**Pakistan School , Kingdom of Bahrain**

**E- Support and Learning Material / Session 2020-2021**

**Subject: Computer Science Grade : 8**

**Book: Computer Education FIRSTTERM**

 **Unit 1: Network Communications Week 1**

**Topic: Computer Network:**

**Q3. Define the following terms.**

1. **a) Computer Network b) Client c) Server d) Wide Area Network(WAN)**

**e) Local Area Network (LAN) f) Modem g) Network Interface Card**

**h) Fiber Optical Cable i) Bluetooth**

**Objectives:** At the end of the lesson, students will be able to define the above terms.

**a) Computer Network**

 A Computer Network consists of two or more computers that are linked in order to share resources, exchange data files or to allow electronic communication.

**Worksheet:**

**Fill in the blanks**

1. Two or more computers are linked in order to \_\_\_\_\_\_\_\_\_\_\_, exchange \_\_\_\_\_\_\_ or to allow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. When two or more computers are connected to each other is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Commonly, the connected devices on a network are\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**b) Client :**

 A **client** is a computer that requests and then accesses a service made available by a server. The client is the user’s computer which gets the data and information from the server on a network. A client computer is also called a workstation.

**c) Server:**

 A **Server** is a computer which supplies the data and information to the client computer on a network. A server computer controls all the data or information which is provided to the client computers.

**d) Wide Area Network (WAN)**

 A Wide Area Network (WAN) is a computer network that covers a large geographical area such as a city, country or a continent.

**e) Local Area Network (LAN)**

 Local Area Network can be defined as a computer network that connects computers and devices in small area, such as a home, an office building, school and the others.

**f) Modem**

A Modem converts analog signals into digital signals and back into analog signals so that signals can travel on telephone lines.

**g) Network Interface Card:**

NIC is short form of **Network Interface Card**. Sometimes it is referred to LAN Card. Transmission media (cables) are attached to this card to build a network.

**h) Optical Fiber Cable:**

 Optical Fiber Cable consists of one or more filaments of glass fiber wrapped in protective layers. Data is transmitted in terms of light.

**i) Bluetooth:**

Bluetooth is short range wireless technology which uses radio waves for communication among the Bluetooth enables devices. Many mobile phones, laptops, MP3 players have built in Bluetooth technology.

1. **What is the function of sending device and receiving device?**

**Sending Device**

 A device which sends data or signals to another device or computer is called a sending device.

**Receiving Device:**

 A device which receives data or signals from another device or computer is called a receiving device.

**Objectives:** at the end of the lesson, the students will be able to define the function of sending device.

**Examples of Sending and Receiving Devices:**

 Sending and Receiving devices initiate or accept transmission of data, instructions, and information on a network. Notebook computers, desktop computers and servers; all can serve as sending and receiving devices.

 When a student sends an email from his computer, his modem of computer acts as a sending device, on the other hand his friend receives email from his mobile, his friend’s mobile acts as a receiving device.

**Worksheet:**

**True/False:**

1. A device which sends data or signals to another device is called receiving device.
2. A device which receives data or signals from another device is called sending device.

**Fill in the blanks:**

1. When a student sends an email from his computer, his \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acts a sending device.
2. **What are the advantages of a computer network? Write any two.**

**Advantages of computer network:**

**Objectives:** at the end of the lesson, the students will be able to differentiate between client and server.

A computer network consists of two or more computers that are linked together in order to:

* Share resources
* Exchange data files or to allow electronic communication.
1. **Which types of computer network connects computer to the Internet?**

Wide Area Network (WAN) connects computers to the Internet.

1. **Differentiate between client and server.**

**Objectives:** at the end of the lesson, the students will be able to differentiate between client and server.

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| --- | --- |
| **CLIENT** | **SERVER** |
| 1. A **client** is a computer that requests and then accesses a service made available by a server.
2. The client is the user’s computer which gets the data and information from the server on a network.
3. A client computer is also called a workstation.
 | **1)** A **Server** is a computer which supplies the data and information to the client computer on a network. **2)** A server computer controls all the data or information which is provided to the client computers.  **3)** A server computer is also called host computer. |