Министерство образования Республики Беларусь
Учреждение образования
«Белорусский государственный университет
информатики и радиоэлектроники»

Кафедра иностранных языков №2

Английский язык

Методическая разработка
по проверке лексико-грамматических навыков
для студентов 2-го курса ФКСиС и ФИТУ
дневной формы обучения

**Computer Science Translating
with
Focus on Grammar**

Минск 2004

Составители:
Л.С.Карпик, Н.Г.Касперович, А.И.Рогачевская, Р.К.Образцова,
Л.Е.Синкевич, Д.А.Пархоменко, Р.Т.Максимчук, Н.Г.Субботкина,
Р.И.Коваленко

М 54

Предназначена для проверки навыков по английскому языку у студентов 2-го курса ФКСиС и ФИТУ. Цель разработки — способствовать развитию и закреплению навыков перевода технических текстов.

Методическая   разработка   содержит   комплекс   упражнений, предназначенный для совершенствования навыков перевода.

Содержание

СТРАДАТЕЛЬНЫЙ ЗАЛОГ (PASSIVE VOICE)

Образование страдательного залога

Пассивную форму (Passive Voice) глагола можно отличить от активной (Active) благодаря наличию вспомогательного глагола *be* перед причастием II от смыслового глагола: *be* + Participle II *(-ed,* 3-я форма).

Перевод страдательного залога

1. Страдательный залог при переводе на русский язык может быть передан:

а) кратким страдательным причастием прошедшего времени с суффиксом –н или –т (с вспомогательным глаголом *быть* или без него), т.е. русским страдательным залогом;

б) глаголом на *–ся* в соответствующем времени, лице и числе;

в) глаголом действительного залога в соответствующем времени, 3-м лице мн.числа, являющимся частью неопределенно-личного предложения:

The experiments were made last year.

    a) опыты (были) проведены в прошлом году;

    b) опыты проводились в прошлом году;

    c) опыты проводили в прошлом году.

2. Предложения с сочетаниями "модальный глагол + инфинитив страдательного залога" рекомендуется переводить со словами *можно, нужно, следует* и др.:

    The problem *must be solved.*

    Эту проблему *нужно решить.*

3. Страдательный залог с подлежащим it переводится неопределенно-личным предложением:

    It was thought . . . - Думали, полагали . . .

    It was known . . . – Известно . . .

4. При переводе английских предложений с глаголом в форме страдательного залога часто используется обратный порядок слов (русское предложение начинается со сказуемого):

    New technique *has been developed.*

    Была разработана новая методика.

Трудные случаи перевода страдательного залога

Можно выделить два типа глаголов, которые вызывают трудности при переводе на русский, если они используются в страдательном залоге:

а) глаголы, которые требуют после себя дополнения с предлогом и в русском переводе тоже имеют предложное дополнение, например:

to depend *on (upon)* smth. — зависеть *от* чего-либо

to deal *with* smth. — иметь дело с чем-либо

to refer *to* smth. — ссылаться *на* что-либо.

Примечание**.** Запомните перевод глагола *to refer to в* сочетании со словом as: *to refer to as* 'называться', например:

The phenomenon is *referred to as* acceleration.	Это явление *называется* акселерацией.

б) глаголы, за которыми идет беспредложное дополнение, но которые в русском переводе требуют предложного, например:

to answer smth. — отвечать *на*

to follow smth. — следовать *за* чем-либо

to affect smth. — влиять *на* что-либо

to influence smth. — влиять *на* что-либо

to approach smth. — подходить к чему-либо

При переводе предложений, включающих оба типа глаголов в страдательном залоге, русское предложение следует начинать с предлога, например:

It is quite evident that not every experiment *can be relied upon.*	Вполне очевидно, что не *на* каждый эксперимент *можно положиться.*
The problem *was not dealt with.*	*(С* этой проблемой *не имели дела.)* Эта проблема *не рассматривалась.*
Many questions *were answered* correctly.	*На* многие вопросы *были даны* правильные *ответы.*

Упражнение 1. *Переведите следующие предложения, обращая внимание на способы перевода английского страдательного залога.*

1. He is often asked to speak at meetings. 2. They were explained how to solve this problem. 3. My friend was being asked many questions about his work when I entered the room. 4. Was Moscow University founded in 1755? 5. The conference will be held next week. 6. This experiment has just been completed. 7. Many books on the computers' architecture had been translated into Russian by the end of the year. 8. This computer's basic units are not being tested now. 9. The article will have been published in the journal by May. 10. The invention of computers will not be spoken about at the next lecture.11. Is the program being loaded now? 12. The new department has not been opened yet.13. The program will be written in three days. 14. These facts are well known. 15. They have just been told the news. 16. The book was translated into all European languages. 17. Complex calculations are being carried out with the help of the computer now. 18. This personal computer had been constructed in our lab by the end of the year. 19. The results of the experiment were carefully being checked up all the day yesterday. 20. These digits are easily multiplied. 21. The results of computations were recorded in the form of tables. 22. The newest electronic memory systems will be much spoken about.

Упражнение 2. *Измените следующие предложения по модели, поставив сказуемое в страдательный залог.*

Модель: They speak English in Canada. — English is spoken in Canada.

1. They produce these computers in Japan. 2. The famous Russian scientist M. V. Lomonosov compiled a lot of calculating tables. 3. A well-known scientist will address the conference. 4. He is typing the name of the file now. 5. W. Oughtred had constructed the first slide-rule by 1630. 6. B.Pascal built an adding machine in 1642. 7. Very large-scale intergration technologies will have reduced the size of computers by the end of the century. 8. They have already discussed the problems of artificial intelligence. 9. We were carrying out experiments when you came in. 10. We shall place the plus sign between these numerals. 11. People have used punched cards since the earliest days. 12. The presence of the CONTROL key allows each letter key to have one more meaning.

Упражнение 3. *Откройте скобки, поставив глагол в нужную видо-временную форму.*
1. The instructions (to be recorded) in the order in which they are to be carried out. 2. Many new branches of industry (to be developed) in our country since World War II. 3. The concept of the stored program (to be worked out) by J. Neuman in 1945. 4. The constituent parts of the computer (to be called) hardware. 5. A new program (to be compiled) when I came. 6. All these calculations (to be done) by 5 o'clock yesterday. 7. The information (to be collected) by the end of the next week. 8. This examination (to be taken) tomorrow. 9. Your papers (to be typed) now. Wait a minute. 10. A new input device (to be discussed) when we came. 11. A new model of the printer (to be shown) tomorrow. 12. Microcomputers (to be applied) since the 1970s. 13. Only one branch of a program (to be selected) on each occasion. 14. "Connector" symbols (to be used) to show the exit to or the entry from another point in the same flowchart.

Упражнение 4. *Определите время и залог сказуемого и переведите предложения на русский язык.*
1. Actually, the term "computer" is fast being replaced by the more appropriate term "electronic data processing machine." 2. Recently certain binary machines have been announced which will be capable of utilizing magnetic disc file memories. 3. This kind of computers will be equipped with a disc file of extremely high capacity and access speed. 4. In the past few years several designs have been advanced and some have actually been built. 5. Business variables have been and are being expressed as mathematical functions and are being statistically analyzed. 6. Eight distinguished speakers have been asked to consider the potentialities and limitations of the computer in activities related to management. 7. The problem of designing a non-mechanical printer has already been studied in the central research laboratory. 8. The computer is given position data and velocity vectors of the satellite for a given time. 9. The idea of organizing the excursion to the Central Statistical Department has been approved by all the students present at the meeting. 10. The magnetron is a vacuum tube whose current is influenced by a magnetic field. 11. When a battery is being charged, a certain number of ampere hours will be added to the battery.

12. The kind of computer which takes in and manipulates information in this form is called digital.

Запомните следующие словосочетания и их эквиваленты.

to give consideration to = to consider — рассматривать

to make allowance for = to allow for — учитывать, делать поправку на

to make an attempt = to attempt — пытаться, делать попытку

to make contribution to = to contribute to — вносить вклад

to make mention of = to mention — упоминать о

to make reference to = to refer to — ссылаться на

to make use of = to use — использовать(ся)

to place emphasis on = to emphasize — делать упор на, подчеркивать

to take advantage of = to use — воспользоваться, использовать

to take care of = to care — следить, заботиться

to take note (notice) of = to pay attention to — обращать внимание на

to take steps +инфинитив = принимать меры, предпринимать шаги.

Упражнение 5. *Переведите предложения, уделяя особое внимание сказуемым в страдательном залоге.*

1.In his book emphasis is placed on the localization problem.2. Reference was made to his earlier publication. 3. Mention is made of an improved version of this method. 4. An important contribution was made to the study of this phenomenon. 5. Care must be taken to assure that an even number of logical inversions occur. 6. An attempt was made to redefine the previous year's budget. 7. In their discussion no account was taken of the environmental conditions. 8. Advantage is often taken of the effect of temperature on solubility. 9. In this chapter detailed consideration is given to digital computers. 10. In deriving these formulas no allowance was made for temperature increase. 11. In the following notice is chiefly taken of the former point. 12. Special attention has been called to the research work. 13.Steps are taken to diminish friction.

Некоторые способы перевода предлога by:

   1) путем, с помощью;

   2) к — в основном при наличии глагола в форме Perfect;

   3) написанный, составленный, проведенный — если by употребляется перед собственными именами;

   4) на — если by употребляется с глаголами типа to divide 'разделить', to multiply 'умножить', to increase 'увеличивать';

   5) by не переводится, когда передает отношения, выражаемые в русском языке творительным падежом.

   Например:

   The necessary amount of energy is provided by a mechanical system. — Необходимое количество энергии обеспечивается с помощью механической системы.

By 1930 they had succeeded in building the first differential analyzer. — К 1930 году им удалось построить первый дифференциальный анализатор.

Six divided by three is two. — Шесть, деленное на три, равняется двум.

Упражнение 6. *Переведите следующие предложения, обращая внимание на перевод предлога "by".*

1.You can judge (tell) a man by the company he keeps. 2. Man cannot live by bread alone. 3.I have a lot of textbooks by this author. 4. Peace cannot be kept by force. It can only be achieved by understanding. 5. You may know by a handful the whole sack. 6. By medicine life may be prolonged, yet death will seize the doctor too. 7. The bull must be taken by the horns. 8. Experience is achieved by industry. 9. Our solution resembles a little the solution by Brambilla.

Некоторые способы перевода глагола to follow и его производных (Participle I, II):

to follow: 1) следовать за; 2) следить за; 3) использовать (о методе, теории и т. д.), прослеживаться

following : 1) следующий за; 2) использующий; 3) после

followed by: за которым следует, с последующим

Например:

Data analysis follows data gathering. — Анализ данных следует за сбором данных.

We followed his method. — Мы использовали его метод.

Following the experiment the end product was tested. — После (проведения) эксперимента конечный продукт был испытан.

The structure is studied in Chapter 13, followed by Chapter 14 on its applications — Эта структура рассматривается в главе 13, за которой следует глава 14, сообщающая о ее применениях.

Упражнение 7. *Переведите следующие предложения, обращая внимание на перевод глагола to follow и его производных.*

1. Here is a complicated introductory paragraph followed by a slightly easier one. 2. The following is a brief outline of these components. 3. The review is followed by a discussion of the problem. 4. The following parameters should be monitored and controlled. 5. The proof follows the same type of arguments as the one for Lemma 1. 6. A sudden increase in demand will be followed by the rise of plant capacity. 7. Following the war the firm's output greatly increased. 8. The logical strategy to follow would be to proceed to the following step. 9. The nature of the process will be discussed first and this will be followed by an interpretation of the actual curves.

Запомните значения следующих глаголов с предлогами:

account for- объяснять, обосновывать, являться причиной;

agree upon (on) –договориться, условиться;

arrive at- приходить к (заключению, решению);

bring about- вызывать, осуществлять;

deal with- рассматривать, разбирать, заниматься, касаться;

depart from- отклоняться, уклоняться от;

do away with- покончить с, отказаться от;

insist on (upon)- настаивать на;

refer to- ссылаться на, упоминать о, направлять к, отсылать к;

rely on (upon)- полагаться на;

send for- посылать за;

speak, talk about (of)- говорить о;

subject to- подвергать (действию, влиянию);

think about (of)- думать о.

Упражнение 8. *Переведите следующие предложения на русский язык, не забывая при переводе о месте предлога.*
1. A number of scientific experiments in the near earth region has been referred to in that article. 2. Manual and automatic aerodynamic control during reentry will be spoken of at the next scientific conference. 3. Old traditions cannot be easily done away with. 4. As a consequence of the very high beam velocity, a large amount of waste energy must be disposed of. 5. The extremely high voltage of the transformer in the case under consideration was spoken of at the conference. 6. The method that has been introduced by that group of engineers will be dealt with in the next chapter. 7.New methods for measuring the results of the experiments are being in search of. 8. The detailed description of the speed indicator is insisted upon by the chief engineer. 9. For the first time the problem under discussion was referred to last year. 10. The changes taking place are not easily accounted for. 11. The sequence of events was brought about by the discovery of radioactivity. 12. Newton's laws of motion may be subjected to criticism. 13. Many materials now in common use were not even thought of thirty years ago.

Упражнение 9. *Подчеркните сказуемое с отделяемым предлогом, переведите предложения на русский язык.*
1. The body may be acted on by any number of external forces having arbitrary directions and applied at arbitrary points of the body. 2. This engine is usually referred to as an internal combustion engine because fuel is burned within its cylinders or combustion chambers. 3. An interesting case involving parallel forces occurs when a body is acted on by two forces which are equal in magnitude but opposite in direction and whose lines of action do not coincide. 4. The resistance of a given conductor depends on the material it is made of. 5. A battery or other source supplies a potential difference for the circuit it is connected to. 6. The performance of

a given tube depends upon the efficiency free electrons are produced with. 7. Whatever the nature of the tube and the arrangement of electrodes, an emitting electrode is not dispensed with. 8 .There is, however, one particular mode of variation which is met with in practice so frequently that it is worth while to develop formulas for this special case. 9. This phenomenon is accounted for by the sudden rise of temperature. 10.Newton's 'Particle Theory ' is sometimes referred to as the 'Corpuscular Theory' since corpuscles are very small particles. 11. Every breach of rules was dealt with as a breach of the law and punishment was proportionally severe. 12.When the molecules of even a good insulator are acted upon by an electric field, there is a motion of electrons due to this field.

Вспомогательный глагол *be* в составе сказуемых, выраженных глаголами в страдательной форме, может быть заменен вспомогательными глаголами *get* и *become*. Значит, в тексте можно встретить три разновидности страдательного залога:
be+Participle II – констатация действия, состояния;
become+Participle II – становление действия;
get+Participle II – приход в новое состояние; добиться какого-то действия.

   Некоторые способы перевода глагола to get:
  1) получать, доставать — смысловой глагол;
  2) становиться — глагол-связка;
  3) заставлять — в обороте «дополнение с инфинитивом»;
  4) get не переводится, когда является вспомогательным глаголом при образовании страдательного залога.

Упражнение 10. *Переведите следующие предложения на русский язык, обращая внимание на варианты страдательного залога.*
1. The latter problem has started to get special attention. 2. What happens when a boxer gets knocked out in the ring? 3. To get the best out of any language, some knowledge of simulation techniques is essential. 4. As people get older they grow more set in their ways and do not welcome any innovation. 5. You cannot get blood out of a stone. 6. You cannot expect to get anything without working for it. 7. He got his proposals accepted. 8. The point of equilibrium however is tremendously influenced by the temperature. 9. The results were affected by the presence of impurities. 10. This phenomenon has been dealt with by several researchers. 11. In ethers and similar solvents the frequency was unaffected. 12. No difficulties were met at all. 13. The reaction was followed by measuring temperature. 14. The experiment will be followed by testing the end product. 15. This usage is not followed in carbohydrate chemistry. 16. Hamilton's discovery was quickly followed by other new algebras. 17. No amount of selected examples, however convincing, can be relied upon. 18. What is watched or waited for seems too long in coming. 19. As far as other compounds of this series are concerned they will be dealt with in another chapter. 20. While such special cases are rather easily dealt with the general problem

is considerably more difficult. 21. The changes in water content will be accompanied by alterations in salt concentrations, and the latter are also affected by the ionic concentrations of the food ingested. 22. This problem can be approached from several points of view. 23. The congress was referred to as a most representative forum in this field.

