**Q. 1. Define internet and write the role and importance of internet in today’s world.**

=> The internet is a global network of interconnected computers that use standardized communication protocols to link devices worldwide. It allows users to access a vast amount of information, communicate with others, and engage in various activities such as shopping, studying, or entertainment.

**Role and Importance of Internet in Today’s World:**

**Roles:**

1. **Information Access**: The internet provides access to a wealth of information on almost every topic imaginable, enabling students to conduct research and learn new things.
2. **Communication**: It facilitates communication through email, social media, and instant messaging, allowing people to connect with others regardless of geographical barriers.
3. **Education**: The internet offers online courses, educational videos, and resources that supplement traditional classroom learning and provide opportunities for self-study.
4. **Entertainment**: It offers a wide range of entertainment options, including streaming services, online games, and social media platforms, keeping people entertained and engaged.
5. **Commerce**: The internet is a platform for e-commerce, enabling businesses to sell products and services online, reaching a global audience.
6. **Work**: Many jobs now require internet access for tasks such as research, communication, and remote work, making it essential for employment in various fields.
7. **Information Sharing**: It allows for the sharing of ideas, knowledge, and creative content through platforms like blogs, forums, and social media, fostering collaboration and innovation.

**Importance:**

1. **Global Connectivity**: The internet connects people and cultures worldwide, fostering global communication and understanding.
2. **Learning Resource**: It provides access to educational materials and resources, supporting learning and skill development.
3. **Economic Growth**: The internet has become a crucial tool for businesses, driving economic growth through e-commerce and online services.
4. **Social Interaction**: It enables people to connect with friends, family, and communities, enhancing social interactions and relationships.
5. **Information Exchange**: The internet facilitates the exchange of information and ideas, contributing to the spread of knowledge and innovation.
6. **Convenience**: It offers convenience by providing access to services like online banking, shopping, and entertainment from anywhere with an internet connection.
7. **Empowerment**: It empowers individuals by providing access to information and opportunities that were previously inaccessible, bridging gaps and promoting equality.

**Q. 2 What is network architecture? Explain the types of network architecture with their merits and demerits.**

***=> On page number: 180 and 181***

**Merits of client/Server network architecture**

1. A client/server network covers a larger geographical area.
2. It reduces the network traffic

**Demerits of client/Server network architecture**

1. In client server system if the server fails, the whole network goes down.
2. It is very expensive to install and manage this type of network

**Merits of peer to peer network architecture**

1. All the resources and contents are shared by all the peers (clients).
2. It is more reliable as central dependency is eliminated. Failure of one peere doesn’t affect the functioning of other peers.

**Demerits of peer to peer network architecture**

1. In this network, the whole system is decentralized thus it is difficult to administer.
2. Security in this system is very less.