Assignment - I

Q. What is a computer networks? write its uses.

→ A computer network is a system that connects multiple computers and other devices so that they may collaborate, share resources, and exchange data. There are various ways for building this connection including conventional wires and wireless signals.

A uses of computer network.

a) File sharing

→ It allow file sharing & remote file access. A person sitting at one work station that is connected to a network can see easily see file present on another work station provide authority to do so.

b) Resource sharing

→ It allow users to access information and allow users to share resources such as printers, scanners and files which can improve efficiency and reduce costs.

c) Collaboration

→ It facilitate collaboration by enabling users to work together on project share ideas, and provide feedback in real time.

d) Education

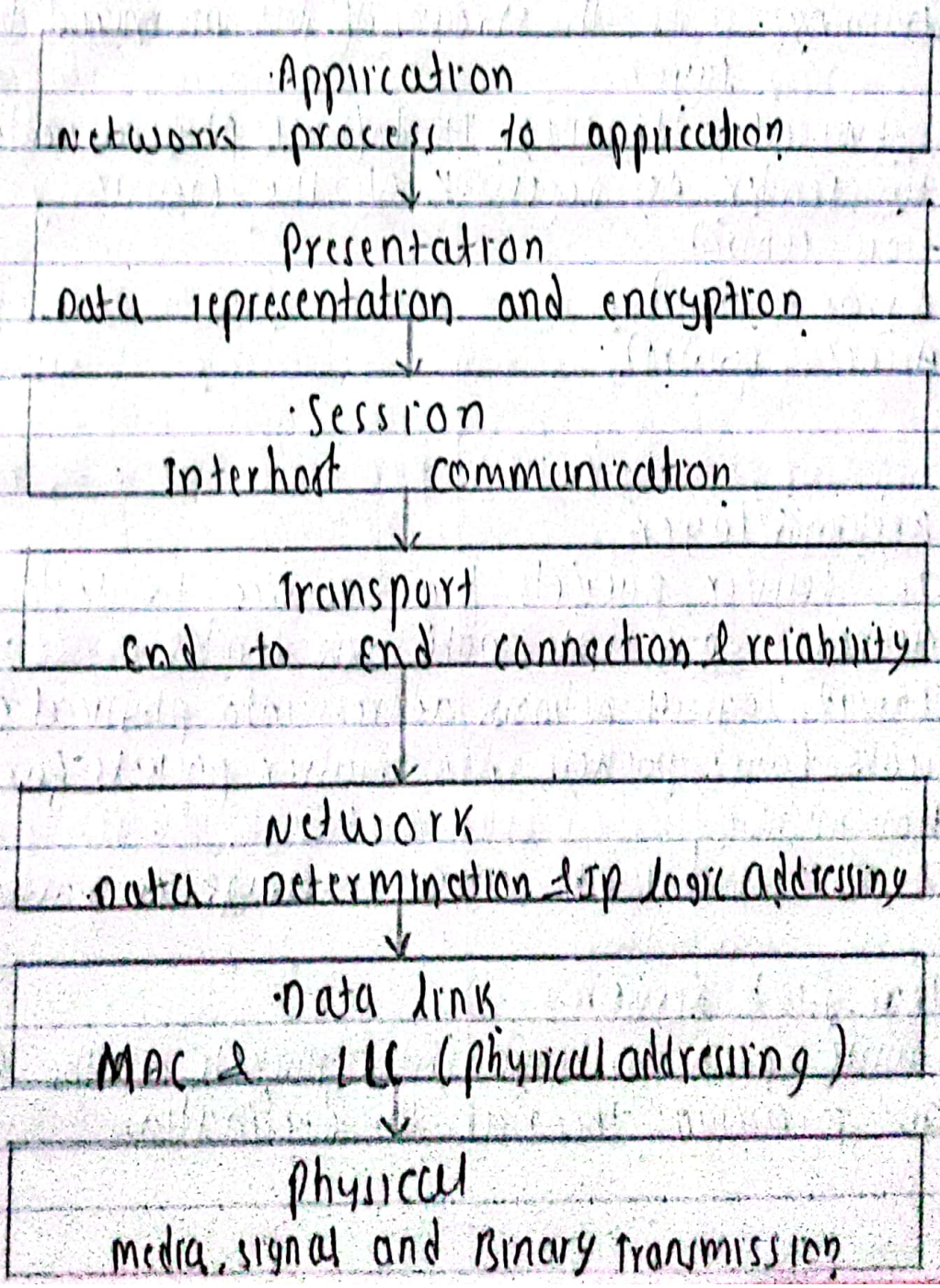
Networks are used in educational institutions to facilitates distance learning provide access to educational resources and enable collaboration among students & teachers.

e) Entertainment.

Networks are used ~~to~~ for entertainment purposes such as online gaming, streaming movies, and music and social media.

1) what are different layers of osi model. writs its uses.

→ OSI model is a layered framework for the design of network system that allows for communication across all types of computer system.



Function of physical layer.

- To activate maintain & deactivate the physical connection.
- To define voltage and data rates needed for transmission.
- To convert the digital bits into electrical signal.

Datalink layer.

- (Framing). it is the stream of bits managed by datalink layer
- Physical addressing. It defines physical address of the sender or receiver of the frame.
- Flow control
- Error control
- Access control.

Network layer.

- To deliver packets from source to destination accross multiple network links.
- Convert logical network address into physical address
- breaks layer packets into smaller packets for easy transmission
- It conserned with circuit message or packet switching

Transport layer.

- Divide each message into packets at the source and re-assign them at the destination.

- It perform end to end flow control rather than across a single to link.

Session layer:

- allow two system to start a dialoge with each other
- allows additional of check points i.e synchronization points into a stream of data

Presentation layer.

- Translate) data bet^n the formate network requires and the formate the computer expects
- does the protocol conversation
- carries out data compression to reduce the bandwidth of the data to be transmitted.

Application layer.

- Supports application apps & end-user processes
- Responsible for application services for file transfer & other network software

3) Differentiate between OSI model & TCP/IP model.

OSI	TCP/IP
=> This is seven layered network.	This model is four layered implementation model.
=> Has both presentation & session layers	Combines them into application layer.
=> Has both datalink & physical layer	combines into internet layer.
=> protocol can be easily replaced	protocol can't be easily replaced.
=> complex due to 7 layers	simple due to 4 layers
=> network layer provide both connectionless and connection oriented services	network layer provides only connection less services.