Упражнение 11. *Найдите в следующих предложениях формы страдательного залога и переведите их на русский язык.*
1. Fallacies of this kind can often be met with. 2. Every thing is affected by its relations to everything else. 3. A decision was arrived at. 4. This is hardly to be wondered at. 5. This central idea must not be lost sight of. 6. Methods employed in solving a problem are strongly influenced by the research objective. 7. As data are changed, how are outputs affected? 8. This paper was shortly followed by another by the same author. 9. Any statement which must be referred to by any other statement in the program must be identified by a "statement number". 10. The inward component is not affected by any of these treatments. 11. These rules were arrived at independently. 12. Often objects can be defined and dealt with independent of their parameters. 13. A printer gets assigned temporally to a user as his own whilst he uses it. 14. Mercury becomes contaminated and cannot be reused. 15. The output gets subtracted from the input signal. 16. Different forms of experience were studied and became organized into a science.

Упражнение 12. *Переведите предложения, выделяя сказуемые в страдательном залоге.*
1. Mathematics is loved by many, disliked by a few, admired and respected by all. 2. Facts alone are wanted in life. 3. These parts are made of steel throughout. 4. At this point the material under examination is fed. 5. The treatment of this theory was modified. 6. The possibilities under consideration will be discussed in detail. 7. The shop will be equipped with automatic machinery. 8. The initiative was supported by everybody. 9. As far as this theory is concerned there are different views. 10. The machine was tried under severe conditions. 11. This stage was preceded by careful study of the results. 12. If you already know what these terms mean, proceed directly to Chapter 1, in which the procedure is presented. 13. No stage of the design can be completed in the absence of a complete specification of the system under design. 14. This requirement must be met. 15. Little was known about subsequent negotiations except that no agreement was reached. 16. In an inductive argument data about past and future are taken as "reasons". 17. Under these conditions the requirements involved are only partially met. 18. Significant variance reductions can be effected by these procedures. 19. Considerably less was written about mechanisms for effecting state changes. 20. The incompatibility of "this is good" and "this is not good" is preserved. 21. The intellect is involved into action. 22. Such acts are forbidden by law. 23. The number of degrees of freedom is reduced by the number of

imposed constraints. 24. The task is executed through successive completion of such cycles. 25. The importance of this phenomenon was underestimated. 26. What is written without effort is in general read without pleasure. 27. The special case derivations will not be provided, but the numerical results will be provided. 28.The work was considered important and is under way to be completed.

Упражнение 13. *Переведите следующие предложения на русский язык.*
1. When a beam is subjected to bending, internal stresses are set up. 2. The meteors of a shower are moving in parallel directions through space with the same speed. 3. Freezing points as well as boiling points are affected by external pressure. 4. The magnetron is a vacuum tube whose current is influenced by a magnetic field. 5. In the common radio tubes electrons are thrown off from the cathode when it is heated. 6. When a battery is being charged, a certain number of ampere hours will be added to the battery. 7. Another subject in Radio Astronomy concerns the reception of radio waves which are being generated by some processes in outer space. 8. In an amplitude-modulated broadcast transmitter during a moment when no music or speech is being broadcast, the antenna sends out its radio signal at a constant intensity or amplitude. 9. Radioactive isotopes offer an excellent method of treatment for many diseases, and are already being widely used for treatment by medical establishments. 10. Electrical circuits were dealt with in Chapter I and this chapter will be confined principally to magnetic circuits. 11. When a body or structure is subjected to external loads, internal forces are created by the corresponding elastic deformation of the body or structure which oppose the external forces and thereby maintain equilibrium. 12. The vertical and horizontal lobes on a kite balloon are sometimes referred to as stabilizers. 13. In one type of air-speed indicator there is a difference of pressure between the two sides of the diaphragm, which is caused to move, and this movement is transferred to an indicator dial on a clock face which is calibrated so as to read in miles per hour. 14. Certain corrections that are needed with both the airspeed indicator and the altimeter are given by a computer, which has been specially designed to allow for certain physical changes in the atmosphere. 15. Atmospheric pressure, which is due to the weight of the air, is measured by the height of a column of a mercury. 16. The air is warmed by the sun, not directly by the sun's rays but due to the fact that the earth absorbs the radiation from the sun, converts this into heat, and then transfers this heat to the air by convection. 17. These molecules are acted on both by forces of cohesion exerted on them by other molecules of the liquid and by forces of adhesion exerted by the molecules of the wall.

Упражнение 14. *Переведите следующие предложения, обращая внимание на формы страдательного залога.*
1. Never ask pardon before you are accused. 2. Little thieves are hanged, but great ones escape. 3. What may be done at any time will be done at no time. 4. Nature is

often hidden; sometimes overcome; seldom extinguished (F. Bacon). 5. Goodness of an object is defined by its relation to other objects. 6. This is rooted in instinct. 7. A mechanical method was substituted for an electric one. 8. Intuitive skill is required in forecasting opinions. 9. For the estimations use will be made of a hypothetical reference model. 10. Assume that all demands must be met on time. 11. The distinction between cause and effect cannot be established or altered by any authority, external or internal. 12. The decision is reached by balancing pleasures against pain. 13. Each sensor was assigned a corresponding specified coordinate S. 14. From now on it is assumed that the machines under consideration are strongly connected. 15. The question of the laws of resistances in circuits may now be turned to. 16. Many materials now commonly used were not even thought of thirty years ago. 17. Biological methods of purifying water are given much attention to by scientists. 18. The range of application of gas chromatography is wide and most substances boiling under 300°C can be dealt with readily. 19. Political and economic penetration was soon followed by outright annexation. 20. Their defeat was utter and awful. Mercy was not thought of. 21. The book was terribly bad, it was just a chance that it got published. 22. Mathematics, astronomy and physics were the first sciences to get organized and defined.. 23. When exposed to a beam of light this movement becomes oriented in the direction of the beam, and on a vertical surface it becomes directed by gravity. 24. The speed with which arithmetic operations are performed is affected by a number of factors. 25. In gaseous reactions the equilibrium position is largely influenced by pressure. 26. The qualitative examination of an organic compound is followed by a quantitative analysis. 27. Questions can be asked and answered, but unfortunately the questions asked and those answered are frequently not the same.

Упражнение 15. *Переведите следующий текст на русский язык, подчёркивая и анализируя формы сказуемого.*

One of the most striking characteristics of modern science has been the increasing trend towards closer co-operation between scientists and scientific institutions all over the world. What have been the reasons for this? One of the factors has already been discussed, i.e. the growing complexity and widening scope of present-day research, which has resulted in the creation of large organization employing great numbers of scientists and technologists. This has led to the extension of many items of research beyond national boundaries. The most important factor, however, has been the magnitude of the problems to be solved. In fact, it is becoming more and more evident that many of the problems cannot be solved except by the pooling of scientific effort and material resources on world-wide scale. As a result of the conditions outlined above international co-operation has been greatly intensified during the last 20 years.

Упражнение 16. *Переведите следующий текст, обращая внимание на перевод страдательного залога.*

A computer is a general purpose machine which represents and processes information. The machine is hardware, and we apply it for specific tasks by means

of software, i.e. , programs, or lists of instructions which are written in the code that the computer has been manufactured to understand. The fundamental principles of programming are connected with the sequence of instructions, the use of flowcharts, symbolic coding aids, loops, etc. The terms "coding" and "programming" are often used as synonyms.

However, "a code" is more specifically a short list of instructions that direct the computer to perform only a part of the entire calculations, whereas the term "program", means the complete list of instructions used for the problem. Hense programming usually includes the overall planning of computer application for a particular problem as well as writing instructions lists, or codes, whereas coding is usually limited in meaning to just writing instructions lists.

The basic stages in a program preparation are: 1) problem analysis, 2) outline or macroflowcharting, 3) detailed or microflowcharting, 4) coding, 5) input preparation, 6) testing and debugging. Some of the above stages may be overlapped , and each stage is followed by a careful check.

Each problem must be clearly defined before the programming function can be performed. It must be analysed in terms of "how must a program be written so that the computer can solve it?" The initial problem analysis usually runs together with outline flowcharting.

The detailed flowchart is developed from the outline flowchart. It is used to show the program in a detailed preparation for coding, the relationship between different parts of a code. The same symbols are used in a detailed flowchart as in an outline flowchart. The detailed flowchart is checked carefully for errors in logic.

At the coding stage the program may be coded in a machine code or by means of a programming language. The machine code can be immediately understood by the computer without translation. Machine code programming requires that the instructions are listed out in the form which is identical to the format of the instructions in the internal store. The address of each constant, item of data and instruction must be noted.

The word "language", when used as a technical term in programming, means a collection of rules which specify how certain symbols may be combined to form meaningful statements. (Languages in the nontechnical sense, such as English, are called natural languages in programming). The bridge between the programming language program and the required machine code program is provided by means of special processor program, or translator. The initial program written by a programmer is called the source program . Since it is only the machine code which the computer can understand, the processor program translates source program into the required, machine code program which is called the object program.

There are some important factors that characterize programming languages: the way and the time at which the object program is prepared, the «level» of the programming language, the format and the general structure of the source program, the basic data types, the possibility to use the program for other types of the computer, etc.

After the coding stage some procedure is used to input the program into the memory of the computer and then to debug the program, i.e., to detect and correct errors. The processor program "flags" (i.e., prints indicative symbols against) incorrect statements in the source program. It is well known that a single error in one instruction invalidates the entire code. When all the errors are corrected and the program is debugged, the CU (central unit) will execute the instructions and the results will be tabulated.

ИНФИНИТИВ (THE INFINITIVE)

Инфинитив – неопределенная форма глагола, отвечает на вопрос *что делать*? или *что сделать*? Показателем инфинитива является частица *to.*

Формы инфинитива

Indefinite	Active	Passive	Выражают действия, одновременные с действием глагола-сказуемого.
	to write	to be written	
Continuous	to be writing	-------	
Perfect	to have written	to have been written	Выражают действия, предшествующие действию глагола-сказуемого,переводятся прошедшим временем.
Perfect Continuous	to have been writing	-------	

Функции инфинитива

Подлежащее (переводится существительным или неопределенной формой глагола)	It is sometimes possible *to recover* data from a corrupted disc.- Иногда можно *восстановить* данные с разрушенного диска. *To input* data is to transfer data or information from outside a computer to its memory. – *Ввести* данные - значит передать данные или информацию извне компьютера в его память.
Составное именное сказуемое (существительное + глагол be + инфинитив) Подлежащее может быть выражено существительными: aim, purpose – цель; duty – долг; task – задача; method – метод; wish – желание; plan – план; function – назначение; problem – проблема, задача. Глагол-связка *to be* либо совсем не переводится на русский язык, либо переводится словами *заключаться в том, что(бы), состоять в том, чтобы.*	His task is *to debug* the problem. – Его задача (состоит в том, чтобы) *отладить* программу.

Составное глагольное сказуемое (переводится неопределенной формой глагола)	Because the computer revolution is so new, many effects *are still to be discovered.* – Поскольку компьютерная революция еще так нова, нам еще *предстоит многое открыть.*
Дополнение (переводится неопределенной формой глагола)	We want *to keep* the information about our clients in a database. – Мы хотим *хранить* информацию о наших клиентах в базе данных.
Определение (переводится определительным придаточным предложением, сказуемое которого имеет оттенок долженствования, возможности или будущего времени. Выбор модального оттенка подсказывается общим смыслом всего предложения. Инфинитив после слов *the first (the second, etc.), the last* является определением и переводится на русский язык в том времени, в котором стоит глагол *to be*	As this is the robot *to be driven* by the general public it has on-board sensors to safeguard itself against the commands that could put it in danger.-Так как это робот, *которым будут управлять* не-специалисты, у него есть бортовые сенсоры для защиты от команд, представляющих опасность для него. Charles Babbage was the first *to design* the programmable computer – Чарльз Бэббидж первым *создал* прграммируемый компьютер.
Обстоятельство цели (может стоять или в начале или в конце предложения, вводится союзами *in order (to) – для того чтобы; so as (to) –так чтобы*	(In order) *To type* letters and files we use a word processing program. Для того *чтобы напечатать* письма и файлы, мы используем программу «текстовый редактор»
Обстоятельство следствия (со *словами too – слишком; enough – достаточно*) часто при переводе имеет модальный оттенок	This metal is too brittle *to be hammered.* – Этот метал слишком хрупок, *чтобы ковать* его.

Упражнение 1. *Переведите следующие предложения, обращая внимание на инфинитив в функции подлежащего.*

1.To solve this problem is extremely important. 2. To know a foreign language is necessary for the computer specialist. 3. It is important to realize that video RAM (VRAM) must meet higher performance specifications than regular RAM. 4. It is necessary to define the tasks of this program. 5. To study this program requires much knowledge. 6. Today it's common to see terminals that include telephones, PCs and larger computers. 7. It is important to remember that disk drives are mechanical devices. 8. To introduce a microprocessor that is not downwardly compatible with previous models is very risky. 9. To translate the text without a dictionary is difficult.

10. New computer systems have such good audio systems that it is possible to listen to music while you work, have the computer tell you when the printer needs paper, play games that include sound, or compose music on the computer. 11. To explain this simple fact is not so very easy. 12. To obtain these data is necessary for carrying out further experiments. 13. To help our comrades is our duty. 14. To train highly qualified programmers is extremely important for the development of computer science. 15. To study this programming language requires much knowledge.

Упражнение 2. *Найдите в следующих предложениях инфинитив в функции сказуемого. Переведите предложения.*

1. The purpose of the computer is to transform data into information. 2. Using computers has both positive and negative effects on our lives. Our goal is to take advantage of the positives and either reduce the negatives or deal with their results in the best way for you. 3. The biggest challenge in making a workgroup effective is to ensure that its members can communicate more easily among themselves. 4. One important task performed by the operating system is to control the execution (running) of programs. 5. Information must be relevant, timely, accurate, concise and complete in order to be useful . 6. Procedures are the steps that you must follow to accomplish a specific computer-related task . 7. Computers may displace workers by automating tasks that people used to perform or by enabling fewer workers to perform tasks more efficiently. 8. You can use software to instruct computer hardware to do a variety of tasks that involve processing data. 9. The transistor was to change the way computers were built. 10. The first step in developing a program is to define the program.11. The communication channels must be as wide - and as clean – as possible to accommodate a large number of complex signals. 12. Virtually all countries have recognized that to be part of the world economy, they must be part of the world communications system. 13. Users can put the information on their Web pages onto the intranet, and all interested parties can access the information, read it , and download it without wasting the paper to copy it, or the time to make and circulate the copies. 14. To read a graphics file, you must use a program that recognizes the file's format. 15. In order to connect a monitor to a microcomputer, you must have a graphics adapter board (also known as a video card).

Упражнение 3. *Найдите и переведите предложения, в которых инфинитив выступает в функции дополнения.*

1. You need to understand some fundamental concepts about how computer systems are set up and how they work. 2. Computers consist of hardware, the physical parts of the computer, and software, the programs that tell the computer what to do. 3. You must transfer the information to a storage device, such a disk drive, if you want to keep the information permanently. 4. Computers also ease your daily activities by brewing your coffee, printing your newspaper, and helping you write your letters and pay your bills. 5. Only in the 1950s it became business to produce and consume computer languages. 6. When a modem attempts to establish a connection, it automatically negotiates the modem on the other end. 7. Windows and the graphical

user interface made it possible to create value-added files – spreadsheets with charts, word processing files that used different fonts and sophisticated formatting. 8. Most users want to use applications with which they are already familiar, and there is no reason not to do so in a networked computing environment. 9. Many officials want to ban the Internet entirely, but others insist that doing so would leave the countries technologically hobbled. 10. Perhaps the easiest way to enter data is with the touch of a finger. 11. Pen-based computing is just beginning to gain widespread acceptance. 12. Once the program is complete, it needs to be implemented - installed on a computer and made to work properly. 13. Performance monitors help maximize the system's performance by keeping track of what is happening with the various hardware devices. 14. Although a computer can operate perfectly without a printer, it is certainly helpful to the user to have one.

