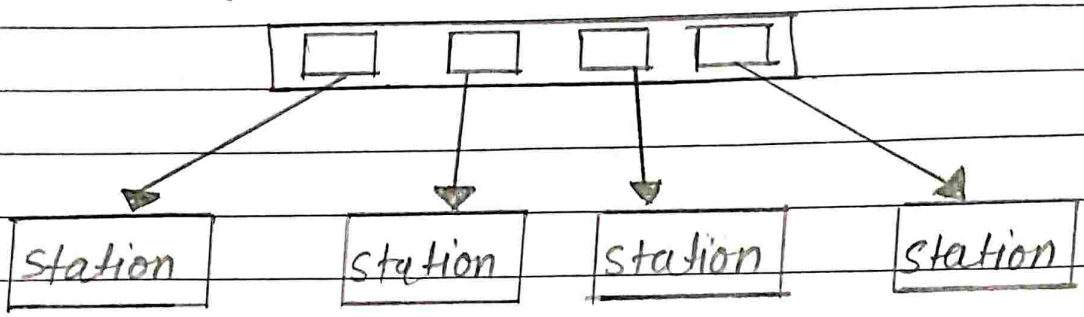
Types of the palogies



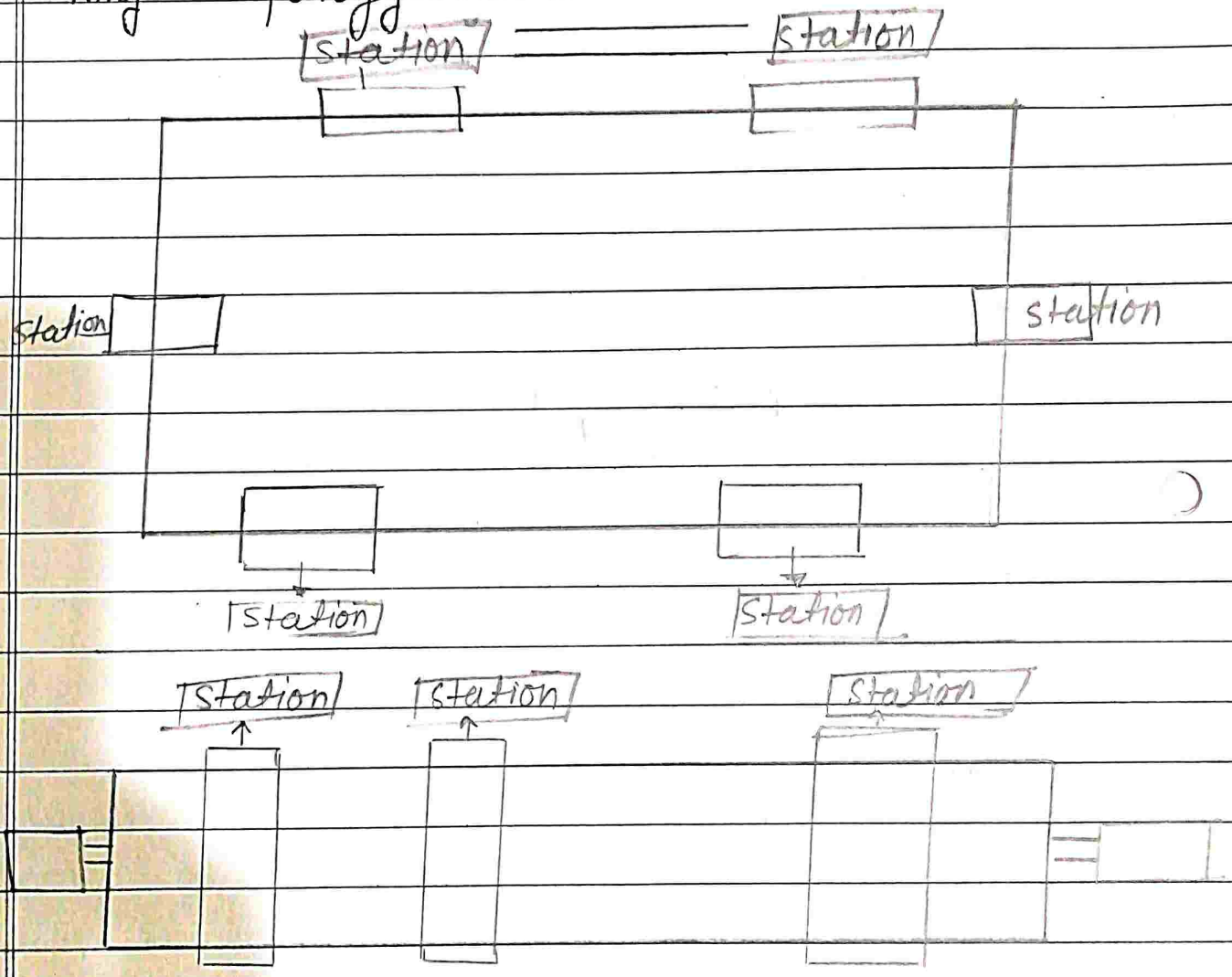
i) Mesh :-



ii) star Topology :-



iii) Ring Topology :-



Lan :- A local area network (LAN) is usally