**UNIT 3**

**I. Make sure that you know the following words:**

To communicate, to share information, computer network, to interact, LAN, WAN, modem, server, workstation, mainframe, to handle, desktop system, explosion, e-mail, file transfer, domain name, internet address, login, identification, indispensable, disperse, joint venture.

**II. Read and translate the text:**

**INTERNET**

|  |  |
| --- | --- |
| People always wanted to communicate and share information. That was the main reason for the development of computer network.  *Computer network* is a group of computers that can interact by means of a shared communication link. There are two types of network:   * *Local area network (LAN)* is a network where computers are connected together directly, usually by cable. It is used in offices etc. * *Wide area network (WAN)* is a networkof local area networks connected together. The connection might be a cable or a mixture of cable, **fiber optic**, and satellite connectivity.   *Modem* (abbreviation for modulate / demodulate) is a device that allows computers to communicate over **ordinary** phone lines. It converts digital computer data back and forth for use with analog phone line. There are two types of modems: internal and external. Internal means that modem goes inside your computer. External modem is outside your computer and must be plugged into it.  *A server* is a computer designed to provide various services for an entire network. It is typically either a workstation or a mainframe because it will usually be expected to handle far greater loads than ordinary desktop systems.  The roots of the Internet go to 1969, when the **Defense Advances[d] Research Projects arm** of the Department of Defense created ARPANET for research in networking. The project title was “**Resource Sharing Computer Networks**”. The work centered around the problem in the Department of Defense – how to keep military sites in communication across the country in the event of a nuclear war.  In the beginning research was the main goal of the system. In 1994 an explosion of direct connections to the Internet occurs. Research is not any more the only purpose of Internet. The Internet experiences a **steady** growing process. Not only universities, research companies and other organizations became part of the Internet, but many of small businesses and home were connected.  **The estimate for year 2000** was 40 million people connected to the Internet and the large majority were home connections in more than 50 countries.  The Internet provides many services. Among them:   * *E-mail*. You can send or receive electronic messages from anyone on the Internet. Anything that can be stored in text file can be mailed. * *File Transfer*. The File Transfer Protocol (FTP) provides for the copying of files from one computer to another. * *Communication*. you can communicate with the help of the Internet with one person or a group of persons simultaneously. * *Information*. On the Internet all addresses / domain names refer to “electronic addresses”, e.g.: *person-id@computer name.domain name*.   There is never blank space between the components of the Internet address. User ids need not be unique (id – identification), e.g. two people with the same name can have it as login name as long as they operate on separate domains. But the domain name must be unique, however: [Austin@galaxi.isr.umd.edu](mailto:Austin@galaxi.isr.umd.edu), [Austin@euler.berkley.edu](mailto:Austin@euler.berkley.edu)  Austin is the person-id, “galaxy” and “euler” are computer names, “isr.umd.edu” and “berkeley” are domain names. Domain names are composed of sub-domain names: esr, umd, edu. In the computer address *isr.umd.edu* the sub-domain “edu” tells that the computer is located at an educational institution. The sub-domain name “umd” stands for University of Maryland, and “isr” means the collection of computers at the Institute for System Research, at the University of Maryland.  If you want to send a message put down the word “mail” before the address.  Today computers are seen as **indispensable** tools not only for computation and typing but for communications. The merging of computation and communications is making essential changes to day-to-day business activities of engineers. Suppose an engineer belongs to a geographically dispersed team. He can:   * Use the Internet? E-mail for day-to-day communications. * Conduct engineering analyses at remote sites. * Share results among the team members. * Participate joint ventures assembled over a network, and online bidding of projects etc. | **Fiber optic** – оптоволоконный  **Ordinary** – обычные  **Defense Advanced Research Projects arm** – подразделение передовых оборонных исследовательских проектов  **Resource Sharing Computer Networks** – компьютерные сети с общим доступом к ресурсам  **Steady** – устойчивый  **The estimate for year 2000** – по оценкам на 2000 год  **Indispensable** – незаменимые  **Suppose** – предположим  **Ventures** – предприятия  **Bidding** – тендер |