Упражнение 4. *Переведите предложения, обращая внимание на особенности перевода инфинитива в функции определения.*

1. The capability to process data can be used in a variety of ways. 2. A useful model to describe the relationship between data and information is called the systems model. 3. Efforts to pack more transistors on one chip have led to such a development as Intel's Pentium Pro microprocessor. 4. Multiprogramming is the capability of a computer to switch between programs requested by different users and to execute the programs concurrently. 5. The instructions to start the computer are stored in read-only memory chips, which are not volatile. 6. When an organization wants to offer communications services to others, it submits a tariff to the government. The tariff is a list of services and charges for the services to be offered. 7. Bandwidth refers to the capacity of a communications channel to carry data or information. 9. Disk drives can store large amounts of data and have the capability to directly access a file or record. 10. Just as CDs have revolutionized the music industry, optical discs have the potential to change secondary storage media. 11. Depending on the volume and type of material to be scanned, you can use drum scanners, flatbed scanners, sheet-fed scanners, and even small handheld scanners. 12. New sound cards even include the possibility to have the computer read a text file to you while you continue working. 13. To test or debug a program, you must create sample input data that represent every possible way to enter input. 14. One program often cannot read data created in another program unless the receiving program has the capability to translate the other program's code. 15. In the early days of the PC revolution, the computer placed the means to gather, organize, and publish information into the hands of more people than any other previous publishing medium.

Упражнение 5. *Переведите предложения, в которых инфинитив выступает в функции обстоятельства.*

1. Because computers have moved into society so rapidly and so completely, you need basic computer skills just to pursue your career goals and function effectively in society. 2. You need computer literacy, sufficient computer knowledge to prepare you for working and living. 3. Today's complex computer programs, such as

Microsoft Word, consist of many separate programs that are designed to run together. 4. In California, for example, a forest ranger uses an electronic spreadsheet to analyze data concerning endangered animal populations. 5. A database program creates an electronic version of a card file - and the program gives you the tools you need to organize this file and to retrieve information. 6. Mainframe computers are large, expensive computers designed to meet a large organization's computing needs.
7. High-level languages were developed to make programming available to most people. 8. To be useful, information must be relevant, timely, concise, accurate and complete. 9. The first computing device could have been as simple as a set of stones used to represent bushels of wheat or herds of animals. 10.To make computers more user friendly (easier to work with), companies developed graphical user interfaces. 11.Computers that use artificial intelligence will have some attributes associated with human intelligence, such as capabilities to decode and respond to natural language(a human language such as English), to reason and draw inferences, and to recognize patterns in sensory input. 12.To interpret the incoming information properly, each computer needs to know whether the other computer is using even parity or odd parity. 13. Minicomputers are smaller than mainframes but still large enough to meet the computing needs of a medium-sized or small organization. 14. To link two computers through the telephone system, a hardware accessory called modem is necessary. 15. To use a bulletin board , you use your communication program to call the bulletin board telephone number.

Объектный инфинитивный оборот (Complex Object)

Объектный инфинитивный оборот – это сочетание имени существительного в общем падеже или местоимения в объектном падеже с инфинитивом глагола, выступающего как единый член предложения – сложное дополнение. Оно употребляется после глаголов с широким кругом значений, выражающих умственную деятельность; желание, требование; физическое восприятие; констатацию факта; просьбу, запрет; приказ, разрешение и др.

Subject	Predicate	Complex Object	
Noun (Pronoun)	expect, assume, think, suppose, know, believe, consider, want, wish	Noun (Pronouns): me, you, him, her, us, them	Infinitive with -to-
Noun (Pronoun)	make, see, observe, hear, watch, feel	Noun (Pronoun)	Infinitive without –to-

Engineers Инженеры	consider считают,	computing equipment что компьютерная техника	*to make* production processes more effective *делает* производствен-ный процесс более эффективным
I Я	have never heard никогда не слышал, чтобы	her она	*sing* that song. *пела* эту песню

Запомните значения глаголов, вводящих сложное дополнение:

assume – считать, полагать

believe – считать, полагать

consider – считать, полагать

choose – считать

expect – ожидать, надеяться

find – находить,обнаруживать

hold - считать

know – знать

maintain – утверждать

reckon – считать

suppose – полагать, предполагать

take – считать

think – думать, полагать

show – показывать

prove – доказывать

desire – хотеть, желать

require - требовать

wish – хотеть, желать

want - хотеть

feel - чувствовать

hear - слышать

see - видеть

watch - наблюдать

observe - наблюдать

cause – причинять, вызывать

make - заставлять

allow - позволять

enable – давать возможность

force - вынуждать

ask – просить

Упражнение 6. *Переведите предложения, обращая внимание на особенности перевода объектного инфинитивного оборота.*

1. The transmission mode enables the receiving computer to know where one byte ends and next byte begins on the transmission medium. 2. 4. A debugger is a system software that helps programmers identify errors. 3. A good communication program directs the modem to dial the telephone number needed. 4. A remote terminal enables the user to operate the distant computer, just as is that person were sitting in front of the distant computer and using its keyboard. 5. Compared to the postal service, electronic mail has many advantages. Many systems let you check to see whether the recipient has accessed your message. 6. International electronic mail systems enable you to find "pen pals" all over the world. 7. Programming languages require certain formalities, and advanced text editors help programmers stick to proper forms.

8. The event is a message that causes a procedure (subprogram) attached to respond. 9. Electronic mail, or e-mail, allows messages sent from your computer to be accessed by the recipient at his or her computer, as long as you both have access to the same e-mail system. 10. Bulletin board systems (BBSs) enable independent computer users, using telecommunications, to interact with each other through a central contact. 11.System software programs help the hardware components work

together and provide support for application programs. 12. Traditionally, programming languages have been procedural in nature. If you wanted a computer to accomplish a task, and then programmed them into the computer. 13. CD-erasable enables users to store, access, and reuse discs in the same way that floppy discs can be used. 14. System software programs help the hardware components work together and provide support for appplication programs. 15. Optical recognition systems enable the computer "to read" data by scanning printed text for recognizable patterns.

Субъектный инфитивный оборот (Complex subject)

Субъектный инфинитивный оборот (сложное подлежащее) состоит из существительного в общем падеже или местоимения в именительном падеже и инфинитива, стоящего после сказуемого.

Subject Noun/Pronoun	Predicate	Infinitive
	is said is known is supposed is believed	
Computing equipment *is known to make* production processes more effective. – *Известно, что компьютерное оборудование делает* производственные процессы более эффективными.		
	seems appears happens proves	
The chip appeared to *be* a crucial development in the accelerating pace of computer technology. – *Кристаллы оказались* важным изобретением в ускорении развития компьютерных технологий.		
	is likely is sure is certain	
He is certain to know the password. – *Несомненно, он знает* пароль.		

Запомните значения следующих глаголов, глагольных словосочетаний, образующих с инфинитивом субъектный инфинитивный оборот.
1. Глаголы, которые употребляются в этом обороте в страдательном залоге:

know – знать   believe – полагать; считать
consider – считать; рассматривать   find – полагать; считать
say – говорить   suppose - предполагать
state – заявлять; сообщать   assume - предполагать
report – сообщать   expect - ожидать
think – думать; считать   hear - слышать

2. В действительном залоге употребляется только несколько глаголов:

seem – казаться   happen – оказываться; случаться

appear – казаться   chance – оказываться; случаться
prove- оказываться   turn out – оказываться

3. Инфинитив в этом обороте может также стоять после словосочетаний;

be likely – вероятно; может   be sure – несомненно; конечно
be unlikely - вряд ли; не может быть, что   be certain – несомненно; конечно
be not likely – маловероятно

Упражнение 7. *Переведите предложения с субъектным инфинитивным оборотом.*

1.The programmer is free to concentrate on the desired result – what the program is supposed to accomplish – rather than worry about the details of how the computer operates. 2. Each new communications technology or application seems to require its own standards. 3. Internet-2 is expected to be deployed around this year. 4. Capturing data at the source minimizes errors because the people who key the data are doing a variety of tasks and are therefore less likely to make errors due to boredom. 5.Processor is known to refer to the processing circuits: central processing unit, memory, interrupt unit, clock, and timing. 6. Many so-called general-purpose computers are known to have features which restrict their use to certain general problem areas. 7. The desk computer is expected to function as your personal librarian, carry out simple optimization computations, control your budget or diet, play several hundred games, etc. 8. Further development of the computer is believed to lead to a situation in which most of the knowledge accepted by mankind will be stored in computers and made accessible to anyone with a home computer. 9. The development of the project appears to be improving. 10. He proved to be an excellent programmer. 11. At present the most important examples of semiconductors seem to be silicon and germanium. 12. The importance of mathematics for all sciences is known to be growing rapidly. 13. The creation of complex modern machines is considered to require a thoroughly developed industry and a high technical level in all branches of industry. 14. The program proved to be a great success.

Предложный инфинитивный оборот
"for + существительное (местоимение) + инфинитив" (for-phrase)

выполняет роль любого члена предложения: дополнения, части сказуемого (в научной литературе чаще всего функции обстоятельства цели или следствия) и переводится в зависимости от выполняемым им функции. Может переводиться придаточным предложением, вводимым союзами *что, чтобы, для того чтобы, который,* подлежащим которого становится существительное или местоимение, стоящее перед инфинитивом, а сказуемым – инфинитив.

The only conclusion *for him to make* was the following. – Единственный вывод, к *которому он мог прийти*, заключался в следующем.

Возможен перевод этого оборота существительным или инфинитивом:

It was important *for us to solve* this problem as soon as possible. – Нам было важно *решить* эту проблему как можно скорее.

Упражнение 8. *Переведите инфинитивный оборот с предлогом for.*

1. It is important for the researchers to fulfil their work in time. 2. It takes more time for the reaction to complete at low tº. 3. It is impossible for the driver to stop the at such a high speed quickly. 4. The problem I spoke to you about is too difficult for the designers to be solved in a year or so. 5. Here is one more important point for the speaker to explain. 6. These stars are too remote for the astronomer to answer these questions. 7. He proved that it was possible for the angle to be altered. 8. It is possible for computers to handle all types of information. 9. For a computer to be programmed each problem must be reduced to a series of very simple steps. 10. Two hours were sufficient for the reaction to occur. 11. The language of specialists is often difficult for the layman to read. 12. There is a tendency for the method to be used in all the experiments. 13. It took a long time for mathematicians to realize that not all continuous functions have a derivative. 14. A computer is a suitable machine for them to use in their research work. 15. All the instruments for that computer to work properly have been given.

Упражнение 9. *Переведите предложения, обращая внимание на инфинитив.*
1. Engineers try to place greater and greater numbers of circuit elements onto smaller and smaller chips. 2. Computer is used to convert data into information. 3. It is a very hard undertaking to seek to please everybody. 4. To construct an experiment of this kind seems nearly impossible. 5. We attempted to carry out this investigation. 6.Robots can be used here as these tools are too heavy to handle. 7. Nowadays robots continue to expand their applications. 8. Spray painting is the manipulation of a spray-painting gun over the surface of the object to be coated. 9. The system must tell us if someone tries to get into the system.. 10. To perform this work one must have all the necessary equipment. 11. It is too urgent a matter to be postponed. 12. Thomas was the first to focus attention on this type of reaction. 13. Some molecules are large enough to be seen on the electron microscope. 14. In order to demonstrate the effect Table I is given. 15. The important thing is to understand what you are doing, rather than to get the right answer.

Упражнение 10. *Переведите предложения, определяя функцию инфинитива.*
1. Four terminals are used by keyboard operators to input information, and the others are used to provide information to senior staff. 2. I need to know more about control of access. 3. In order to avoid accidental or intentional loss of data, only specially authorized personnel may delete data files. 4. The operations are efficient enough to have little effect on the speed of the simulation. 5. Also, the programs to be verified will have to be well-constructed, to make the job easier. 6. This correspondence dealt with books published or to be published. 7. The Nary was too new, too small and not experienced enough to resist the enemy's. 8. A small computer company announced a computer small enough to set on a desktop and powerful enough to support high level language programming. 9. Care should be taken not to view these three methodologies as competitive ones. 10. He felt that the only thing to do was to study their methods and ideas. 11. For him, however, obstacles existed only to be overcome. 12. The system must allow managers to call up data relevant to their

needs. 13. I would like to find out what your company requires in terms of protection for your computer system. 14. And to conclude, he is to be highly imaginative too. 15. To solve the problem would justify all the costs.

Упражнение 11. *Переведите предложения, обращая внимание на порядок перевода слов в сложном подлежащем (Субъектный инфинитивный оборот).*
1. Many substances are known to dissolve in hot water. 2. Air was considered by the ancients to be an element. 3. Pop-stars are thought to live a happy luxurious life. It is too bad he appeared to be a fair-weather friend. 4. Microphone and video camera are known to be used to input data into the computer. 5. The use of robots in assembly is expected to increase because of the high cost of manual labour. 6.Assembly machines are considered to be examples of fixed automation. 7. The real situation is stated to be very complex. 8. The fact happened to become known to everybody. 9. These two methods turned out to be incompatible in effectiveness. 10. The conditions seem to have been poorly chosen. 11. Hardly any aspect of economic life is likely to be unaffected by automation. 12. Benjamin Franklin is acknowledged to be the founder of the theory of atmospheric electricity. 13. He is recognized to have been a great public figure who did as much as he could for the good of his country. 14. Unfortunately this approach is unlikely to be successful. 15. The device known to be built by Charles Babbage is now considered to be the parent of modern computers.

Упражнение 12. *Переведите предложения, содержащие сложное дополнение (Объектный инфинитивный оборот).*
1. He wished the matters to be taken seriously. 2. It causes the monitor to indicate computer failure. 3. It is usually rather difficult to get nitrogen to combine with other elements. 4. You may lead a horse to the water but you cannot make him drink. 5.Flexible automation allows a mixture of different products to be produced one right after another. 6. Did you hear him go out? 7. The way the situation developed made the government change their tactics. 8. This program will enable scientists to perform remote geological experiments. 9. He expected everyone else to do all the work. 10. Experience shows this strategy to have produced better results than more traditional algorithms. 11. We know metal to conduct electricity. 12. For 2200 years all the mankind believed Euclid to have discovered an absolute truth. 13. The whole world knows Lobachevsky to have strictly demonstrated and explained the principles of the theory of parallel lines. 14. We know many Byelorussians to have taken part in the Russian-Turkish war of 1877-78. 15. Optical recognition systems enable the computer to "read" data by scanning printed text for recognizable patterns.

ПРИЧАСТИЕ (THE PARTICIPLE)

Причастие является неличной формой глагола и обладает признаками как прилагательного (иногда наречия), так и глагола. В английском языке имеются следующие формы причастия:

	Participle I	Participle II	Perfect Participle
Active	writing asking		having written having asked
Passive	Being written being asked	written asked	having been written having been asked

Participle I указывает на то, что действие, выраженное им, совершается одновременно с действием, выраженным глаголом-сказуемым: reading – *читающий, читая*.

Действие, выраженное Participle II, всегда носит страдательный характер, т.е. направлено на предмет или лицо, с которым связана эта форма: written-*написанный*.

Perfect Participle указывает на законченность действия по отношению к основному действию в предложении, выраженному сказуемым: having written – *написав*; having asked – *спросив*.

Participle I и Perfect Participle в страдательном залоге указывают на то, что действие, выраженное причастием, направлено на лицо или предмет с ним связанный: being written – *будучи написанным*; having been written *будучи (уже) написанным*.

Независимый причастный оборот

В независимом причастном обороте перед причастием стоит существительное в общем падеже или местоимение в именительном падеже. Это существительное или местоимение является субъектом действия, выраженного причастием, и не совпадает с субъектом действия, выраженного личной формой глагола (то есть не совпадает с подлежащим). Независимый причастный оборот переводится обстоятельственным придаточным предложением с союзами *так как, после того как, когда, если* и др. или самостоятельным предложением с союзами *а, и, причем.* Союз ставится перед существительным (местоимением), предшествующим причастию. Причастие переводится личной формой глагола в функции сказуемого, а стоящее перед ним существительное (местоимение) – подлежащим:

1. *My colleague being away*, I had to take the decision myself.
   Так как мой товарищ по работе отсутствовал, мне пришлось самому принять решение.
2. We continued our work, *with our laboratory assistants helping us*.
   Мы продолжали свою работу, а *наши лаборанты помогали нам*.

Упражнение 1. *Найдите причастия в следующих предложениях и переведите их на русский язык.*

1. Based on technology research by Newlands Scientific at Hull University, and marketed by a company called Olympia, the gadget is a little smaller than a computer mouse. 2. Usually, you would think of smart cards as pieces of plastic with embedded memory chips.3. Last year, a program called Alice, developed by Dr Richard Wallace, took the bronze prize. 4. Linux being created and maintained by a worldwide army of programmers belongs to no one and is open to all. 5. The avatars are computer animations designed to look and move like real people. 6. An official report released the day after the September attacks highlighted the vulnerability of

America's computer networks. 7. Broadband users worried that their PC is vulnerable will soon be able to buy a "black box" that watches over their net link to stop viruses and hack attacks. 8. Because broadband net links are "always on", insecure machines linked to them are much more likely to be found and exploited by net vandals.