privately owned and links the devices in a single

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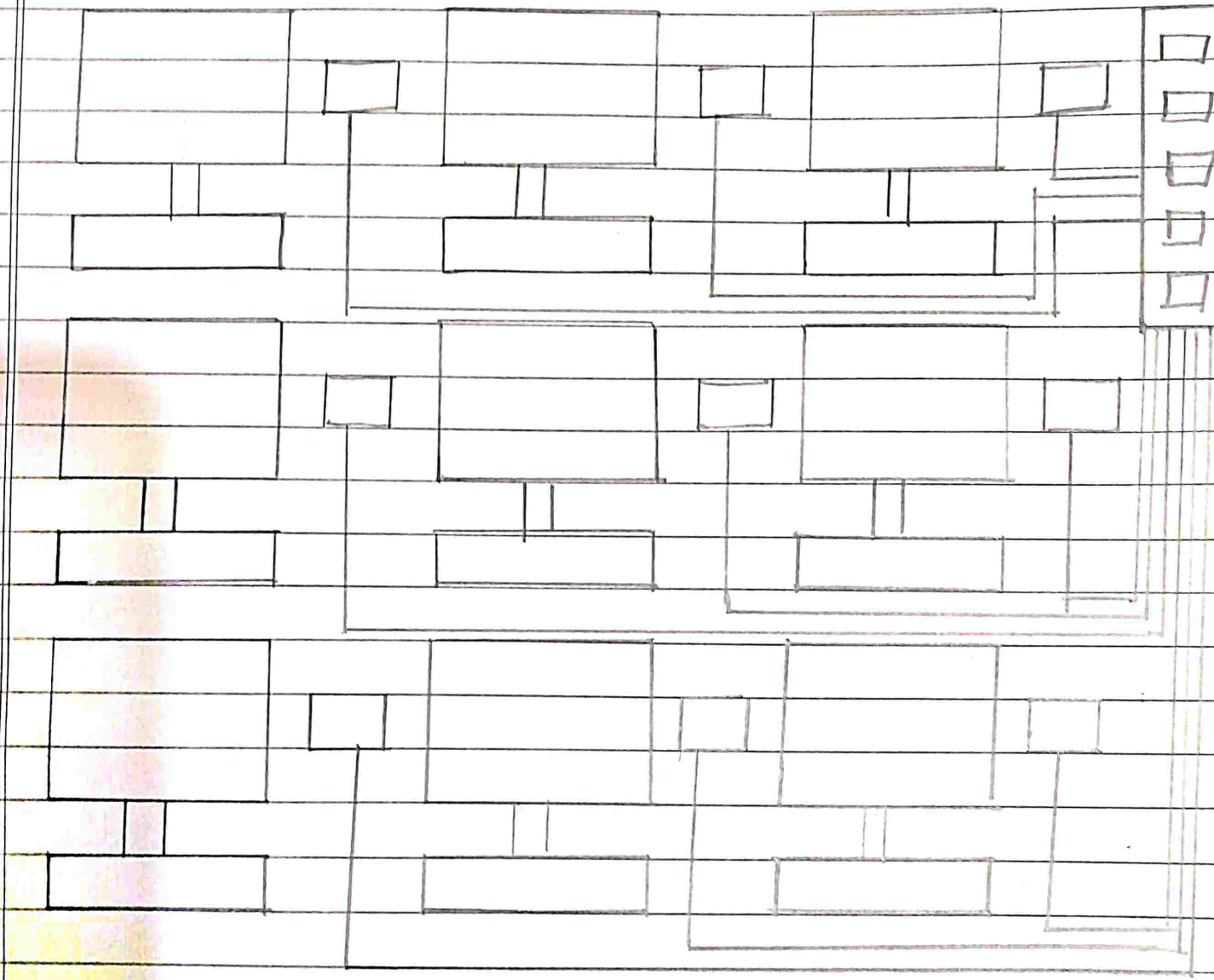
~~pro~~ office building or campus as shown in figure given blow.