**III. Match the terms in the left-hand column with their definitions in the right-hand column**.

|  |  |
| --- | --- |
| 1. access 1 | 1. the act of receiving |
| 2. communicate 14 | 2. far away in time or space |
| 3. convert 15 | 3. give; translate; perform |
| 4. estimate 16 | 4. ask |
| 5. goal 17 | 5. close and careful scientific study |
| 6. handle 18 | 6. the base of anything; a source; the underground part of a tree |
| 7. indispensable 19 | **7**. a man-made object fired into space to orbit a planet |
| 8. local 20 | 8. look over in order to find smth |
| 9. majority 21 | 9. divide out among a number of people |
| 10. mixture 22 | 10. happening or done at the same time |
| 11. outline 23 | 11. constant |
| 12. own 24 | 12. combine or join together |
| 13. receipt 13 | 13. right or means of entry |
| 14. remote 2 | 14. tell, make down |
| 15. render 3 | 15. change (from one thing into another) |
| 16. request 4 | 16. judge roughly the size, value etc of smth |
| 17. research 5 | 17. anything aimed at |
| 18. root 6 | 18. manage, cope with of a plant |
| 19. satellite 7 | 19. necessary |
| 20. search 8 | 20. of or confined to a certain place |
| 21. share 9 | 21. the greater number or quality |
| 22. simultaneous 10 | 22. smth made by combining different things |
| 23. steady 11 | 23. line(s) showing a thing’s shape |
| 24. merge 12 | 24. have a possession *(владение)* |

**IV. Answer the following questions:**

1. What is the Internet?
2. What does it mean ‘computer network’?
3. Which types of networks do you know?
4. What do we need modem for?
5. What are the ‘duties’ of server?
6. What types of computers are used as servers?
7. What can you tell about the roots of the Internet?
8. Which services does the Internet provide?
9. Which of the Internet services do you prefer to use mostly?
10. Does The Internet help you in your study or work? How?

11.What does the FTP provide?

12. What does the domain name of the computer mean?

**V. Retell the text briefly using the following expressions:**

Computer network, LAN, WAN, modem, to covert digital data, server, the roots of the Internet, connections to the Internet, e-mail, file transfer, communication, information.

**VI. Fill in the gaps with the missing words from the text. Mind that in each item the first letter of the word is used:**

1. **Computer network** is a group of computers that can **interact** by means of a shared communication link.

2. **Modem** converts digital data **back** and **forth** to use with phone line.

3. In the **beginning** research was the main **goal** of the network.

4. A server is either a **workstation** or a **mainframe** because it will be expected to handle much more loads than ordinary desktop system.

5. Many people connected to the Internet and the large **majority** were home connections.

6. With the help of the Internet you can communicate with a group of persons **simultaneously**.

7. If you are going to send a message write down the word “**mail**” before the address.

8. There is never **blank** space between the **components** of the Internet address.

9. The **merging** of computation and communication is making **essential** changes to day-to-day business activities.

10. Today computers are seen as **indispensable** tools not only for **computation** and typing but for **communications**.

**VII. Rearrange the words and get the right sentences**:

1. information **/** to communicate / and / share / want / people.

* *People want to communicate and share information.*

1. plugged / is / it / your / computer / must / modem / outside / and / be / external / into.

* *External modem is outside your computer and must be plugged into it.*

1. of / an / explosion / direct / to / the / later / Internet / occurs / connections.

* *Later an explosion of direct connections to the Internet occurs.*

1. businesses / and / small / homes / were / many / of / connected.

* *Many of small businesses and homes were connected.*

1. from / you / send / or / messages / can / anyone / on / the Internet / receive.

* *You can send or receive messages from anyone on the Internet.*

1. never / there / address / between / the / blank / components / is / of / the / space.