9. Those with a high-speed connection use the net far more than those with just a dial-up modem, and very often choose to leave their PC switched on and connected almost all the time. 10. In such attacks, PCs dotted around the web bombard a target site with bogus data packets on behalf of an attacker. 11. Some pages adopting chatbot software make their sites more interactive and friendly. 12. Fraunhofer engineers are experts in data compression, handy for making music files portable on the internet and essential for dealing with the giant volumes of data generated by film. 13. But the challenge they face extends further - to replicating the exceptional range of light captured by conventional cinema film and taking 3D sound to an entirely new level. 14. Even cameras built for high-definition television cannot match the quality of chemically processed analogue film. 15. Computer attacked by the virus crashed.

Упражнение 2. *Переведите предложения на русский язык, обращая внимание на разницу перевода Participle I и Participle II.*

1. Being too expansive the project couldn't be approved. 2. Remote access devices are used to connect remote users to central or enterprise computers and data centers – for example, the travelling businessman using a notebook computer. 3. There are some good reasons to use magnetic tape, despite the disadvantages mentioned. 4. In addition to minimizing typing errors, a mouse makes operating a microcomputer easier for beginning users. 5. A magnetic disk, coupled with a disk drive that can store and retrieve data on the disk, is a random-access storage medium. 6. Removable disks consist of a single platter encased in a plastic cartridge. 7. The disks can't be easily duplicated because the encoding process does not actually pit the disk. 8. A hard disk consists of several platters, with data encoded on both sides of each platter. 9. Many small disk notebook computers use a hard card, which is a small disk mounted on an expansion card, rather than a full disk drive and pack. 10. Most hard disks are permanently encased within the disk drive in a sealed environment free from dust and dirt. 11. Based on the same laser technology as CDs, optical disks offer a medium capable of storing extremely large amounts of data. 12. To use a CD-ROM, you must have a computer equipped with a CD-ROM drive. 13. Because CD-ROMs are read by refraction of light, a dye layer is discolored in the recording process, which causes the area either to reflect light or to disperse it. 14. We want to take the existing Jpeg2000 coding process and adapt it for cinema applications. 15. Existing 3D sound systems work well for cinemagoers sitting within a relatively small optimal zone but can suffer quality losses outside that zone.

Упражнение 3. *Выберите предложения, в которых причастие выполняет функцию определения, определите форму причастия и переведите на русский язык.*

1.A RAID (Redundant Array of Inexpensive Disks) can be composed of more than one hundred 5.25-inch disks with a controller mounted in a single box. 2. CD-ROM

workers much like the compact disks used in CD players. 3. If you want to create a multimedia presentation and then play it back on any available computer equipped with a CD-ROM drive, CD-R is the tool you have been looking for. 4. The blank disks are made with the spiral tracks impressed on the recording surface. 5. Magneto-optical (MO) disks are erasable and combine the magnetic principles used on tape and disk with new optical technology. 6. One of the newest MO systems – Orray produced by Pinnacle Micro – uses a storage method similar to that of RAID. 7. No matter what storage medium or computer you are working with, everything stored on it is stored in a file. 8. You should never alter or delete a configuration file, particularly one required by a computer's operating system. 9. Graphic files contain pictures in a specific graphics format used for storing digitally encoded pictures. 10. Related fields are combined to form a record. 11. Of all the scanning devices, you are probably most familiar with bar code readers. 12. Optical scanners can scan typed documents, pictures, graphics, or even handwriting into a computer. 13. Photographs scanned into a microcomputer appear clearly on the screen. 14. Some new keyboards have 107 keys, with the three new keys designed to simplify working with Windows95. 15. Another tool used in CAD (computer-aided design) applications and other graphics applications is a digitizing tablet.

Упражнение 4. *Переведите следующие предложения, соблюдая порядок слов, свойственный русскому языку.*

1. Early scanners could recognize only text printed in a special optical character recognition (OCR) typeface. 2. A system recently released by IBM, known as Voice Type, is capable of recognizing as many as 32,000 words and speaker independent. 3. The higher resolution with more pixels provides a clearer, more detailed image. 4. Interlaced monitors refresh every other line. 5. The second most common form of computer output is printed documents. 6. A continuous-curve plotter is used to draw maps from stored data. 7. A cookie is a small piece of data sent to your hard disk by the website. 8. A switch receives incoming transmissions arriving at a node and redirects them through the network to their proper destinations. 9. The increased capabilities of minicomputers have resulted in a decline of sales of mainframe computers. 10. IBM started producing mainframes based on arrays of microprocessor chips and designed to be servers for giant databases. 11. This is the Soundbug, a British-designed gadget aimed at young people that turns any hard, smooth surface into a loudspeaker. 12. At the heart of the Soundbug there is a small piece of a material called Terfenol-D, originally developed by the US military for sonar work. 13. The Soundbug attached to audio sources via a 3.5 millimetre jack plug, is easy to connect to a CD player or a minidisc. 14. A new video game inspired by the abstract artist Kandinsky aims to overload the senses with its psychedelic visuals and pulsating dance beats. 15. Sound generated every time you destroy one of the insect-like enemies becomes a form in the scrolling, flashing 3D computer world rushing past.

Упражнение 5. *Определите форму причастия и переведите предложения на русский язык.*

1. The new faster standard called Wi-Fi5 and is awaiting final approval for use in Europe. Its imminent arrival has been promoted at the CeBIT technology fair in Hanover. 2. Business users are more likely to use the technology to connect to the internet on the move at wireless "hotspots" installed in airports, hotels and cafes. 3. Mira technology designed to give Windows users the ability to lift a flat screen display off a PC and continue using it in another room is presented at the CeBIT 2002 fair in Hanover. 4. Deutsche Telekom will base a product called T.Net around Microsoft's .Net technology, designed to provide the backroom glue for mobile business computing. 5. Only one of the blocking programs tested in the report did a good job of blocking access to the pornography stored and shared via these peer-to-peer systems. 6. Research carried out by Abbey National has revealed that when people have one bad experience online, they tend to regard all websites the same way. 7. Every minute of every day hundreds of networks connected to the internet are under attack by automatic software tools looking for and exploiting the vulnerabilities they find. 8. Two reports issued separately have shown that the net is awash with security problems and reveal the efforts anyone using the net has to take to stay safe. 9. With the FBI estimating that 1% of all attacks are succeeding, this could mean that vast numbers of the networks connected to the net have been compromised. 10. A statement issued by Counterpane along with the results said that without expert help many companies would be completely overwhelmed by the sheer number of attacks. 11. In the report Cert said that one of the most worrying trends was the increasing sophistication of the tools used by computer vandals to cause havoc on the net. 12. Wireless network fans wanting to hook up computers without the mess of cables will see new Wi-Fi5 cards, which promise a big speed boost compared with their predecessors. 13. 60,000 new domain names registered during this month are those with a ".uk" suffix. 14. There is much to learn from the games industry in terms of developing scenarios that really challenge and engage children, rather than reproducing text books on the screen. 15. A scheme in London, UK, called Consume, aims to show people how to share their net connections, software and experiences using wireless networks.

Упражнение 6. *Найдите независимые причастные обороты в следующих предложениях. Переведите.*
1. The main menu functions of Windows 98 being known, the main menu functions of Windows Me could be guessed. 2. The disk removed, the computer can be switched off. 3. The new browser having been studied in detail, the committee decided to introduce it at the exhibition. 4. My colleague being away, I had to take the decision myself. 5. There being many people in the conference hall, we couldn't enter. 6. We continued our work, with our laboratory assistants helping us. 7. The new wireless network is very expensive, we hardly buy it. 8. The technology designed, we made a great progress in the field of IT. 9. The research being carried out, the virus can't destroy our equipment. 10. Other protecting systems being cumbersome, we use the old one. 11. The new software having been installed, I felt a sort of satisfaction. 12. With the new virus being created, we need the patchs for

Windows. 13. With a sound generated every time you destroy one of the enemies, the game becomes more interesting. 14. The computer crashed, I lost all my afternoon's work. 15. The information stored, you can access it any time you need it.

Упражнение 7. *Выберите правильный вариант Participle I или Participle II и переведите предложения.*
1. The net was supposed to be about community, about people with common interests *finding/found* each other in the limitless tracts of cyberspace and *connecting/connected* like never before.
2. The nodes will link to the net via broadband links and share that access via antenna *siting/ sited* on the roofs of several buildings.
3. The company *administering/ administered* the .info domain could face legal challenges from those *denying/ denied* a chance to apply for some generic .info domains.
4. A group of researchers at Bell labs have made tiny *functioning/functioned* transistors a million times smaller than a grain of sand.
5. Each molecular transistor is 10 times smaller than any components *creating/ created* with today's most *advancing/ advanced* chip *making/ made* techniques.
6. In the media you can often find articles *telling/ told* of hackers *breaking/ broken* into computer systems and websites *stealing/ stolen* and *destroying/ destroied* information.
7. Hacker is a computer user *breaking/ broken* a system's security and *stealing/ stolen* valuable information.
8. Hackers will often write open-source code *allowing/ allowed* others to see what they have done.
9. The hacking contest was not run fairly and proved nothing about the integrity of the *proposing/ proposed* technologies.
10. Chemically *producing/ produced* components are microsopicaller, faster and more efficient then today's silicon products made *using/ used* lithography.
11. Technologies such as the Internet, PCs and wireless telephony have turned the globe into an increasingly *interconnecting/ interconnected* network of individuals, organizations and governments *communicating/ communicated* and *interacting/ interacted* with each other with through a veriaty of channels.
12. *Using/ used* effectively, information and communication technologies can help to create *training/ trained*, *educating/ educated* and healthy workforce.
13. Netscape Gecko control how WebPages appears on the screen and supports *accepting/ accepted* web standards such as HTML, XML, Cascading Style Sheets and JavaScript.
14. The method *using/ used* depends on the length to be measured.
15. An intelligent network consists of *distributing/ distributed* signaling network of switches, databases and *dedicating/ dedicated* computer servers.

ГЕРУНДИЙ И ГЕРУНДИАЛЬНЫЕ ОБОРОТЫ

I. Признаки герундия и его перевод

Герундий образуется так же, как и причастие: к инфинитиву без частицы *to* прибавляется окончание – *ing: to read – reading, to write – writing.*

Герундий имеет признаки существительного и глагола, и можно его переводить или **существительным**, обозначающим **процесс** (словом, оканчивающимся на *–ание, -ение*), или **глаголом**, чаще всего **инфинитивом**, и иногда (если есть предлог) **деепричастием**, например:

Saying is one thing and *doing* is another.	*Сказать* – это одно, а *сделать* – это другое.
By doing nothing we learn to do ill.	*Не делая* ничего, мы учимся делать зло.

II. Функции герундия в предложении

1. Подлежащее:

Defining problems precisely requires patience.	Точное *определение* (постановка) задач требует терпения.
Getting several viewpoints is vital.	Чрезвычайно важно *иметь* несколько точек зрения.

2. Определение:

Memory is the process of selective *forgetting*.	Память – это процесс выборочного *забывания*.

Существительные, после которых употребляется герундий в функции определения:

ability	- способность	advantage	- преимущество
chance	- возможность	merit	- достоинство
necessity	- необходимость	possibility	- возможность
probability	- вероятность	reason	- причина, основание
way	- способ		

3. В роли обстоятельства герундий всегда имеет предлог и иногда может переводиться деепричастием, например:

In an interview a person can learn only *by listening*, not *by talking*.	Во время интервью человек может (что-то) узнать, только *слушая*, но не *говоря*.

4. Дополнение:

We thought of *starting* another series of experiments.	Мы подумывали о том, чтобы *начать* еще одну серию экспериментов.

Переходные глаголы, после которых в качестве дополнения без предлога может использоваться герундий:

to avoid	- избегать	to deserve	- заслуживать
to prefer	- предпочитать	to require	- требовать

| to resist | - сопротивляться | to try | - пытаться |

Например:

| He preferred *changing* the course of actions. | Он предпочел *изменить* ход действий. |

Герундий может употребляться и после глаголов, требующих дополнения с предлогом:

to account for	- объяснять	to accuse of	- обвинить в
to aim at	- стремиться к	to depend on	- зависеть от
to differ in	- различаться	to be fond of	- любить, нравиться
to insist on	- настаивать на	to be interested in	- интересоваться
to object to	- возражать против	to prevent from	- предотвращать
to rely on	- полагаться на	to be responsible for	-быть ответственным за
to result from	- быть результатом	to result in	- приводить к
to succeed in	- удаваться	to think of	- думать о

Например:

| They *insisted on postponing* the discussion. | Они *настаивали на том, чтобы отложить* обсуждение. |

III. Герундий в составе сказуемого

1. Герундий может также играть роль именной части составного сказуемого. В этом случае перед ним используется другой глагол, который берет на себя показатели времени, числа, лица, наклонения. Такими глаголами могут быть:

а) глагол-связка *be*, который обычно переводится словами *являться*, *заключаться в* и др.

| The main point of a transform-er *is providing* the change of voltage (составное сказуемое: *be* – глагол-связка, *providing* - герундий). | Главным назначением трансформатора *является обеспе*чение изменения напряжения. |

б) глаголы, передающие начало, продолжение или прерывание действия типа:

to begin, to start	- начинать
to continue, to go on	- продолжать
to finish	- кончать, заканчивать
to give up	- переставать (что-л. делать), отказываться от
to keep (on)	- продолжать
to stop	- прекращать

в) обратите внимание на перевод следующих словосочетаний, за которыми используется герундий:

cannot help – *нельзя* (*не можем*) + *не* + неопределенная форма глагола

Например:

| They *could not help using* this information. | Они *не могли не использовать* эту информацию. |

(it is) worth } *стоит* + неопределенная форма
(it is) worthwhile глагола или существительное

Например:

| It is *worth (while)* discussing this phenomenon. | *Стоит обсудить* это явление. |

no use – *нет смысла (бесполезно)* + неопределенная форма глагола

Например:

| There is *no use considering* these writings. | *Нет смысла рассматривать* эти произведения. |

IV. Три *ing*-формы

1. Существуют три части речи, имеющие окончание *–ing* (три *ing*-формы) – причастие I, герундий и отглагольное существительное:

covering – Participle I   покрывающий (определение)
                                                    покрывая (обстоятельство)
(by) covering – Gerund -   (путем) покрытия (процесс)
(a) covering – Noun   -   покрышка, пленка, покрытие (предмет)

2. Герундий и отглагольное существительное часто могут переводиться одинаково – существительным с окончанием *–ание, -ение*:

а) если перед *ing*-формой есть предлог (но нет артикля) и после нее нет предлога *of*, то это **герундий**, и, значит, нас интересует **процесс**, **действие в его длительности**;

б) если перед *ing*-формой стоит артикль или после нее есть дополнение с предлогом *of*, то это – **отглагольное существительное**, и, значит, нас интересует сам **факт**, **явление**, **предмет**, а не процесс. Ср.:

| There are different ways of *solving* a problem (*solving* – герундий, обозначающий процесс). | Существуют разные способы *решения* одной и той же проблемы. |
| *The solving of* the problem was approved (*the solving* – существительное, обозначающие факт). | *Такой метод решения* этой проблемы был одобрен. |

V. Образование сложных форм герундия и их перевод
Формы герундия

Форма	Залог	
	Active	Passive
Indefinite	planning	being planned
Perfect	having planned	having been planned

Indefinite Gerund – передает действие, **одновременное** с действием сказуемого;

Perfect Gerund – передает действие, которое происходит раньше действия сказуемого;

Active Gerund – подлежащее **само совершает** действие, выраженное герундием;

Passive Gerund – действие герундия (который стал сказуемым в придаточном предложении) переходит на подлежащее.

Например:

We *know* of the work *being carried out* in his laboratory.

Мы *знаем*, что эту работу *выполняют* в его лаборатории.

We know of the work *having been carried out* in his laboratory.

Мы *знаем*, что эту работу *выполнили* в его лаборатории.

