

## **TOPIC 4**

### **PART 1. COMPUTERS IN OUR LIFE**

#### **1. the role of ICT in our life**

ICT stands for information and communication technology. It has a great role in our life. Now it is very hard to imagine a day of a normal student without a smartphone, a laptop and household gadgets.

#### **2. nature of ICT, its application and core attributes;**

ICT is a result of a digital revolution which is used to make our life easier.

#### **3. difference between data and information;**

Information is a more wide definition than data. Data is a part of inf. which is stored in memory and can be processed by computer. Definition inf also belongs to files or websites

#### **4. core characteristics of a modern computer;**

As for me, a great computer should be light-weight, fast and have big memory. The best type is a laptop.

#### **5. digital revolution**

Even 40 years ago a lot of state-of-the-art gadgets were unavailable for a plethora of people.

### **PART 2. HARDWARE**

#### **1. definition and types of a computer.;**

A computer is an electronic machine that accepts, processes, stores and outputs information.

The first type is the mainframe. It is the most powerful type of computer. It is the server which is connected to terminals. It is used in universities, banks and big companies.

The next is desktop PC. It consists of a keyboard, monitor and CPU. It is used as a personal computer in the home for example.

A laptop is a lightweight transportable computer. Usually it has a touchpad - a sensitive platform which allows moving a pointer.

A PDA is a personal digital assistant.

It is a small hand-held computer. They are used as mobile phones or personal organizers. For input you should use a stylus - a special pen used with a touch screen. But some PDAs have handwriting recognition or voice recognition.

## **2. basic components of a computer;**

A computer is an electronic machine that accepts, processes, stores and outputs information. It consists of hardware and software. Hardware is a technical part of a computer. Software is a set of instructions, which tells the computer what to do. Hardware is divided into CPU, main memory and peripherals.

## **3. input / output devices; processing devices;**

You can connect some devices to the computer to input or output some information.

If you want to input some text, you should use a keyboard. It has different groups of keys, for example cursor keys or alphanumeric keys.

The next Device is a mouse. It lets you move a cursor and select items on your screen. A mouse has 2 buttons. You can make clicks by them to choose some options

There is one more type of input - voice input. You should use a microphone - a special device for voice input. And the voice recognition system will convert it into text or the computer will complete your command.

Also you can input some images or videos. For pictures you can use a scanner. This device reads your image and converts it into a code. There are a plethora of types of scanners, for example pen scanner or film scanner.

To input photos or videos you can use a camera. It allows you to input files, which were saved on a flash memory card. To input live video you can use a web camera. They are used for video calls or for recording videos or photos onto your hard disk.

For outputting something on paper we use printers. There are a lot of types of printers, for example a plotter. It is used for detailed designs or maps.

Also gadgets use displays to show smth. There are some characteristics of displays for example screen size or resolution. There are 2 types of screens: CRT (cathode ray tube. rgb system) and LCD ( active matrix lcd use tft thin film transistor - each pixel has its own transistor switch).

CPU - central processor unit. Three typical parts are the control unit - it is responsible for realization of instructions; ALU - arithmetic and logic unit - it is responsible for arithmetic and logic operations; the registers - it controls and stores data.

Motherboard contains the CPU, the memory chips and controllers for peripherals.

## **4. types of storage.**

There are 2 types of storage: RAM (random access memory) & ROM (read only memory).

RAM holds data while the PC is working. ROM holds data for a long time and used by BIOS to control peripherals.

Data stored as binary code. each 1 or 0 called a bit. 8 bits are called a byte. Usually, the size of our files is measured in kilo or megabytes.

## ***PART 3. ISSUE OF E-WASTE***

Computers produce e-waste like plastic cases and microchips. The problem is that this waste is not biodegradable. It means that e-waste does not decompose. So people just throw it away. This has led to the fact that we just have heaps of rubbish.