Lan Cont - Depending on the needs of an organization and the type of tennalogy used a lan can be as simple as two PCs and a printer In some One home office or it ea extend through a company and Indude audio vedeo feripperas.
Currently lan size is limited to a few KMs lans

In our mood high tech world are now that Just fourpair of pound to gether in a cashing to connect electronic objects to each other Cables in fact, ar a necessary Component that keep out planet connected most to todays connecting relies on shielded and unshielde cable

Shielded twisted pair Cable (STP) has the Indindua pair of again for double (UIP) has each pair are then wrapped Intubing without any other protection UTP cables, are less expensive and a more popular type at cubling knowing which cable to use for a specific application depends on the pewtedian neede from power frepuency (EMT) This is where shildid cable become Impotant.

Preventing Electromagnetic Interference - Electronagneti interference (E) or radio frequency interference. (RET) as its also refered to is an electronic disturbance generated by external electronic or electrical sources such as electric circut noise the truth. Is EMI/RET is all around us Just like the static you may hear during a phone all the same is true foots networking. It the EMT noise is strong enough it may inter fere with the actua data traffic and prevent computers from hearing eac other, has to resent the intarmation a second time the more after the network slows down. thes E disturbance Can lower. Performance of acircult can b

are designed to allow resources to be shared between personal computer or work evare e.g. printer, software, leg, and application programe are data.
One of the Computer may be given a large Capality disk drive and may become a server to clients software Can be stored on this Sentral Seaver and used as needed by the whole group in addition to size lans are distinguished from other types of network their trumsmission media and topology.

WAN (wide Area network) - A wide area network (WAN) Provider long-distance transmission of data nage audio video information over large geographies areas that may comprise a country a Continal or even the whole world a wan can be as the back bones that connect a home computer to the Internet we normally refer to the first as a evitened WAN and to the Second as a point to point WAN.
The Switched wan Connects the end system which usa Comprise a Cinterent-working Connecting device) that Connects to another LAN or WAN the point to point WAN is normally a line laxed from a telephone or cable Provider that Connects a home computer or small lan to or Internet service provides (ISP) this Type of WAN is often used to provide internet acces.

Explain the Shielded twisted pair (STP) an unshielded twisted pair (UTP)

Interipted ranging on increase in Error rate to a Complete lass of Intarmation.

Q.3 What are difference between baseband and broad-band transmission ?