<h3 style="text-align:center">Герундиальные обороты</h3>

Герундий с относящимися к нему словами образует **герундиальные обороты**, которые обычно начинаются с предлога, притяжательного местоимения или существительного в притяжательном (иногда общем) падеже. Герундиальные обороты можно разделить на две группы: зависимые и независимые.

I. Зависимые герундиальные обороты

Зависимые герундиальные обороты – это такие обороты, в которых перед герундием (после предлога) нет слова, обозначающего действующее лицо или предмет. При переводе таких оборотов придаточными предложениями обычно повторяется подлежащее английского предложения (используя, если нужно, соответствующее местоимение), а герундий становится сказуемым.

Предлог, вводящий герундиальный оборот в английском предложении, при переводе на русский язык должен стать союзным словом, соединяющим главное предложение с придаточным. Поэтому в русском переводе главное и придаточное предложения соединяются словами *то, что* в том падеже, который определяется предлогом, например:

In spite of being very complicated the problem has been solved.

Несмотря на то, что эта проблема очень сложная, ее (все же) решили.

Служебные слова и словосочетания, вводящие герундиальные обороты:			
by	- тем, что	in addition to	- кроме того, что
of	- о том, что	in spite of	- несмотря на то, что
to	- тому, что	besides	- кроме того, что
in	- в том, что; к тому, что	owing to	- благодаря тому, что
due to	- вследствие того, что		

II. Независимые герундиальные обороты

1. Независимые герундиальные обороты – это такие обороты, в которых между предлогом и герундием имеется слово, выражающее лицо (или предмет), которое совершает действие, передаваемое герундием. Такое слово может быть притяжательным местоимением или существительным в общем или притяжательном падеже. При переводе оборота придаточным предложением это местоимение или существительное становится подлежащим, а герундий

– сказуемым придаточного предложения. Перевод герундиального оборота придаточным предложением начинается с перевода предлога, стоящего перед герундием, например:

The accuracy of the definition depends *on the terms* being carefully formulated.	Точность определения зависит *от того*, насколько тщательно сформулированы (*все*) члены.

Примечание. Если герундиальный оборот играет роль подлежащего (перед герундием нет предлога), то перевод его придаточным предложением следует начинать со слов *то, что* (в именительном падеже), например:

His *having made* this experiment is a known fact.	*То, что он* уже провел этот эксперимент, является известным фактом.

2. При переводе независимых герундиальных оборотов, в которых перед герундием стоит притяжательное местоимение, это местоимение в русском предложении становится личным местоимением в именительном падеже, т.е. подлежащим, например:

There is no hope of *our* getting a complete analysis of the measurements within 10 days.	Нет надежды, что *мы* получим полный анализ этих измерений в течение 10 дней.

Упражнение 1. *Прочитайте и переведите предложения, в которых герундий употребляется в роли:*

1) подлежащего:

1. Computer-aided testing is determined by the aims of educational procedure. 2. Learning rules without examples is of little use. 3. Knowing English is helpful for any programmer. 4. Learning to use a computer is important for every educated person. 5. Manipulating this matrix requires about 80 million separate multiplications. 6. Reading is to the mind what exercise is to the body. (R. Steel). 7. Defining problems precisely requires patience. 8. Getting several viewpoints is vital. 9. Carrying out experiments is a must with every scientist. 10. Measuring resistance is necessary in many experiments. 11. Programming a computer involves analyzing the problem to be solved and a plan to solve it. 12. Trying to minimize the importance of the discovery was of no use. 13. Using computers in a classroom enhanced the actual teaching and learning processes. 14. Understanding the distinction between memory and storage is essential. 15. Learning to use a word processing program is an excellent step toward computer literacy. 16. Distance learning, taking the classroom to the student, has been tried without much success over the last twenty years;

2) именной части составного сказуемого:

1. Our aim is studying information science. 2. We started improving the device. 3. Computer-managed learning is processing and storing students' exam results, registering and timetabling. 4. The main requirement is observing the rules. 5. The main point of a transformer is providing the change of voltage. 6. It is worth (while) discussing this phenomenon. 7. The world is a fine place and worth fighting for. 8. It is no use considering these writings. 9. Today we cannot help witnessing a tendency

in science to direct the collective efforts of a research team at the achievement of a common goal. 10. The primary function of the office is handling the information. 11. Programmers begin solving a problem by developing an algorithm. 12. Businesses first began using computer systems and setting up computer departments in the 1950s. 13. The teacher simply cannot keep repeating a lesson in different ways until he or she is sure that all the children understand the concept. But a computer can. 14. Computer professionals are busy attending seminars, conferences and shows and participating in professional associations. 15. The negotiations are still far from being ended;

3) прямого дополнения:

1. We expected being given further assistance. 2. They discussed improving the program. 3. I like using BASIC and Pascal. 4. The device needed retesting before the experiment. 5. He remembers being shown this project. 6. He who likes borrowing dislikes paying. 7. The scientists' names deserve mentioning. 8. Computer teaching programs often involve breaking a learning task down into a series of subtasks. 9. He preferred changing the course of actions. 10. It is no good arguing about this issue. 11. Would you mind answering one more question? 12. Avoid mixing these two substances. 13. Simulating an expedition, a discovery, an exploration involves making decision and cooperation. 14. For many people, computer literacy means simply knowing which key to press. 15. Very few people who have tried word processing would consider going back to a paper-and-pencil method;

4) дополнения с предлогом:

1. He insisted on adopting a new plan. 2. They succeeded in solving the problem. 3. I am sure of having debugged the program. 4. Computers are used to assist in teaching and learning. 5. Some people might object to making sacrifices now in order to satisfy demands of others in future. 6. They insisted on postponing the discussion. 7. I think of trying another approach. 8. The book aims at acquainting the readers with modern achievements in information technologies. 9. Silicon resembles carbon in forming a series of volatile hydrates. 10. Up to the present time, several writers have succeeded in finding exact solution of the fundamental differential equation in certain particular cases. 11. In the passing of current through the conductor resistance results in giving off heat. 12. Drill and practice programs can enhance practice in improving a skill or understanding and application of concepts. 13. When you think about viewing computer output, you probably visualize a monitor. 14. There are systems analysts who are responsible for analyzing and designing new applications as well as complete systems. 15. Computers have been important in saving, restoring, and studying works of art from the past. 16. Joyce is a talented artist who is interested in learning more about computer-generated graphics;

5) определения:

1. The idea of using symbols instead of words was very helpful. 2. Output devices are devices for giving information back to human beings. 3. Every teacher must study the language of educational computing. 4. In Middle Ages multiplication and division were both performed by the method of successive doubling numbers. 5. The device has the merit of being suitable for many purposes. 6. Memory is the process of

selective forgetting. 7. He had early opportunity of becoming well acquainted with experimental work. 8. There is no necessity of making any corrections. 9. There is some reason for questioning this assumption. 10. Having a source code is a way of achieving independence. 11. The value of allowing children the freedom to program computers rather than using educational programs is rather disputable. 12. Most people don't really understand the process of transforming raw data into usable information. 13. Voice input and control systems have the potential of revolutionizing the way we communicate with computers. 14. Programming is the process of creating a list of stored instructions that tell the computer what to do. 15. A high-level programming language is a way of writing programs using English-like words as instructions;

6) обстоятельства:

1. Without knowing the result we can't draw a conclusion. 2. In considering the development of computers we must point out the oldest forms of mechanical devices for calculation. 3. After writing an equation the next step is to find the values of unknowns. 4. In designing computers experts have developed new techniques. 5. In CAL (Computer Assisted Learning) programs are designed to encourage knowledge by finding out and learning rather than by drill and practice. 6. After being discussed at the seminar many problems of educational computers became clear to us. 7. He can't solve this problem without being given this program. 8. The ability of the device to place max poles while preserving others is clearly attractive. 9. By using an information retrieval program students can store their own information or they can retrieve specific items of information and display them on the screen or on paper.

10. Computer games can enhance language development by encouraging interaction between the computer and the user. 11. A computer can be used as a tool simply by using it as a calculator or in complicated programs for analyzing data or displaying data in a clear and interesting way. 12. In making observations extreme care to avoid errors is necessary. 13. Though obeying learn to command. 14. We have no more right to consume happiness without producing it. 15. Be slow in choosing a friend, slower in changing him.

Упражнение 2. *Переведите предложения, обращая внимание на роль герундия в предложении.*

1. Upon switching off the current the pressure dropped. 2. We have modified the network while retaining the SFS property. 3. Besides being useful in general interpolation technique, the procedure can be effectively used to approximate the first coefficients of F. 4. The new opportunities may make life on this planet much more worth living. 5. They were against postponing the meeting and for going on with the discussion of this problem. 6. The purpose of the method is determining system stability. 7. We succeeded in building a flexible system. 8. He preferred changing the course of actions. 9. The main requirement is observing the rules. 10. We'll discuss the problems of computer's way of thinking as a model of human thinking at this conference. 11. We cannot help acknowledging the importance of this statement.

12. He had to give up experimenting. 13. Know your own faults before blaming others for theirs. 14. It is better doing well than saying well. 15. On solving one problem we went on studying the others.

Упражнение 3. *Переведите предложения, определяя, какой частью речи является –ing форма (причастие I, герундий, отглагольное существительное).*
1. In solving these equations you must be very careful with the signs. 2. Everything must have a beginning. 3. Swallow all your learning in the morning, but digest it in company in the evening (Ph. Chesterfield). 4. Submitting to one wrong brings to another. 5. We obtained these values in terms of the following formula. 6. This procedure is finding increasing use. 7. A man should be viewed as a free, rational being possessing a free will. 8. The problem, however, is in not dividing the structure finely enough. 9. Fortran has become a widely accepted programming language of the coding of mathematical applications. 10. Two results obtained using the protocol showed an interesting effect worth presenting and discussing here. 11. A system analyst spends much of a working day interviewing people. 12. The ideas underlying hierarchial structuring of software will be discussed at the next seminar. 13. Giving definitions ready makes the teacher forego the possibility to teach his students creative thinking. 14. Compiling a program requires great attention of a programmer. 15. Input devices are devices for putting information into a computer, ranging from a keyboard to a microphone.

Упражнение 4. *Переведите предложения, определяя различие между зависимыми и независимыми герундиальными оборотами. Обращайте особое внимание на предлоги, вводящие герундиальные обороты.*
1. Lobachevsky's having created a new geometry different from that of Euclid was a new stage in the development of mathematical science. 2. His having proved the advantages of the new system is very important. 3. The computer's being used in different spheres of our life is shown in the table above. 4. I know of Pascal's having built an adding machine at the age of 19. 5. Your having graphed the flowchart helped you to show the structure of the program. 6. Pride is therefore pleasure arising from a man's thinking too highly of himself. (B. Spinoza). 7. There is only one corner of the universe you can be certain of improving, and that's you own self. (A. Huxley). 8. I knew nothing of having completed the experiment. 9. They succeeded in getting reliable information on dealing with this type of error. 10. This is a result of our not having specified input or output variables for the network. 11. Ch. Babbage's having designed his Analytical Engine was very important for the development of computer engineering. 12. The professor insisted on our comparing the results of the experiments. 13. The name of M.Lomonosov became known all over the world for his having made great achievements in different branches of science. 14. We know of these properties being used in the operations of division and multiplication. 15. In spite of having met with failure they continued experimenting. 16. The change in velocity resulted from the force acting from outside. 17. Some scientists argue that these considerations are incompatible with our decision being random. 18. This

problem owes its fame to looking easy but being hard. 19. Metals cannot be dissolved without being changed into new substances. 20. In addition to being a tool of science, mathematics is also an art form. 21. Computer's offering endless practice is very helpful – it doesn't become impatient or tired.

Упражнение 5. *Определите значение выделенных слов и словосочетаний. Укажите индекс соответствующего им перевода:*

1. <u>Learning</u> without thought is labour lost, thought without <u>learning</u> – perilous. (Confucius). 2. <u>Having access</u> to the code was symbolic. 3. They <u>couldn't help seeing</u> the importance of the process. 4. <u>The reaction proceeding</u> via another route was a surprise. 5. This was due to the central atom <u>being screened</u>. 6. The probability of this finding <u>being due to chance</u> is 1 in 22600. 7. They insisted on the sample <u>being tested</u> repeatedly. 8. <u>Seeing</u> is <u>believing</u>. 9. Tolerate others, and refrain from <u>ruling on</u> or <u>trying to direct</u> the way they run their lives. 10. <u>Doing</u> is better than <u>saying</u>. 11. In an interview a person can learn only <u>by listening,</u> not <u>by talking</u>. 12. We thought <u>of starting</u> another series of experiments. 13. We <u>succeeded in obtaining</u> the explicit form of the component. 14. They <u>couldn't help using</u> this information. 15. He published an article named "<u>On applying</u> computers to commercial problems".

Ответы:

а) процесс доступа, б) то, что реакция протекала, в) происходит случайно,

г) видеть, верить, д) знания, е) о применении, ж) не могли не использовать, з) не могли не понимать, и) был экранирован, к) чтобы был проверен, л) от того, чтобы управлять, м) направлять, н) о том, чтобы начать, о) удалось получить,

п) слушая, р) говоря, с) сделать, т) сказать.

Упражнение 6. *Укажите в каждом из следующих предложений те признаки, по которым вы находите герундий. Переведите предложения.*

1. We account for the incompleteness of a reaction by its being reversible.
2. Einstein's being awarded the Nobel prize in physics soon became widely known.
3. Adding more turns makes the magnetic field stronger. 4. To a large extent the skilled analyst's productivity may be attributed to his having acquired, through many repetitions, the necessary technique. 5. There are several precautions to be observed in making such experiments. 6. The explosion resulted from the substance being volatile. 7. We know of computers' being used in many fields of human activity.
8. There is no hope of our getting a complete analysis of the measurements within 8 days. 9. He is responsible for the program not having been corrected in time. 10. The mistake resulted from the device not having been mended before the test. 11. We are interested in the test being carried out repeatedly. 12. This metal differs from that one by having a higher melting point. 13. The accumulated bulk of knowledge on how to run a business, provides deep understanding of the mechanism of business. 14. Two results obtained using the protocol showed an interesting effect worth presenting and discussing here. 15. Our goal should be automating the routine and thereby leave more time for the creative process. 16. Microcomputer's being linked to national databases opens up wider possibilities for the curriculum.

Упражнение 7. *Переведите предложения, определяя герундий по его синтаксической функции:*

1. Manufacturing is one of the most important application areas for automation technology. 2. The reprogramming of the equipment in flexible automation is done at a computer terminal without using the production equipment itself. 3. Material-handling is the transfer of material and loading and unloading of machines. 4. Spot welding of automobile bodies is one of the most common applications of industrial robots. 5. The most common ways of storing data are hard disk, floppy disk and CD-ROM. 6. Just a little bit of exploring the World Wide Web will show you what a lot of use and fun it is. 7. PCs can be used for home management (balancing the family finances, for example) and for playing computer games, watching films or listening to music. 8. In the office personal computers may be used for word processing, book-keeping, storage and handling of necessary information. 9. The Internet and its technology continue to have a profound effect in promoting the exchange of information, making possible rapid transactions among businesses, and supporting global collaboration among individuals and organizations. 10. Coordinating the distribution of information in large companies is a challenge. 11. Computer security is the process of preventing and detecting unauthorized use of your computer. 12. We use computers for everything from banking and investing to shopping and communicating with others through e-mail or chat programs. 13. There are two parts to generating custom newspapers: collecting data in local text databases and formatting the information. 14. The biggest advantage for companies is that teleworking reduces their running costs. 15. Archimedes is credited with applying huge lenses.

МОДАЛЬНЫЕ ГЛАГОЛЫ (MODAL VERBS)

CAN – be able to do smth. / be capable of doing smth.

	Meaning	*Use*	*Present*	*Past*
1	physical or mental ability or possibility	+ - ?	You can use computer for various purposes.	We couldn't use the floppy because of the viruses.
2	permission	+	You can try a new application for this task.	-
3	suggestions	+	We can/could try another procedure instead.	-
4	offer	?	Can I offer you this new product of IBM?	-
5	polite request	?	Can/Could you help	-

6	surprise or astonishment	?	Can/Could you make such an inquiry?	How can/could you have entered this data?
7	doubt or uncertainty	-	-	The processor can't/couldn't have come to a halt.
8	certainty	-	They can't/couldn't be at our disposal.	They can't/couldn't have been used for that purpose.
9	prohibition	-	We can't get access.	They couldn't use that devise.
10	lost opportunity or complaint	+	-	The floppy could at least have been checked for viruses before.

