**UNIT 5**

**COMPUTER SYSTEMS**

Computer can be divided into three main types, depending on their size and power.

Mainframe computers are the largest and most powerful. They can handle large amounts of information very quickly and can be used by many people at the same time. They usually fill a whole room and are sometimes referred to as mainframes or computer installations. They are found in large institutions like universities and government departments.

Minicomputers, commonly known as minis, are smaller and less powerful than mainframes. They are about the size of an office desk and are usually found in banks and offices. They are becoming less popular as microcomputers improve.

Microcomputers, commonly known as micros, are the smallest and least powerful. They are about the size of a typewriter. They can handle smaller amounts of information at a time and are slower than the other two types. They are ideal for use as home computers and are also used in education and business. More powerful microcomputers are gradually being produced; therefore they are becoming the most commonly used type of computers.

A computer can do very little until it is given some information. This is known as the input and usually consists of program and some data.

A program is a set of instructions, written in a special computer language, telling the computer what operations and processes have to be carried out and in what order they should be done. Data, however, is the particular information that has to be processed by the computer, e.g. numbers, names, measurements. Data brought out of the computer is known as the output.

When a program is put into operation, the computer executes the program step by step to process the data. The same program can be used with different sets of data.

Information in the form of programs and data is called software, but the pieces of equipment making up the computer system are known as hardware.

The most important item of hardware is the CPU (Central Processing Unit). This is the electronic unit at the center of the computer system. It contains the processor and the main memory.

The processor is the brain of the computer. It does all the processing and controls all the other devices in the computer system.

The main memory is the part of the computer where programs and data being used by the processor can be stored. However it only stores information while the computer is switched on and it has a limited capacity.

All the other devices in the computer system, which can be connected to the CPU, are known as peripherals. These include input devices, output devices and storage devices.

An input device is a peripheral, which enables information to be fed into the computer. The most commonly used input device is a keyboard, similar to a typewriter keyboard.

An output device is a peripheral, which enables information to be brought out of the computer, usually to display the processed data. The most commonly used output device is a specially adapted television known as a monitor or VDU (Visual Display Unit). Another common output device is a printer. This prints the output of the CPU onto paper.

A storage device is a peripheral used for the permanent storage of information. It has a much greater capacity than the main memory and commonly uses magnetic tape or magnetic disks as the storage medium.

These are the main pieces of hardware of any computer system whether a small “micro” or a large mainframe system.

**Vocabulary**

divide into – разделить

depend on – зависеть от

size – размер

mainframe computer – универсальная вычислительная машина

powerful – мощный

handle – обрабатывать

fill – занимать

referred to – относиться к

installations – системы

institution – организация

Government departments – государственные учреждения

minicomputer – мини-ЭВМ

microcomputers – микро-ЭВМ

typewriter – печатная машинка

commonly know – широко известный

input – вводная информация

data – данные

a set of – набор

carry out – выполнять

to be processed by – обрабатываться

measurements – измерения

brought out – выдает

output – производительность

capacity – производительность

put into operation – запустить

execute – выполнять

software – программное обеспечение

pieces of equipment – единица оборудования

hardware – аппаратное оборудование

item – элемент

Central Processing Unit – центральный процессор

contain – включать в себя

main memory – оперативная память

brain – мозг

store information – хранить информацию

switch on – включать

limited capacity – ограниченные возможности

peripherals – второстепенное оборудование

input device – вводное устройство

lead into – вводить

keyboard – клавиатура

output device – выводное устройство

display the processed data – отображать на дисплее получ. данные

storage device – запоминающее устройство

permanent – длительное хранение

magnetic tape – магнитная лента

storage medium – носитель информации

mainframe system – универсальная система

1. **Answer the following questions:**
2. What type of computer is most suitable for home use?
3. What is a program?
4. What are the functions of main memory, input device and storage device?
5. What data is?
6. What are the functions of processor and output device?
7. What are peripherals?
8. What is hardware?
9. What is software?
10. What are the main types of computers?
11. **Match each component in column A with its function in column B:**
12. storage device
13. input device
14. output device
15. main memory
16. processor
17. displays the processed data
18. it holds the programs and data being used by the processor
19. it does all the processing and controls the peripherals
20. it allows data to be entered
21. it provides permanent storage for programs and data
22. **Complete the table:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mainframe | Minicomputer | Microcomputer |
| Size |  |  |  |
| Power |  |  |  |
| Use |  |  |  |

1. **Find the English equivalents for these word combinations:**

Самый важный элемент аппаратного оборудования; запоминающее устройство – это второстепенное оборудование; одна и та же программа может использоваться с разными данными; компьютерная система; размером с печатную машинку, зависит от размера и мощности, самый широко распространенный, хранить информацию, вводная информация.