In a baseband transmission the band width of the cable is Consumed by a single sn broad band transmiss signals are sent on multiple singals in the next simultaneously also.

i user digital Signaling.
ii No frequency division multipleting
iii Disections tramission.
iv Singal travels over short distance

ii → Braband Singnalling –

i uses along singnaling
(ii) uses an along singn unidirectional transmission.
(iii) Frequency division mulliple.ing is possible.
iv Signal can traul over long distance bl fare ruated.

Q.4 What are the difference a nub, moden, routes a a Switch ?

In an ethernet network there are some net working devices that pay thier roles at various levels suc as homs switches and router the function of the there devices are all quite different from one anoth even if some times they are all intergrated in single device due to that many people full con fo

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about the differents between the switch and router the following part will focues on the topic hub vs switch router, comming to clarify different among them.

Hub :- Hub is commonly used to connect segments of CAN (Local area network) A hub contains multiple ports when a packet arrives at one it is copied to the other ports so that all segments at the LAN can see all packet Hub acts as the comman connection point for device in a network

Switch - A switch operates at data link of the OSI (open system Interconnection) Reference model and therefore support any packet CANS that use switches to join are called switched ethernet LANS in network, Switched Ethernet LANS in network switched ethernel LANS in network the switch is the devices that filters and forwards packets between LAN segments.

Router - A router is connected to least two networks commonly two LAN and WANS (Wide area networking) or LAN and its V.S.I.S (internet service provises) / network the places where two or more networks connect using heades and for routing tonies routes never mixes the best to forward the packets in addition routers use protocol to Communicate with each other and sig

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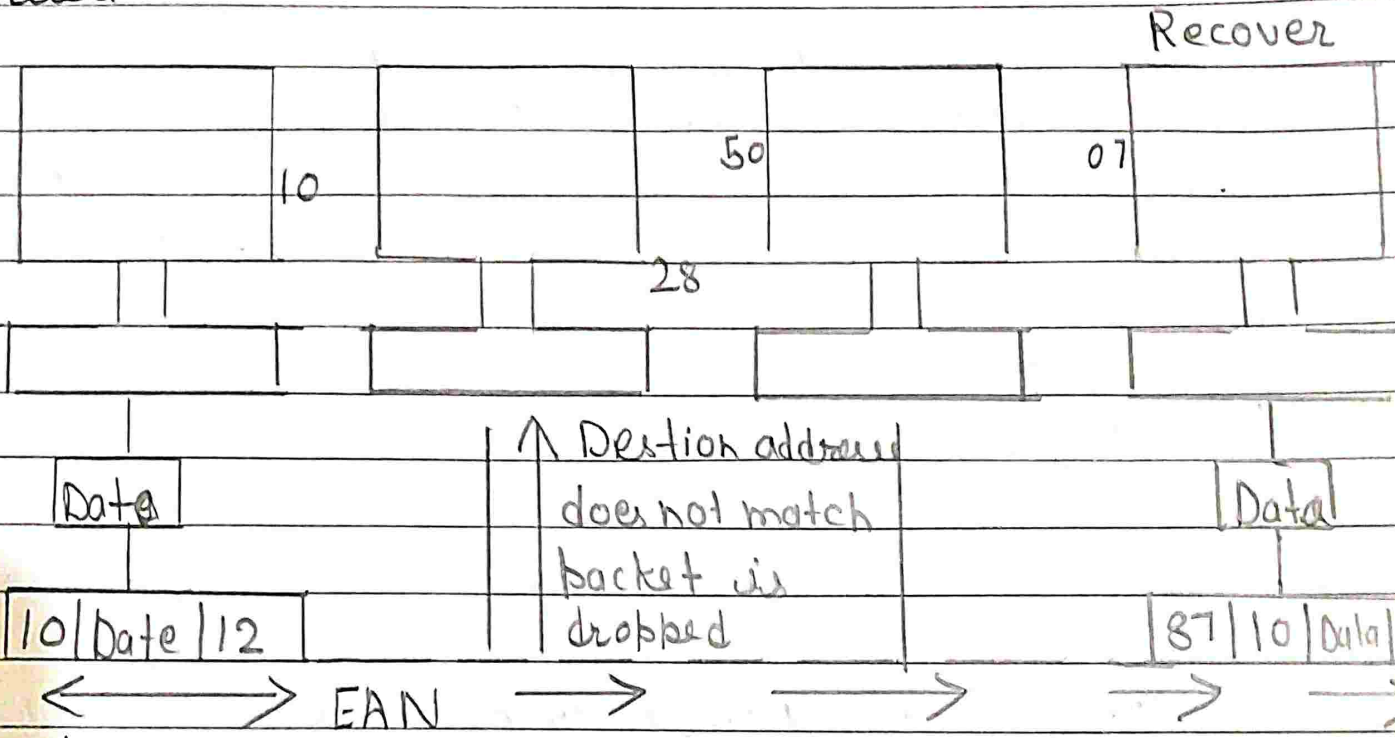
the best route between any two nasts In a work, router forwards ata packets almong networks.