Notes:

1. **Can** has only two tense forms: **can** (present) and **could** (past), so for other tenses *to be able to do smth.* or *to be capable of doing smth.* are used. But if you mean that someone managed to do something in one particular situation (where can or could are possible), you have to use *was/were able to do smth.* or *was/were capable of doing smth.*
2. **Could** is not always the past of **can**, sometimes it has a present or future meaning. Perfect infinitive after **can** or **could** in such cases shows that they refer to the past.
3. Passive and progressive infinitives after **can** or **could** are also possible in some cases.

Упражнение 1. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **can** либо его эквиваленты и форму инфинитива после них.*

1. You can end your program with 'quit' command. 2. The information from memory can be retrieved by CPU. 3. We will be able to correct the arrows in the program. 4. Couldn't the transistors or other radio elements be joined together right inside the crystal? 5. Engineers could thus substitute program code words for hardware parts. 6. Couldn't they have created this program by themselves? 7. The computer memory can be considered as consisting of a number of cells capable of storing binary patterns representing program instructions or data. 8. He wasn't able to perform those calculations without a computer. 9. In one program run, memory cells 5 and 6 could have been set to 70 and 25, respectively. 10. The sequence couldn't have been chosen wrongly.

MAY – to be allowed (permitted) to do smth.

	Meaning	Use	Present	Past
1	permission	+ / ?	You may use my ISP if you wish.	-
2	prohibition	-	You may not use my e-	-

			mail box.	
3	possibility	+ / -	It may/might be a faulty program.	The modem may/might not have been switched on.
4	suggestion	+	We might use other graphical software.	-
5	complaint	+	They might pay more attention to the instructions.	He might have checked his e-mail at least sometimes.

Notes:
1. **May** has only two tense forms: **may** (present) and **might** (past), so for other tenses *to be allowed (permitted) to do sth.* is used.
2. **Might** is not always the past of **may**, sometimes it has a present or future meaning. Perfect infinitive after **may** or **might** in such cases shows that they refer to the past.
3. Passive and progressive infinitives after **may** or **might** are also possible in some cases.

Упражнение 2. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **may** либо его эквиваленты и форму инфинитива после них.*
1. This device may not be switched on here. 2. At first the desktop might seem a little foreign to you. 3. It's also more installation procedures than you might expect. 4. Will she be allowed to process these figures? 5. It may have been said that the development of modern computers was entirely depended upon developments in integrated circuits. 6. Different combinations of 1s and 0s may be used to represent numbers and characters (letters of the alphabet special characters). 7. Were they allowed to operate that new device? 8. Programs other than the one that is being obeyed may be stored on a backing-store external to the computer memory. 9. You may not be the only person using the program and this is the factor to be considered. 10. Combining both of these technologies might produce a completely new range of possibilities for user of information technology.

MUST

	Meaning	*Use*	*Present*	*Past*
1	obligation (speaker's authority)	+ ?	They must provide us with all necessary data.	-
2	necessity (speaker's thought)	+	He must work hard to learn this computer language.	-
3	prohibition	-	You mustn't press any button.	-
4	certainty	+	He must be working in the Internet. I can't call him.	They must have already opened this file.

Notes:
1. **Must** has no other forms. To express past perfect infinitive can be used sometimes.
2. **Had to** is the past form of **must** which refers to a past obligation.
3. **Need** is used in its negative form to express the lack of necessity.

Упражнение 3. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **must** либо его эквиваленты и форму инфинитива после них.*
1. The data must have been lost. I don't see it anywhere. 2. To use a CD-ROM, you must have a computer equipped with a CD-ROM drive. 3. You mustn't interfere with the program work. 4. To read this graphics file you must have used a program that recognized the file's format. 5. The user must create sample input data that represents every possible way to enter input.

SHOULD / OUGHT TO

	Meaning	*Use*	*Present*	*Past*
1	advice (giving/asking for)	+ / ? / -	Should these commands be carried out?	-
2	obligation	+ / -	The files ought to be fully defined.	The PC shouldn't have been used inappropriately.
3	possibility	+	You should see the message on the screen.	They should have carried out the calculations.
4	complaint	+ / -	You should be using another application for this purpose.	These devices should have been handled with great care.

Note:
        Should/Ought to have no other forms. To express past perfect infinitive can be used sometimes.

Упражнение 4. *Прочтите и переведите следующие предложения, обращая внимание на значение модальных глаголов **should/ought to** и форму инфинитива после них.*
1. It determines which operations should be carried out and in what order. 2. They ought to have tested new applications. 3. Make sure your last command is finished. You should see the prompt on the screen. 4. The batteries should not be kept uncharged. 5. What kind of data ought to be typed?

NEED

	Meaning	*Use*	*Present*	*Past*
1	necessity	+	To do this, you need to understand how the data bus	He needed to back up that file regularly.

			width affects performance.	
2	no obligation	-	You don't need to use virus scanning every time.	You didn't need to back up these files.

Notes:
1. **Need** can be used in different forms with and without "to" after it.
2. **Needn't** and **don't need to** are different.
   - We generally use **needn't** when the authority comes from the speaker and **don't need to** when the authority doesn't come from the speaker.
   - To talk about the past, we use **needn't** and Perfect Infinitive (means: you did but it wasn't necessary) or **didn't need to** (means: you knew in advance it wasn't necessary).

Упражнение 5. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **need** и форму инфинитива после него.*
1. Most memory chips are now mounted on boards, you needn't have checked for other ports. 2. Nonvolatile media are needed to store programs and data when the power is off. 3. The smaller size reduced the distance electrical signals needed to travel. 4. The fields need not be contiguous in memory, nor do they need to be part of a structure. 5. You can insert the executable code you need to "clean up" at an embed point.

HAVE TO

	Meaning	*Use*	*Example*
1	necessity (circumstantial)	+ / -	You have to follow a number of rules when entering these commands.

Notes:
1. **Have to** can be used in all forms (present, past, future).
2. The difference between **must** and **have to** is that with **must** the speaker is giving his own feelings, while with **have to** he is just giving facts.
3. **Mustn't** and **don't have to** are completely different. "You **mustn't** do something" means "it's necessary that you do *not* do it". When "you **don't have to** do something" means "it is *not* necessary to do it; you *don't need to* do it".

Упражнение 6. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **have to** и форму инфинитива после него.*
1. You don't have to push buttons; these actions occur under the direction of the program you are using. 2. If the program is designed to be sold commercially, the documentation will have to include directions for the user to install the program and begin working with it. 3. You have to remember which entity (set of fields) you described as "left" and which ones as "right". 4. You won't have to compete with other users to gain access to the system. 5. Because of its cost, new information had to be stored in appropriate archives and libraries for use by others.

BE TO

	Meaning	*Use*	*Example*
1	planned action or agreement	+ / ?	Old PCs are to be replaced next month.
2	prohibition	-	You are not to start working without antivirus prescan.
3	necessity (the result of orders or instructions)	+ / ?	You are to turn off the device at the end of work.
4	unavoidable events	+ / ?	What is to happen to the system?

Note:
1. **Be to** can be used in all forms (present, past, future).
2. Perfect infinitive after **be to** can express a planned or agreed action which didn't happen.

Упражнение 7. *Прочтите и переведите следующие предложения, обращая внимание на значение модального глагола **be to** и форму инфинитива после него.*
1. An alternative way of expressing the instructions is to use mnemonic codes. 2. In industrial situations, the ability to inspect and, if necessary, reject quickly is desirable if further errors are to be prevented. 3. One of the main objectives of research and development in this field was to provide techniques and equipment capable of helping to control this "information explosion". 4. An alternative to bit slice microprocessors for complex systems is to use several microprocessors together. 5. Zip drives are not to be confused with zip files.

WILL / WOULD

	Meaning	*Use*	*Example*
1	willingness, intention, volition	+	It will only use the Toolbar buttons and popup menus for Insert, Change and Delete actions.
2	possibility	+	Sometimes the escape or altmode key will modify the actions of the next few keys pressed after the escape or the altmode key.
3	request	?	Would you help me with the installation procedure.
4	persistence	-	This program won't work in this operating system.

Упражнение 8. *Прочтите и переведите следующие предложения, обращая внимание на значение модальных глаголов **will/would** и форму инфинитива после них.*
1. During POST, DMI/ESCD would not be updated. 2. There will not be any warning message in this situation. 3. The system boot would not stop for a disk error. 4. Quick

Load pops up a dialog telling you it will create the file. 5. You would then add the procedure to the Application Tree with the Insert Procedure Command.

SHALL

	Meaning	*Use*	*Example*
1	promise, warning (for all the persons)	+	He shall have problems if he starts this program.
2	suggestion	?	Shall I carry out these calculations for you?
3	asking for instructions	?	Shall we format these disks?

Note:

    Modal verb **shall** is rarely used in technical language.

Упражнение 9. *Переведите предложения, обращая внимание на модальные глаголы и формы инфинитивов после них.*
1. This must have given rise to the development of this type of motherboards. 2. Usually the computer's instruction book will fully describe the effect of pressing the control or escape keys. 3. The device might have been added to the list. 4. The starting point of designing a program should be the output. 5. The requirement may have been met in the previous experiment. 6. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard surface. 7. Whether your system can run under these specific bus frequencies properly will depend on your hardware configurations. 8. Before you can use you new disk for storing information, you must format them. 9. You should never alter or delete a configuration file. 10. The system boot would not stop for any error that might be detected.

Упражнение 10. *Переведите текст, обращая внимание на модальные глаголы и следующие за ними инфинитивы.*

Design for Decision

    Throughout this book I must have been critical of people who produce beautiful thoughts with little or no data behind them. Some readers may have felt that the decision-maker (принятие решения с использованием ЭВМ*)* is a cold-hearted, even grim, method of making decisions. These readers might admit that a machine may be all right for making the scientific decisions or even commercial decisions, but they may have felt that Statistical Decision had no place in their world, that it is mea-ningless insofar as personal, governmental, or international decisions are concerned.

    I disagree with this point of view. I think that Statistical Decision must have played a useful role in a wider class of decisions which have a direct influence on all of us. I certainly do not consider Statistical Decision to be a panacea. It is one method among many methods of reaching decisions. It is not necessarily the best method; there are situations in which intuitive procedures lead to more effective decisions than any existing Decision-Maker. In fact I think that most people must have already used many of the principles in making their decisions. You may have felt that such

concepts as mathematical expectations were new and unfamiliar. However, I am sure that you have had to make decisions on the basis of expectations, when you have had to combine probabilities and desirability (though you may not have used these names).

Упражнение 11. *Поставьте следующие предложения в прошедшее время не меняя их смысл, где это возможно, и переведите их.*
1. Programs which the control unit operates must be in internal memory in order to be processed. 2. It is allowed to alter some features. 3. They are to discuss the results of their pilot research at the next meeting. 4. Drawings can be stored on a hard or floppy disk. 5. Before you start giving these instructions, however, you might like to know how to quit MS-DOS. 6. Also the memory cells could be given symbolic names instead of referring to them by their actual numeric (binary) addresses. 7. Anyone will be able to operate this menu driven program. 8. The costs of microelectronic would continue to decrease and we have not yet seen any significant departure from this law. 9. Each type of logic circuit may be implemented as a microelectronic circuit using microelectronic transistors and resistors. 10. You need to consider and make decisions on the following aspects.

Упражнение 12. *Выберите вариант перевода, соответствующий приведенным сообщениям.*

Message	Translation
1. Cannot recover nonremovable drive X.	а) Не следует восстанавливать несъемный накопитель X; б) Нельзя восстановить несъемный накопитель X; в) Восстановить несъемный накопитель X.
2. Target disk cannot be used for back-up.	а) Диск, на который осуществляется запись, не может быть использован для резервного копирования; б) Не используйте диск, на который осуществляется запись, для резервного копирования; в) Диск, на который осуществляется запись, может быть использован для резервного копирования.
3. Unable to create table in resident memory.	а) Возможно создать таблицу в резидентной памяти; б) Невозможно создать таблицу в резидентной памяти; в) Создайте таблицу в резидентной памяти.
4. Target floppy may be unusable.	а) Дискета, на которую ведется запись, является непригодной; б) Дискета, на которую ведется запись, может быть непригодной; в) Дискета, на которую ведется запись, должна быть пригодной.
5. Drive letter must be specified.	а) Буква, определяющая дисковод, должна быть определена; б) Буква, определяющая дисковод, может быть определена; в) Буква, определяющая дисковод, определена.

Упражнение 13. *Заполните пропуски модальными глаголами, русские эквиваленты которых даны в скобках.*

Hard disk … (может) be divided into one to four separate sections, called partitions. Partitions separate your hard disk into individual areas, and each partition … (может) contain a different operating system.

To prepare your hard disk for the MS-DOS operating system, you … (должны) create a partition for MS-DOS, called a DOS partition. You … (можете) create a DOS partition on your hard disk by using a menu driven utility called fdisk. You … (должны) use fdisk if you want to create or delete an extended DOS partition. You … (должны) to follow all the instructions to get the required results.

Упражнение 14. *Прочтите текст и заполните пропуски подходящими по смыслу модальными глаголами и данными в скобках инфинитивами в правильной форме.*

Peripheral Equipment

The microcomputer … (to communicate) with the outside world, so that programs and data … (to enter) into its memory and processed information … (to display) or (to transmit) in some form to the microcomputer user.
There are various types of peripheral equipment that … (to attach) to microcomputers including keyboards and paper tape readers for input, and visual display units (VDUs) and printers for output. Information … (to output) from the microcomputer on to magnetic tape or disk for storage and re-entered when required. Different sensors and actuators … (to link) to the microcomputer for controlling instruments and machines.

СОСЛАГАТЕЛЬНОЕ НАКЛОНЕНИЕ

Сослагательное наклонение – это форма глагола, выражающая желание, предположение, сомнение или нереальность выполнения действия.

Формы сослагательного переводятся на русский язык сочетанием глагола в прошедшем времени с частицей "*бы*" (чтобы, если бы и т.д.).

If I were there I should ring you up.	-- Если бы я был там, я бы позвонил тебе.
I wish she would win the game.	– Мне бы хотелось, чтобы она выиграла игру.
If I knew her address we should write to her.	--Если бы я знал ее адрес, мы бы написали ей.
It is necessary that he should go there.	-- Необходимо, чтобы он поехал туда.

I. Система форм сослагательного наклонения

Синтетические формы			
Действия относятся к настоящему или будущему времени	Present Subjunctive	I, he, she, we, you, they	be ask
	Past Subjunctive	I, he, she, we, you, they	were asked
Действия предшествуют действию, выражаемому глаголом-сказуемым главного предложения	Past Perfect в значении сослагательного наклонения	I, he, she, we, you, they	had been had asked
Аналитические формы			
Действия относятся к настоящему или будущему времени	Indefinite Subjective		should + Indefinite would + Infinitive без частицы to
Действия относятся к прошедшему времени	Perfect Subjunctive		should + Perfect would + Infinitive

Примечание. Употребление сослагательного наклонения формы *"be"* характерно только для письменной речи.

Глаголы *may, might, could* можно причислить к аналитическим формам сослагательного наклонения, однако они в какой-то степени сохраняют своё лексическое значение возможности.

II. Употребление сослагательного наклонения

Типы предложений	Пример	Перевод
I. В простых предложениях	So be it!	Пусть будет так.
	There would be no progress in science without observations.	В науке не было бы никакого прогресса без наблюдений.
II. В сложных предложениях		
1. В придаточных предложениях	It is important that safety measures be (should be)	Важно, чтобы соблюдались меры

после оборотов типа:
 	
It is necessary
    important
    essential
    of importance
    likely
    unlikely
	taken.
	
	It is necessary that a personal computer meet(should meet) an individual's computing needs.
		безопасности.
		
		Необходимо, чтобы персональный компьютер удовлетворял потребностям определённого человека.