* *There is never blank space between the components of the Internet address.*

1. are / as / tools / seen / indispensable / computers / today.

* *Today computers are seen as indispensable tools.*

1. people / are / information / the Internet / making / via / available.

* *People are making information available via the Internet.*

1. information / helps / to find / necessary / browser.

* *Browser helps to find necessary information.*

1. ventures / a network / participate / over / joint / can / assembled / an / engineer.

* *An engineer can participate joint ventures assembled over a network.*

**VIII. Supply the missing preposition. Refer to the text if necessary**.

1. A device that allows computers to communicate **over** ordinary phones lines is called modem.

2. External modem must be plugged **into** a computer.

3. ARPANET was created **for** research **in** networking.

4. Their work was centered around the problem – how military sites **in** communication **across** the country **in** the event of a nuclear war.

5. **In** the beginning research was their main goal.

6. The File Transfer Protocol provides **for** the copying of files **from** one computer **to** another.

7. Many of small businesses were connected **to** the Internet.

8. The sub-domain ‘edu’ tells that the computer is located **at an** educational institution.

**IX. There are two words given in each item. You have to explain in what way they are similar and how they differ from each other.**

1. (a) LAN, (b) WAN

2. (a) internal modem, (b) external modem

3. (a) server, (b) desktop system

4. (a) computer name, (b) domain name

5. (a) domain name, (b) sub-domain

6. (a) address, (b) mail address

**X. Give the opposites of the following words:**

external; beginning; connection; available; indispensable; find; combine; send; leave; remote.

**XI**. **Give the synonyms of the following words:**

research; render; project; type; purpose;. inform; many; share; own; concentrate.

**XII.** **Replace the italicized word combinations by appropriate ones given in the list below**. **Some of them might be used more** **than once. Refer to a** **dictionary if necessary.**

1. Сначала основной целью интернета являлись исследования.

* *In the beginning research was the main goal of the Internet.*

1. Корни интернета уходят к 1969 г.

* *The roots of the Internet go to 1969.*

1. Модем является сокращением слов модулятор и демодулятор.

* Modem is an abbreviation of the words modulator and demodulator.

1. Через интернет можно получать или отправлять письма или просто общаться.

* *You can receive or send emails or just chat on the Internet.*

1. Интернет позволяет быстро находить любую интересующую вас информацию.

* *The Internet allows to find any information you are interested in quickly.*

1. Несмотря на то, что на ранней стадии Web имел своей целью развитие науки и образования, позже он приобрел существенное значение для бизнеса.

* *In spite of the fact that at an early stage the Web was aimed at the development of science and education, later it acquired significant importance for business.*

7. Для нахождения необходимой информации в интернете следует пользоваться специальной программой, которая называется «браузер».

* *To find the necessary information on the Internet, you should use a special program called "browser".*

8. Сервером называется компьютер, обслуживающий всю сеть.

* *A server is a computer that serves the entire network.*

9. Web-сервером называется программа, которая при получении запроса отсылает клиенту затребованный документ.

* *A web server is a program that, upon receiving a request, sends the requested document to the client.*

10. Для соединения с клиентом необходимо знание его адреса.

* *It is necessary to know client’s address for connection to client.*

**XIII. Translate into English.**

**1-3-2-4-5**

1. Search engines as Altavista and Hotbot claim that they have indexed the contents of tens of millions of web pages. How can they do this?

2. Resource discovery is perhaps the most exciting application of web robots. It means that rather than relying solely on browsing, a Web user can combine browsing and searching to locate information.

3. A Web robot is a program that traverses the Web’s hypertext structure by retrieving a document, and recursively retrieving all documents that are referenced. Such programs are sometimes called “spiders’, “web anderers”, or “web worms”.

4. Even if the database doesn’t contain the exact item you want to retrieve, it is likely to contain references to related pages, which in turn may reference the target item.

5. Web robots can be used for statistical analysis (e.g., to count the number of Web servers), for maintenance (e.g., summarize large segments of the web).