Q.5 When you move the NIC Cards from One PC to another PC does the MAC address transferred as well?



Q.6 When troubles hooting Computer network problems what comman hard ware-related prob Can Occur?

A large percentage of a network is made up of hardware problems these can range from malfuctioning hard devices. drives broken NICS and even hardware start up Incorrectly hardwa Configuration is also One of these culprits to

Q.7 In a network that contains two Servers and tw

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Q.7 workstations, where is the best- to Installan antivirses. P ?
The best solution is to Intsall anti-virus on all the Computer in the netwasks This will protect each devic from the other in case some malicious user there to Insert a virus into the Servers or Legitimate users.

Q.8 Define static IP and bynamic IP.? Disues the difference between IP04 and IPV6.
when a device is assigned astatic IP address the address does not change most devices use dynamic IP address. which are assigned by the netwark when they connect and change over time.
Static IPs address - Mast users web-sit matter dont hud static. IP addresses
static Satatic IP addresses devices are website need to remember your. IP. address one example in VPN or other remote access. one example is VPN solutions that trest (unitelists) Cestain. IPs for security purpase A static IP address is not required if you are hosting a server although it can simply the setup process google bes provides tow options.
Wynamic IP address — use advanced setings for you netwark to configare dynamic DNS when you netwark to configare dynamic DNS entry with is new IP address So outside users can use the Some domain home you can choose the aynamic DNS provider and don't have to hast all additional softwar