2. В дополнительных придаточных предложениях после глаголов: advise, demand, desire, insist, order, propose, request, require, suggest, suppose, want, wish	He demanded that the chips be (should be) reprogrammable for any functions. They suggested that a special code be(should be) used for processing the data. We wish the TV-camera were simpler in design.	Он требовал, чтобы чипы могли быть перепрограммированы для выполнения любых функций. Они предложили, чтобы для обработки этих данных был использован специальный код. Хотелось бы, чтобы телекамера была проще по конструкции.
3. В придаточных обстоятельственных предложениях цели, после союзов: so that, lest, in order that	Clearly identify the users' needs lest your software cause (should cause) confusion while running it. Install a modem in order that the system could be connected by telephone lines to a mainframe computer.	Точно определите потребности пользователей, чтобы ваша программа не вызывала сомнений при работе с ней. Установите модем, чтобы систему можно было соединить с главным компьютером с помощью телефонной линии.
4.В обстоятельственных сравнительных предложениях после союзов: as if, as though.	The man repaired our TV-set as if he were an expert in telemechanics.	Этот человек починил нам телевизор, как будто он специалист по телемеханике.
5. В придаточных уступительных	Whatever handheld device you should use, it will let	Какое бы устройство с ручным управлением

	you work or entertain yourself while on the move.	вы бы ни использовали, оно позволит вам работать, или развлекаться в пути.
	Even though a power interruption were short, it would cause loss of all the data.	Даже если бы подача энергии прекратилась на очень короткий срок, это вызвало бы потерю всех данных.
6. В придаточных предложениях условия (II и III типа) после союзов: if, unless, in case, provided, provided that, providing, providing that, on condition, on condition that, even though, suppose, supposing	If a programmer used assembly language he would have to pay careful attention to how the machine works. If he had used this formula, he would not have made this mistake	Если бы программист использовал язык ассемблер, ему пришлось бы внимательно следить за работой машины. Если бы он применил эту формулу, он бы не сделал этой ошибки

III. Условные предложения

Тип предложения	Условное придаточное предложение	Главное предложение
I тип. Изъявительное наклонение. Условие реальное, относящееся к будущему времени. (Переводится будущим временем).	Present Indefinite As soon as we <u>receive</u> the necessary data, Как только мы получим необходимые данные,	Future Indefenite we <u>shall inform</u> you. мы сообщим вам.

| II тип. Сослагательное наклонение. Условие нереальное (или маловероятное), относящееся к настоящему или будущему времени. (переводится глаголом в прошедшем времени с частицей "бы") | Past Indefinite в значении сослагательного наклонения _____ If there <u>were</u> no atmosphere, Если бы не было атмосферы, | Should (would, could, might) + Indefinite Infinitive _____ the surface of the Earth <u>would become</u> too hot by day and too cold by night то поверхность Земли была бы слишком горячей днём и слишком холодной ночью. |
| III тип. Сослагательное наклонение. Нереальное условие, относящееся к прошедшему времени. (Переводится так же, как II тип). | Past Perfect в значении сослагательного наклонения If he <u>had worked</u> hard last term, Если бы он работал усердно в прошлом семестре, If he <u>had had</u> more time yesterday, Если бы он имел вчера больше времени, | Should (would, could, might) + Perfect Infinitive he <u>would have passed</u> his exam. он бы сдал экзамен. he <u>might have done</u> this work. он бы выполнил эту работу. |

IV. Бессоюзные условные предложения

В научно-технической литературе встречаются бессоюзные условные предложения, в которых наблюдается обратный порядок слов, т.е. сказуемое или часть его (вспомогательный глагол) ставится перед подлежащим. Такая инверсия в предложении является признаком условного предложения в сослагательном наклонении.

Условное придаточное предложение	Главное предложение
I тип Should any repair be required (If any repair is required)… Если потребуется ремонт,	it will be made immediately он будет произведён немедленно
II тип Had we enough time to spare (If we had enough time…) Было бы у нас достаточно времени,	we should attend the conference. мы бы пошли на конференцию.
III тип Had we applied this method of work, (If we had applied…) Если бы мы применили этот метод работы (тогда),	we should have had the desired results. мы бы имели бы желаемые результаты.

Упражнение 1. *Обратите внимание, что форма сослагательного наклонения "be" переводится изъявительным наклонением. Переведите следующие предложения.*

1.If the quality requirements be proposed not as a part on the series but as an independent standard, then it will cause another confusion to the users. 2. If the distance between the two points be the same, no further experiment will be necessary. 3. The geometric properties of crystal are the same whether a crystal be large or small. 4. The management should ensure that the testing department be independent, unbiased, and organized for the fair sharing of recognition and rewards for contributions made to enhance the product quality. 5. If the force "x" be increased by the factor "y" all the velocity will be increased. 6. In order to develop, acquire or use a software product of satisfactory quality, it is necessary that the quality be independent, planned, measured and evaluated through using quality metrics based on the quality model. 7. It is necessary that sufficient information be provided before they (consumers) purchase the standards. 8. After the users begin to use software product, it is important that real contexts of use be collected with measured values, that data be analyzed and the information be used for the next version. 9.He required that the reporting performance be not significantly degraded by increasing the number of dimensions or database size. 10. It is important that the law be observed. 11.It is suggested that some attributes be measured using base metrics. 12. At the beginning of software product development, it is necessary that needs be clearly identified. 13. It is desirable that the output signal be a linear function of the input signal. 14. It is important that the satellite not be dependent upon orientation relative to the Sun or the Earth.15. It is important that the type of the reaction be determined.16 . It is suggested that only logarithmic plots for each point be made.

Упражнение 2. *При переводе обратите внимание на предложения со словами "lest", "as if", "as though"," in order that".*

1. It is necessary that atomic energy should be used for industrial purposes. 2 . It is agreed that applied research in international management should support managers to increase the efficiency of MNCs (MultiNational Corporations). 3. In order to define quality requirements and to evaluate the product quality, each quality characteristic and subcharacteristic should be measurable. 4. The world itself behaves as if it were an enormous but weak magnet. 5. The man spoke as if he were an expert in that line. 6. He insisted that such additional functions should be grantable to any dimension. 7. It is necessary that the people apply scientific knowledge to practically all fields of human activity nowadays. 8. It is advisable that the engineer choose between several possible solutions. 9. Magnetism is very often treated as if it were a subject as fundamental as electrcity. 10. It is unlikely that the reaction should occur. 11. It is desirable that this method should be recommended. 12. By about 1880 it seemed as if the world of science were fairly well explained. 13. Make exact calculations lest you should fail with your experiment. 14. They did not mention the subject again lest it should occasion a fresh testing. 15. In order to design and develop the software product that satisfies requirements, the designer should develop a design strategy, which includes selecting appropriate design method and tools as well as defining architecture, at the beginning of the stage.

Упражнение 3. *Переведите следующие предложения, обращая внимание на значение слов " should ", "would".*

1. If accepted, the plan would enable to send a fact-finding mission to investigate the incident on the spot. 2. These factors would make it difficult for a bot to know when to check for updated pages. 3. Synthetic benchmarks would let researchers explore a wider range of the application behaviors space. 4. It would be difficult to write an efficient code for processing image or other multidimensional arrays. 5. Developers would rewrite selected loops and functions of existing **C** programs. 6. Microcomputers would be used since they are more than powerful enough for any functions likely to be required. 7. The main input device would be a QWERTY keyboard with an integral numeric keypad. 8. A Winchester would provide faster access to large amounts of information. 9. Proponents say reconfigurable chips would combine the programmability of microprocessors with the speed of dedicated hardware. 10. This technology would also facilitate long-distance auditions and piano-teachers training. 11. Production system whose workload resembles the specific problematic workload should not use this scheduler. 12. The calculations which would have taken several years of intense human work in the past are now done in a few minutes. 13. Without computers the development of atomic power stations would have been quite impossible. 14. It would be desirable to have a system that created its own training exemplars. 15. It is demanded that these devices be tested at once. 16. He suggested that these data should be processed by a new computer.

Упражнение 4. *Переведите предложения с глаголами "could","might", которые используются для выражения значения сослагательного наклонения.*
1. Searchers could go from one page to another until they find what they are looking for. 2. An SDR (software-defined radio) device could download code to reprogram itself to work with a new wireless service. 3. This concept could be extended to create parameterized workloads a variable mix of program behaviors and rates . 4. Better communication could help the customer configure for automatic memory dumps, which might help to diagnose and fix problems more quickly. 5. Adaptive computing could increase performance while reducing energy consumption. 6. This interaction could affect the results when we measure several workload and metric combinatons. 7. Other commonly used data represantations that operate at a higher semantic level could be used as well. 8. In addition the downloaded code might know how to react to user inputs and how data should be stored and saved. 9. This substance might be an insulator or a conductor. 10. Atomic energy finds such wide and varied application in our life that our age might be called the age of atom. 11. You could save a lot of trouble if you knew what were in the instruction book. 12. If the output image were binary with a simple shape, it could be easily recognized by a digital computer with an appropriate software. 13. If a modem was used, the system could be connected by telephone lines to a mainframe computer.14. If you could scale down all dimensions to, let us say, one tenth, the average lengths of the current paths would be reduced to one tenth. 15. Provided one knows the rate of the emission, one could determine the range of the particles.

Упражнение 5. *Найдите придаточное предложение, к какому времени относится выполнение условия? Переведите предложения.*
1.If you make a mistake in the use of the language your computer will detect this and output a message to tell you that there is a syntax error. 2. If sounds of a given frequency are important to a robot's job it will act on them, otherwise the brain will ignore the sound. 3. If the disk is formatted the read/write head moves across its surface, magnetically marking tracks and sectors to it. 4. If it is stored on ROM chips, it comes into operation as the computer is switched on. 5. If the chips turn out to be reprogrammable for only a few functions they won't appeal to vendors. 6. If fragmentation occurs that leaves processors idle, jobs from the back of the queue can bypass jobs that precede them, provided they fit. 7. If computers perform routine intellectual tasks, what will be left for humans living in the information society?
8. If every sector begins to build its own robots, it will be impossible to avoid duplication of research and development. 9. If you want to make information available to others over the Web, you put the information on a server. 10. If you want to access the information, you get the information from a server. 11. If your computer cannot handle graphics, you will need to use a nongraphical browser. 12. If you don't want a Web page of your own, you don't have to create one in order to use and enjoy the Web. 13. If you use the OR operator, you will get every reference with either term. 14. If sufficient heat is applied for a long period of time, the

electrons will leave the metal. 15. If the temperature of the cathode is increased, the electrons are emitted with a higher average speed.

Упражнение 6. *Определите, к какому времени относится выполнение условия в придаточных предложениях, переведите следующие предложения.*
1.If both computers tried to use the disk simultaneously there would obviously be problems, so various systems are used to ensure that every machine on the network checks that the network is free. 2. If we were to build a robot to be used in the assembling of automobiles and if our robot had the specific task of mounting wheels on the car, the instructions for this process would be input into the computer. 3. The process would be the calculations required to determine how to get the wheel on the car, and the output would be the robot's responses to these calculations: mounting the wheel on the car. 4. If the computer were to print on paper eighty characters wide, there would be eighty hammers in the use on that printer. 5. If the hidden unit activations were allowed to propagate to the output of the network, the characteristic response would appear. 6. If we were to stand motionless and hold a weight in our arms, we would grow tired, but we would not be performing work in physical sense of the term. 7. If you made up data and put it into a computer problem, you would not be able to have any idea of whether the computer results are correct or incorrect. 8. If a customer were not satisfied with the end result, even if the software met the requirements, then for the customer, it would not be a good quality. 9. If the workstation were located in a place where only authorized or trusted people had access, the securing the BIOS or the boot loader would not be necessary. 10. If many copies were needed then the ink-jet printer would have to print each copy individually. 11. If a program were written too hastily, valuable time might be lost subsequently in implementing the necessary changes. 12. If large public displays could be integrated into this kind of game, the content would be viewed and shared. 13. If one of the component circuits developed a fault, it would be needed to locate the faulty unit, throw it away and plug in a new one. 14. If floppy disks were used, a dual disc drive would be useful for making backup copies of important data. 15. If the Holmes system should somehow become obsolete or unusable in the future, the data would remain usable because XML preserves structure (XML – Modelling Language). 16. Should a man go into store-rooms for radioactive materials, the radiation would kill him.

Упражнение 7 . *Определите, к какому времени относится выполнение условия придаточного предложения. Переведите предложения.*
1. If he had been given an opportunity, the work might have been finished. 2. They would not have put something into the box, if there were no way to get it out. 3.Users soon get bored of waiting, and the project will be much less successful than if it had delivered a near instantaneous response, even at the cost of less detailed analysis. 4. If a new network had been added to the system, the modulator system would have been retrained. 5. Only a few years ago if you had heard of sending up artificial moons to circle the earth that idea would have sounded fantastic. 6. We

could have derived the minimum of error variance for measurement of time delay if that expression had been employed. 7. It would have been impossible to cope with these difficulties if it had not been for the work carried out by our scientists. 8. If the forces had been balanced there would have been no tendency for the vessel to move. 9. If the spacecraft had gone behind the Moon it would have gone into an initial Lunar orbit. 10. There are many factors that could have contributed to this relatively small imbalance. 11. It is evident that the motor car of today could not have been produced in the quantity and quality without the liberal use of forgings. 12. It was considered at first that a cubical design of the telescope would have been adopted. 13. If the Telstar satellite had been built using the state-of-the-art of a decade ago it would have been a very different satellite. 14. Although these mechanisms work, it is a key area of DA 4 that could have been designed better. 15. Had it not been for a large size of this body, we should have already weighed it on our pan. 16. Had the science of electronics not been developed so rapidly, we should not have got such remarkable changes in technology today.

Упражнение 8. *Переведите предложения, обратите внимание на перевод слов "unless", "provided", "but for".*
1. The customers would not be wanting some software unless their business needed it. 2. Unless the intruder knew the expected image and could project this image on the output camera, it would be impossible to illegally bypass the correlator. 3. Unless computer techniques had been developed, space research would have never made such great progress. 4. Computers would not have been more user-friendly unless graphical user interfaces had been developed. 5. But for space meteorological stations, we would not be able to observe the formation of hurricanes. 6. But for the radioastronomy, we should have never made the discoveries in the Universe. 7. But for the luminosity of this substance it would be difficult to detect its properties. 8. A hot air furnace may be used for heating provided very accurate temperature control is maintained in it by circulated air. 9. Provided the moving diaphragms of earphones set the air next to them in motion you would like to hear the sound that motion produces 10. It would be worth while investigating this substance, provided we could get it in sufficient quantity. 11. Providing all the requirements were met, the efficiency of the device would be increased. 12. But for this increment, the system would stay in the same position indefinitely. 13. But for the preliminary work it would have been impossible to cope with the new project. 14. Provided new data are obtained we shall be able to proceed with our work.. 15. Unless the problem of information had been not so serious, the men of science would hardly have taken so deep interest in it. 16. But for transistors mankind would not have had modern computer technology.

Упражнение 9. *Переведите следующие предложения на русский язык, обратите внимание на инверсию в условных предложениях.*
1.Should a large amount of data be processed it may be advisable to read it from a data file. 2. Were one electron removed, a net positive charge would be left. 3. Had

we all the necessary materials we should complete this device in time. 4. Be the index of the instruction manual not so complete, you might put another page in it. 5. Should your work meet these conditions, it will be of great service to our industry. 6. Had he informed me in time I should have sent this device. 7. Had you taken all safety measures the machine would not have been broken. 8. Had the degree of evaporation been high, the salinity of water would have been rising. 9. Had this warning been needed, the processing might have taken quite a different turn. 10. Had the spacecraft gone behind the Moon it would have gone into an initial Lunar orbit. 11. Were you to read that paper you would see that the state of millimeter wave technology has improved significantly in the past several years. 12. Should those experiments be made they would show us once again that very little attraction exists between the molecules of any gas. 13. Were the Earth not rotating the satellite in 1-4 hours would cover 360 degrees in longitude. 14. The velocity of a particle would be continuously changing had that particle non-uniform motion. 15. Were the field winding in series with armature, all the current to be generated would pass through it. 16. Should one computer fall, the other takes over its function.

Упражнение 10. *Найдите предложения с сослагательным наклонением, переведите их на русский язык.*
1. This kind of metrics should be listed in the series. 2. Depending on the stage of the llifecycle, different attributes should be measured. 3. The software product evaluation should be done iteratively depending on the previous design and implementation stage. 4. Programs in the language should be able to execute over networks of computers and on parallel computers. 5. If the motor speed is too slow, the controller should increase the speed. 6. Software testing should not be viewed as a singular activity, or as a few individual tests. It should be viewed as broad workflow encompassing a continuous series of tests focused on identifying and eliminating defects, and assessing product quality early and continuously throughout the development lifecycle. 7. End-users assume that a process has failed if results are not received with 30 seconds, and they are apt to hit "Alt – Ctrl – Delete" unless the system warns them that the report will take longer. 8. The test group should continuously focus on improving its processes, regardless of the maturity level of the organization. 9. If you use the restricted directive, you must have a password line in the stanza. 10. It is important that we debate the importance of such gatherings. 11. Care should be taken that the packing be as uniform as possible. 12. If the formal axioms did not agree more or less with the properties of physical objects, then geometry would be of little interest. 13. The facts do not always answer our questions as unmistakably as might be desirable. 14. Even problems that would be termed "simple" nowadays could not be handled in a straightforward way. 15. We might well compare the conditions thus created to the present conditions. 16. Such differences could be of advantage, because these catalysts may complement each other.

