

4. The different types of connections for connecting to the internet are discussed as follows:  
Dial up connection, Digital Subscriber Line, Cable Internet, Satellite Connection, 3G, 4G, or 5G Systems, Wireless Fidelity (Wi-Fi), WiMAX, Wi-Fi Hotspot

- **Dial up Connection:** This type of connection utilises the telephone lines but is not preferred these days as it is very slow. It allows the user to do one work at a time. One can either use the phone to call or connect to the internet.
- **Digital Subscriber Line (DSL):** It is also a type of connection that uses the telephone lines, but is capable of transferring data at a much higher speed. A DSL filter removes the high-

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frequency interference, thus enabling simultaneous use of the telephone and data transmission.

**D. Answer the following questions.**

1. Wireless Fidelity is a popular technology through which computers and mobile devices exchange data wirelessly over the network. Wireless internet connects a home or business organisation to the internet using a radio link between the customer's location and the service provider's facility. Wi-Fi is generally used to provide the internet connection to remote places, where it is difficult to use wires. Wi-Fi is also used within smaller areas, like a home, an educational institute or a corporate office to provide wireless internet to all the users there.

2.

<b>Repeater</b>	<b>Router</b>
A repeater simply copies the information arriving at its input and retransmits it from the output.	A router is a networking device, which routes the information around the network.
This is required at times when the network signal is weakened or distorted over a long distance.	It is also used to connect one network with the networks.
This happens if the network passes through an area having strong electromagnetic fields. The weakened or distorted signals are regenerated and then retransmitted by the repeater.	The header of every packet of the information arriving at a router is checked for the destination and using the best route, the message is forwarded to the next device.

3. Data in the internet refers to all the files, e-mails, web pages, etc. that you can see across the internet. Data travels across the internet in packets. The information in the packet enables a computer to understand how it assimilates with any other data, the origin or source of the data, and the data's final destination. This technique is called packet switching and widely used for optimising data transfer over a computer network.

Let us understand this technique of data transmission.

- When you send a message or an e-mail to another computer connected on the internet, the data in the message or e-mail is first broken down into small data packets. Once the packets are ready, the address of the sending and receiving computer is enclosed with the data packets.
- When the data packets are received by a computer the data packets are again reassembled in a way that they take the form of the original message. The data packets reach their destination using different routes. The process is somewhat similar to sending parcel to your friend using a courier service.