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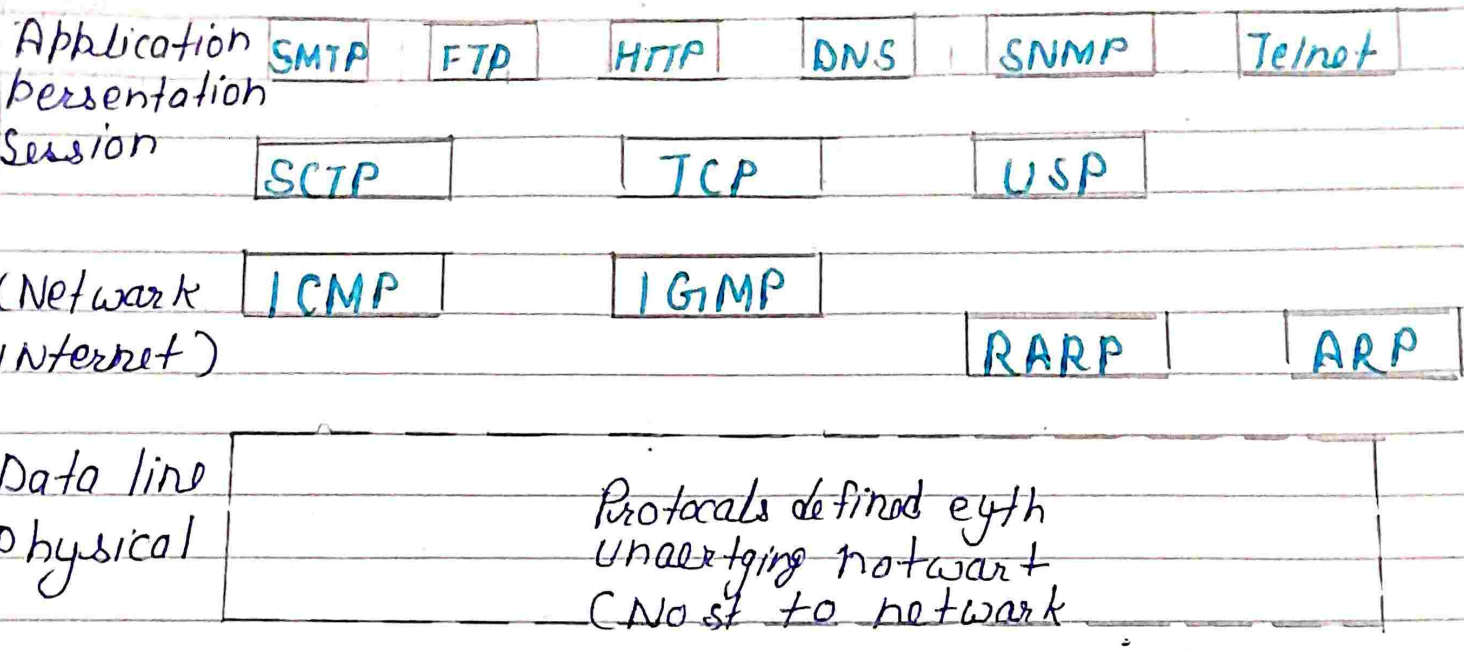
~~Lan - A Local area network (CAN) is uscally pr your computer.~~

Discuss the between IPV4 and IPV6

Difference	IPV4	IPV6
Security	Ser writy is depented on applications IPV4 was not designed with secusty in mind.	IP See (Internet Pokal Scurity is built into the IPV6 usable with apopes key infurtion -re
packetheader	Does not idintipes packt Flow for Q.O.S nonding which inculdes arectum option.	pacted head contains Checku moptions flow ~~Lable if eld flow for~~ QOS hondin g
DNS roords	Addrase (A) recards maps postaimanes	Address (AAAA) recor maps has thames.
Campabitiy with moble device.	IPV4 addressves the dot-dencind notation. that why it its naisuitable for mobile network.	IPV6 addressis represen in Chexaitinwad. Coulam. Shipprali nation. Pubis bothu soitedte.
Mapping	(uses ARP (addoese Resolution) Protecal) to map to macaddess.	Mobilenet wark NDP (Neighger Distovery Pootocal make Ro MAC ad

Discuss TCP/IP model Indetail -

The figure given below shows the comperpson of TCP/IP



0.11 What is a web Browser (Drowser)? Give Some Example of brower.

A web browser or simply browser is an application used to access and view Common web browser mole micro soft Edge internet Explares. Google, Chrome, Mozile firefox end apple Surface. The primary functio of a web browser is to render .HIML The Code u to design or mark up web pages.

11 What is search engine? Give example?

A search engine is a web-based tool that enable users to locate information on the ward wide web popular example of search. search engines are google and MSM Search, search engine utilize out matsen software application (referred to as robu

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Spiders) that travel along the web following links from page to page. Wide to site the Information gathered by the spiders is used to create a search able index of the web.

Q.12 What is the internet & WWW? What are the use of internet in our daily life?

The Internet is a global network of networks Connecting millions of users world wide via many Computer network using a simple standard comman addressing system and basic communication palocal called. TCP/IP This allows message sent over the internet table broken into small ~~pieces~~ pieces called packets which travel over many different routes between source and destination Computer.

WWW (world wide web) - www stand for (world wide web)