Упражнение 11. *Подчеркните формы сослагательного наклонения, переведите текст на русский язык.*

The software would probably consist of integrated applications packages which might include a database program a word processor program and a graphic program. A diary planner program and a drug interaction program would also be useful.

The database program would be used to store patient files containing records of each patient. Each record would give details such as the patient's name, address, telephone number, date of birth and medical history. It may also include dates for further appointments.

The doctor could instruct the program to search for a particular patient's record which would then be displayed on a VDU screen. He could then update the record by inputting new information using a keyboard.

Using the database program, the records could be automatically sorted into any order e.g. alphabetical order, and classified into various categories. This would enable the doctor to quickly identify groups of patients, for example, men over forty with high blood pressure. Lists of any required category could be printed out using a printer.

Repeat prescriptions could also be stored on the database and printed out when required. The program could be designed to limit the number of times the repeat prescription would be printed without further instruction from the doctor. A drug interaction program would check each prescription so that drugs which interacted badly with each other would not be prescribed.

МЕСТОИМЕНИЯ И СЛОВА-ЗАМЕСТИТЕЛИ

1. Предложения с вводящим there, конструкция there is (there are)

Перевод предложений с конструкцией there is (there are) следует начинать с обстоятельства места, если оно есть. Сама конструкция there is (there are) переводится *есть, существует, находится*:

There is some discrepancy in the results obtained.

В полученных результатах *есть* расхождения.

2. Местоимение it, заменяющее предшествующее существительное или целое высказывание

А. Личное местоимение it (мн. число they) заменяет предшествующее неодушевленное существительное и переводится личным местоимением 3-го лица в именительном или косвенном падеже:

I have read your paper and found *it* very interesting.

Я читал вашу статью и нашел *ее* очень интересной (нашел, что *она* очень интересна).

Б. Местоимение it заменяет все предшествующее высказывание и переводится местоимением *это*:

В. The temperature is rising slowly. *It* means that…

Температура медленно поднимается. *Это* означает, что…

3.   Местоимение *it*, предваряющее последующее высказывание

Местоимение *it* предваряет последующее высказывание, выраженное инфинитивом, реже герундием или придаточным предложением с союзом that – *что*, *чтобы*, why – *почему* и др.:

It is worth while *to try (trying)* another approach.
Важно *попытаться* применить другую методику.

Предваряющее *it* выполняет в предложении функции подлежащего:

I found *it* easy to understand the speaker.
Мне было легко понимать докладчика.

А. Предваряющее *it* в функции подлежащего. Местоимение it может быть подлежащим в различных предложениях, которые переводятся на русский язык неопределённо-личными или личными предложениями с вводными словами.

It will be remembered that some hypotheses were put forward in the last decade.
Вспомним (следует вспомнить, читатель помнит, не следует забывать), что некоторые гипотезы были выдвинуты (только) в последние десять лет.

Б. Предваряющее *it* в функции дополнения. Неопределённо-личное местоимение *it* является дополнением после таких глаголов, как find – *считать, находить, оказываться*; make – *делать* и другие. В этих случаях после местоимения *it* стоят прилагательные с оценочным значением: possible – *возможный*, reasonable – *разумный, приемлемый* и другие. Местоимение *it* на русский язык не переводится, поскольку оно – лишь формальное дополнение, предваряющее логическое.

The method *makes it possible to obtain* the substance in a pure form.
Данный метод *дает возможность получить* это вещество в чистом виде(с помощью этого метода можно получить…).

4.   One – слово-заместитель существительного

One (ones) – заместитель ранее стоящего существительного. Переводится тем существительным, которое оно заменяет, или опускается:
The method is a conventional *one.*
Этот метод общепринят (является общепринятым *методом*).

5.   One – обобщённо-личное местоимение
Обобщённо-личное местоимение one выполняет в предложении функции подлежащего и дополнения.

А. Если местоимение one – подлежащее, то при переводе, оно опускается, а сказуемое передаётся неопредлённо-личной формой глагола:

One believes that … - считают, что …
One knows that … - известно, что …
One must expect that … - следует ожидать, что …
One can easily understand that … - легко можно понять, что …

Иногда one удобно переводить личным местоимением *мы* (реже *кто-то, кто-нибудь*) или существительным *человек, люди* с обобщённым значением:

The similarity *one finds* in this case is not accidental.

Сходство, которое *мы находим* в данном случае, не случайно.

Б. Обобщённо-личное местоимение one в функции дополнения или совсем не переводится или передаётся косвенным падежом от личного местоимения *мы* (*нам, нас*), реже существительными *человек, люди* с обобщённым значением:

The new *device enables one* to examine the process thoroughly.

Новый прибор *позволяет (нам)* более тщательно исследовать этот процесс (с помощью прибора *мы* можем исследовать …).

6. Слово-заместитель that (those)

Слово-заместитель that (those) заменяет ранее стоящее существительное и переводится тем существительным, которое оно замещает, или опускается:

The atomic weight of oxygen is greater than *that of* carbon.

Атомный вес кислорода больше (*атомного веса*) углерода.

7. Слово-заместитель this(these)

Слово-заместитель ранее стоящего существительного this (these)переводится личным местоимением в именительном или косвенном падеже:

Also, the Schiff-Sherrington phenomenon is of interest; *this* involves the increase of…

Представляет также интерес явление Шиффа-Шерринтона; *с ним* связано увеличение…

8. Глагол do – заместитель сказуемого

Глагол do заменяет предшествующее сказуемое, которое при переводе или повторяется, или опускается :

Sugar dissolves in water. So *does* common salt.

Сахар растворяется в воде. Поваренная соль тоже (*растворяется* в воде).

9. Глаголы- заместители значимой части сказуемого

При повторении составного сказуемого, состоящего из глагола связки be и именной части, выраженной существительным или прилагательным, повторяется только глагол-связка, а именная часть опускается.

При повторении сказуемого, состоящего из вспомогательного глагола и значимого, повторяется только вспомогательный глагол (be,have,shall,will,should,would); при повторении модального сказуемого повторяется только модальный глагол (can,could,may,might).

В русском переводе сказуемое или повторяется, или опускается:

Bush *is an engineer* . *So are* Grey and Miller.

Буш – *инженер*. Грей и Миллер –*тоже (инженеры)*.

The volume of a gas *is dependent* on temperature *and so is* the reaction rate.

Объем газа *зависит от* температуры, и скорость реакции *тоже(зависит от температуры)*.

Предложения с вводящим **there**, конструкция **there is (there are)**

Упражнение 1. *Переведите следующие предложения.*

1. There is no need to "hunt and peck" for entry keys or memorize the keyboard configuration. 2. However, up to now there has been little effective standartisation of systems techniques. 3. There has been an interest in language translation and, in particular, in the prospects for automatic translation by computer. 4. There is a solar-powered talking watch that not only literally "tells" the time but also but also wakes you up with such alarm messages as "Time to get up, go, go, go". 5. There are also programs for other types of computers. 6. In this type of application, therefore, there are microprocessor-based surface measurement instruments and also "add-on" systems. 7. When there are many items to be printed, the printing is usually done on a high-speed line printer. 8. If the computer were to print on paper eighty characters wide, there would be eighty hammers in use on the printer. 9. Although chain printers and band printers are very fast, there has been considerable concern about their sloppy printing. 10. There are believed to exist some other species of the same type. 11. There is another similarity between trying to learn to play a musical instrument and trying to learn to use a computer. 12. There seems to be a considerable disagreement between observations of the same phenomenon by different authors. 13. There is another memory cell located in the instruction decoder called the current-address register. 14. In practice there is absolutely no need for this. 15. There were more flexible and mobile devices which could squeeze into narrow openings, move on flat vertical walls, and even on the ceiling.

Местоимение **it**

Упражнение 2. *Переведите следующие предложения. Укажите, где местоимение it заменяет предшествующее существительное, а где – целое высказывание.*

1. The CD has one major drawback, however: once the manufacturer stores information on a disc, it cannot be erased or changed. 2. Julia's word stock includes about 100 sentences and it selects the required reaction after "hearing" the key word, such as, for example, "to have dinner" or "to play". 3. The electronic meter begins tabulating distance and cost internally, and it also displays its calculations on a digital screen upon push-button command. 4. If you yourself try these experiments, you can verify everything we have described. It will take patience, however. 5. The equipment can also incorporate anti-passback features to avoid more than one person using the same card by passing it back from one person to another. 6. The capabilities of the computer ABC-book do not strike only children. It can "speak" three male and two female voices. 7. Children from village and town schools are thus learning to operate computers. It is one of the forms of implementing the countrywide programme for computer knowledge among students. 8. Since the standard routines of manufacturing this or that component will be put into computer's memory in advance, the designer will not have to rack his brains for the way to make it. 9. Do you think that if a robot does not justify itself economically, using it would be a scientific and technological step backward rather than forward? 10. Depending on the

task it is to perform, a robot can have any of these built into it. 11. Robot hearing is possible because sound is a form of energy. It comes in waves. 12. Once set up to do a job they perform it repeatedly. 13. In this case, the more complex the process, the more suitable it is for microcomputer control. 14. You may find the "bugs" in your program by initiating a trace through it during execution. 15. Once the computer has the desired input, it will process the stored information and produce its output (a picture of what the doctor requested), which can also be stored by the computer to be used in the future if necessary.

Упражнение 3. *Переведите следующие предложения с местоимением it, предваряющим последующее высказывание.*
1. It appears that even a super-computer is powerless in translating, say, an English text into Russian with one-to-one correspondence accuracy. 2. Consequently, it is no wonder that this is an area which is expected to make qualitatively fresh gains. 3. However, as with many other areas of computing technology, it has been much more recently that software developments have made significant changes in the principles of computer functioning. 4. But it would be ideal to store lengthy reference works such as an unabridged dictionary, telephone directories for several cities or dozens of income-tax forms. 5. It seems to function like the five human senses. 6. It is possible to change the void/valid status of a card immediately at the control unit. 7. It is also able to produce an audio-text containing up to 400 characters, punctuate a text and do the simplest arithmetic operations. 8. It is noteworthy that the appropriate programs are designed for the Polish-made microcomputers with which many of the countries schools are equipped. 9. The introduction of the new course in schools made it imperative to reorient the higher educational establishments, too; over a hundred faculties and departments were opened to provide training in information science and computer technology. 10. Many think it will not be too long before robots like these take over from human musicians and artists. 11. It turned out to be that electrons obtained and controlled in the new device have demonstrated a volumetric character, i.e., they moved in three directions. 12. You will find it useful to include the following sections in your documentation: Identification, Contents Page, Summary, Description of the Problem, etc. 13. Having decided what is to be output, it is then necessary to consider the format and general layout. 14. On occasions it becomes apparent from the flowchart or analysis of the problem that a similar calculation will be repeated several times in the program. 15. If a large amount of data is to be processed, it may be advisable to read it from a data file.

Местоимение **one**
Упражнение 4. *Переведите следующие предложения. Укажите, где местоимение one заменяет существительное, а где оно является обобщенно-личным местоимением.*
1. Like many of the newest pocket-size electronic calculators, this one can do more than simple arithmetic. 2. A designer will enter all the initial data in a computer which will help him try out all possible versions of the unit he is devising and select

the best one. 3. One doesn't have to prepare a new program each time you set a new function to a microprocessor-equipped robot. 4. There are two rational ways in the field of robotics. The first one is to built standardized modules – unified elements on the basis of which it will be easy to assemble robots for the most varied of purpose. 5. One may not be the only person using the program and this is the factor to be considered. 6. The first class comprises radio receivers, TV sets and computers. The second one includes microwave devices such as radars, for example. 7. One believes that the procedure described above will simplify the experiment. 8. One is to make a lot of experiments to make sure that his observation is adequate. 9. The steady state of the gas is supposed to be one which gives no one direction preference over another. 10. Several standard programs can be stored in the computer, and the one required summoned by the push of a button (if this is not done automatically). 11. A moment's reflection is enough to convince one that the speeds found are not only possible, but reasonable. 12. The procedure is straight-forward and is the one followed throughout the experiment. 13. A one-cell eye isn't able to do much more then tell the difference between light and dark, while some of the more complex ones are able to see colour and detect movement. 14. The computer is not another human being with whom one can speak easily and clearly in common English. 15. The computer allows one to make calculations in a short time.

Слова-заместители **that (those), this (these)**

Упражнение 5. *Переведите следующие предложения, выделив предварительно местоимения-заместители и те существительные, которые они заменяют.*
1. Stereo buffs are quickly discovering that compact discs (CD's) can produce music that is clearer and crisper than that of any phonograph record. 2. There are two methods of measuring the conductivity of semiconductors. The first of these, which is used more commonly, has a number of advantages. 3. There are many kinds of potential energy besides that due to the force of energy. 4. The electron temperature is much greater than that of the gas as a whole. 5. The logic part of the solution takes very little time. With computer equipment, this can be done efficiently and with the entire class participation. 6. The chief use of diffusion and thermal diffusion results is to determine the forces between unlike molecules. These can also be determined by methods like those used earlier for like molecules. 7. Certain U.S., Japanese and West European companies spend much money on building robots of no practical value at all. This is done for the sake of publicity so as to secure a foothold on a competitive market. 8. Two other very suitable temperatures are always generally available, those of melting ice and of boiling water – The former, constant under all conditions, the letter depending on the atmospheric pressure. 9. A human being has to have eyes and ears, a nose, a mouth and a sense of feel. Depending on the task it is to perform, a robot can have any of these built into it. 10. Once set up to do a job they perform it repeatedly. To perform another sequence they need re-programming. This is often done by the operator moving the robot's "hand" through the desired sequence, the sequence being recorded in computer memory. 11. If the original avalanch (лавина)

is a strong one, it leaves behind it a large number of positive charges; these may be enough to attract the electrons of some of the new avalanches into their tube. 12. The individual readings can be conveniently stored to allow trends, etc. to be identified. This often enables a situation to be altered before faulty work is produced. 13. But early computer-assisted classes used cassette tapes that were prerecorded and more rigidly programmed than those of the new course. 14. As an example of how programs are written in a computer's own code (machine code), it will be assumed that two numbers are held in memory cells 5 and 6, that these are to be added together, and the result stored in memory cell. 15. The laser printer combines laser technology with that of the office copying machine.

Глагол **do -** заместитель сказуемого и глаголы-заместители значимой части сказуемого.
Упражнение 6. *Переведите следующие предложения.*

1. Robots feel in the same way that humans do. 2. The velocity of a falling body increases exactly as does the time as it has been falling. 3. The pressure didn't change, nor did the temperature. 4. And even when the cab driver is not working, the meter is: the unit also functions as a digital clock. 5. Complete description in quantum theory does not imply precise knowledge of all measurable quantities at all instants of time as it does in classical mechanics. 6. If a body is at rest and starts to move, its velocity is changed. So is its speed. 7. About 1834, Macedonio Melloni showed that infrared rays behave as light does in reflection, refraction, and absorption experiments. 8. Since a visor is meant for bright, sunny days, so is the radio; it is powered by a solar-charged nickel-cadmium battery. 9. There is no certainty that molecules in a gas must behave in the same way as in a liquid; but if they do, the forces between two molecules must be attractive at sufficiently great distances, but violently repulsive at small. 10. The familiar law of the lever is a special case as is Archimedes' principal. 11. A thin liquid film, such as a soap-bubble, tries to pull itself together and reduce its area, much as a stretched elastic sheet would. 12. The molecules of a liquid, at any given temperature, do not all have the same speed. If they did, no evaporation would take place below a definite temperature.

Учебное издание

Английский язык

Методическая разработка
по проверке лексико-грамматических навыков
для студентов 2-го курса ФКСиС и ФИТУ
дневной формы обучения

Составители:
Карпик Людмила Станиславовна,
Касперович Наталья Григорьевна,
Рогачевская Анна Ивановна и др.

Корректор Е.Н. Батурчик