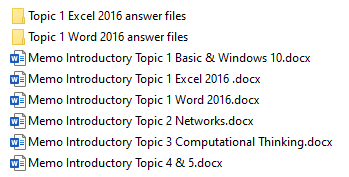
**MEMO: TOPIC 2**

**NETWORKS AND SYSTEMS TECHNOLOGIES**



**Activity 2.1**

**Networks**

**Instructions**:

1. Answer the multiple-choice questions: Type or choose the correct answer to the questions below.

“*Click or tap here to enter text*” in the space provided or choose correct answer from drop-down list.

2. Change the font colour to **red** when you enter the letter or text to complete the answers.

3. Save the answer file as **Networks Systems**

1. Name the term defined by given below statement:

"Communications media, devices, and software connecting two or more computer systems or devices."

Computer network

2. Which cable networks are used for LAN connections?

Twisted-pair wire, coaxial cable, fiber-optic cable

3. In computer networks, computing devices that route and terminate the data are called network Switches

4. A computer network is a group of (i) Computers that are (ii) Connected to each other for the purposes of (iii) Communication A computer (iv) Network allows computers to communicate with many other computers and to (v) Share resources and information.

5. A PAN is a\_.

(a) Network that operates in a large area, such as across a country

(b) Network built for a single person connecting all the devices

(c) Very small network that usually covers a single home

(d)Network that operates in a small area, such as a house, school or office

Answer: (b) Network built for a single person connecting all the devices

6. A computer connected with LAN can share information or peripheral devices

7. A group of computers connected together with the help of cables within an office building is called LAN

8. A switch is a device that\_\_\_\_\_\_\_.

(a)Shares information between specific computers without involving the other computers in the network

(b)Makes the decisions about all the messages that pass through the network

(c) Connects a computer or network to the internet

(d) Allows computing devices to connect to a wireless network without cables

Answer: (a) Shares information between specific computers without involving the other computers in the network

9. Which of the following statements is not true about LAN?

(a) LAN is designed for a small geographical area

(a) LAN is designed for a small geographical area

(b) LAN's operate at higher speed than WANs

(c) LANs are privately owned networks

(d) LANs can share data across the world

10. Network formed between computers which is spread across the continents is called:

(a) LAN

(b) WAN

(c) MAN

(d) WLAN

(b) WAN

11. A computer connected to a network is known as a stand-alone computer. True or False?

False What is the reason for your choice? Two or more computers are connected in a network

12. A separate printer will be needed in a network for all connected computers.

False What is the reason for your choice? Printers are shared; several people can use the same network printer

13. MAN's are the computer networks confined to a localised area such as an office.

False What is the reason for your choice? A MAN (Metropolitan Area Network) is a network that connects users and their computers in a geographical area that spans a campus or city

14. MAN provides communication services up to 5 km. True or False? False

Reason for your choice? Using fiber optic transmission media, services can be over many km

15. Ethernet\_\_\_\_\_\_\_\_\_\_\_.

(a)Ethernet is the technology that is commonly used in wired local area networks (LANs).

(b) Is a type of data link protocol that defines the types of cables and connections used to wire computers, switches and routers together

(c) Connects a computer or network to the internet

(d)Can remove computers from the network and restrict access to users

**Answer:** (a) Ethernet is the technology that is commonly used in wired local area networks (LANs).

16. The people who can modify and change the network settings are called the

**Answer:** Network administrators

17. Local Area Network is a computer network that connects computers within a school.

18. The Internet is an example of a Wide Area Network.

19. Which network covers the smallest geographic area?

**Answer**: Personal Area Network

11. Name the type and function of the different network equipment.

|  |  |  |
| --- | --- | --- |
| **Type** | **Function** | **Equipment** |
| Cellular or WiFi Router | To connect to the Internet. |  |
| Modem | Translates data from a digital form into an analog signal. |  |
| Router | Forwards data packets across two or more distinct networks toward their destinations through a process known as routing. |  |

12. Name the software needed to connect to the Internet.

Answer: Web browser, for example Internet Explorer

13. Name the hardware equipment to connect to the Internet

Answer: Computer, modem or router, fibre services

14. Explain the difference between a LAN and a PAN.

Answer: LAN is a local area network, connects computers in a building

PAN is a **Personal Area Network (PAN**). It is a wireless network that connects information technology devices close to one person.

15. List three advantages of using a network in a business environment.

**Answer**: Sharing hardware, sharing software, sharing data, enables users to communicate and collaborate, teamwork.

16 List two possible disadvantages of using a network in a business environment.

**Answer: You can lose access to your information if a file server breaks down. One computer can create problems for the entire network. Computer networks require a specific setup to be useful.**

17. Differentiate between the mode of transmissions. Type your answer in the right column of the table.

|  |  |
| --- | --- |
| **Mode of Transmission** | **Description/Answer** |
| Wired Internet | Wired, also called guided transmission media: Communications signals are guided along a solid medium, such as wires and cables. The medium can be twisted pair wire, coaxial cable or fibre-optic cables. |
| Satellite Internet | Communications satellites are relay stations that receive signals from an earth station and then redirect the signals back to many earth-based stations. |
| Cellular Internet | In a Wi-Fi wireless network, the user's smartphone, or other mobile device has a wireless adapter that translates data into a radio signal and transmits it using an antenna. The communications signal is transferred over airwaves as a form of electromagnetic radiation, or antennas, transmitting signals through air, water, vacuums. |

**Activity 2.2**

**Networks**

**TOPIC 2: Networks and systems technologies**

**Instructions**:

1. Answer the multiple-choice questions: Type or choose the correct answer to the questions below.

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1. Name the four main categories of Networks and say what the acronym stands for.

PAN Personal Area Network

LAN Local Area Network

WAN Wireless Local Area Network

MAN Wide Area Network

2. Twisted-pair wire, cable, coaxial cable, and fiber optic cable are all examples of guided communications media. True or False? True

3. Define the term "computer network".

A network can be described as two or more computers that are linked and capable of sharing information and resources with each other.

4. Define the term "network topology".

Network topology shows how the hardware devices are arranged and how the communications links.

Examples: Star topology

5. What is a social network? Give 3 examples.

A **social network** is typically an online service or platform which is focused largely around uniting individuals and allowing them to communicate and interact.

Facebook, Twitter and Instagram

6. A network normally within an office environment.

LAN (Local Area Network)

7. The Internet is a global network of computers that enables people all over the globe to communicate electronically. True or False? True

8. List three advantages of using a network in a business environment.

**Answer**: Sharing hardware, for example the same network printer.

Sharing software, for example MS Word.

Sharing data, for example a database file.

Users can communicate, engage and elaborate with others, for example sharing documents.