Basic Concept of Computer Network and Cloud Computing

Q1. What is computer network?

ANS1.Computer network is a set of computers connected together for the purpose of sharing resources and information. Network can be established by fibre optic cable and other connecting devices like- Hub, Bridge, Switch, Router etc.

Q2. What is OSI Model? How many layers are there in OSI Model?

ANS2.OSI stand for the open system interconnection. This is the model of conceptual and logical layout to defined network communication among more than one computer system. In model of communication introduced 7 layer to send and receive information from one station to other. Following are those 7 layer.

- 1. Physical Layer
- 2. Data Link Layer
- 3. Network Layer
- 4. Transport Layer
- 5. Session Layer
- 6. Presentation Layer
- 7. Application Layer



Q3. What is Topology?

ANS3.The topology of a network is the geometric representation of the relationship of all the links and linking devices. Topology is a method to establish a Network between computers.

Q4. Explain different types of topology?

ANS4. There are 6 types of topology's.

1. **Star topology**- Each device has a dedicated point to point link only to a central controller, Called a hub. This central device is responsible to transmit data to different connecting devices.



2. **Bus topology**-All nodes are connected with single cable. That's why it is also called single line cable connection. Data is transmitted through this cable to different destinations.



3. **Ring topology**- A ring topology is a network configuration in which device connections create a circular data path. Each networked device is connected to two others, like points on a circle.



4. **Mesh topology-**Every computer in the network has a connection to each of the other computers in that network.Data can be transmitted from different devices simultaneously. In this topology high traffic occur.



5. **Tree topology-** This is highly flexible and Centralized monitoring based topology. Computers have access Point-to-point connection. In this topology you can easily add other devices with.



6. **Hybrid topology-**Hybrid topology is the combination of two or more topologies. Its easy to increase the size by adding new components,

without disturbing existing architecture. The main advantage of this topology is- easy fault detection.



Q5. How many types of services provided in cloud computing?

ANS5-There are three types of services provided in cloud computing.

1.Infrastructure-as-a-service (IaaS)

- It maintain all storage servers load balancing, application firewalls and networking hardware.
- 4 Amazon Web Services (AWS), Microsoft Azure

2.Platform-as-a-service (PaaS)

- **4** Provide web based services.Developer can make their applications on here.
- **4** Database, operating system and programming language etc.

3. Software-as-a-service (SaaS)

File storage and backup, web-based email and project management tools.

Dropbox, G Suite, Microsoft Office 365 etc.

Q6. Define computer virus with example?

ANS6.It is set of programs which entered into your computer and could harm your information and machine.Some virus are specifically designed effect working efficiency of computer.Some virus are specifically designed to harm files.

Following are some examples of computer virus-

Resident virus- Resident viruses set up in your RAM and meddle with your system operations.

- **Boot sector virus-** This virus hides out in a file on a USB drive or email attachment. Easier to remove.
- Trojan horse- This is one kind of malware which can create hidden back door into system.
- **Spyware-** This is malware which can gather your login information, card information and passwords also.

Q7. write some websites name which provide e-commerce facility and also write the name of some payment tools?

ANS7.Some websites for online transactions are-

- **www.flipkart.com**
- 🖊 www.irctc.co.in
- 🔸 www.paytm.com
- www.amazon.com

Payment tools to use online transactions-

- 🖊 Debit/ Credit card.
- Net banking
- 🜲 BHIM UPI
- 4 Online wallets (Paytm wallet, Phone pay wallet)

Q8. What is E-Commerce? Write some advantages of E-Commerce.

ANS8.E- commerce is the process of selling and buying the things on internet this is also called electronic commerce or internet commerce.

Following are the advantages of e-commerce.

- **4** This is a modern methodology of doing business.
- E-commerce is a process of buying and selling goods and services by using internet.
- E-commerce reduced paperwork.
- **4** By e-commerce enhance the product reach.
- **4** User can get better customer service.

- **4** Customer can get better auction e-commerce.
- 4 Customer can save their time.

Q9. write some advantages of blockchain technology?

ANS9.Following are the advantages of blockchain technology.

- 1. It provides permission to digital information record and distribute. But it can't be edited.
- 2. No third party involve.
- 3. You can store, spread and preserve information.
- 4. It can run only with Internet.
- 5. Can't temper.
- 6. Blockchain is technic which allow transection of cryptocurrency.

Q10. In which area blockchain technology is being used?

ANS10- Following are some areas where blockchain technology is used.

- 1. Banking
- 2. Education
- 3. Supply chain
- 4. Healthcare
- 5. Electoral system
- 6. Trading

Q11. what is the difference between TCP and UDP?

ANS11.

Parameter	ТСР	UDP
Connection	TCP is connection-	UDP is connection-less
	oriented protocol.	protocol.
Speed	TCP is slower	UDP is faster.
Handshake	TCP use handshake	UDP doesn't use
	protocol.	handshake protocol.
Security	TCP provide a security.	UDP, because this is
		connection-less protocol
		so no guarantee of
		security.
Weight	Heavy weighted	Light weighted

Q12. What is protocol? Explain any two protocols?

ANS12.In a communication protocol is a set of rule which used to guide secure and accurate data transmission from sender to receiver. There are four main type of protocol.

- 1. Simple mail transmission protocol
- 2. File transmission protocol
- 3. User datagram protocol
- 4. Hypertext transfer protocol.

1. Simple mail transmission protocol-

It is the standard protocol for email services on a TCP/IP network. It provides the ability to send and receive email messages. It is an application-layer protocol that enables the transmission and delivery of email over the Internet.

2.Hypertext transfer protocol-.

HTTP is used by the World Wide Web. This protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.