

АНГЛИЙСКИЙ ЯЗЫК

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АНГЛИЙСКИЙ ЯЗЫК

Учебные задания

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АНГЛИЙСКИЙ ЯЗЫК

Учебные задания
для студентов 2 курса
заочного отделения
инженерных специальностей

Тамбов
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Учебные задания представляют собой контрольные работы по английскому языку для студентов 2 курса (III семестр) заочного отделения инженерных специальностей.

Работы составлены в пяти вариантах, которые отличаются друг от друга содержанием, имея общую структуру построения: тип и количество лексико-грамматических упражнений. Перед каждым контрольным заданием предлагаются перечень рекомендуемого грамматического материала, примеры, адекватные лексико-грамматическим заданиям контрольных работ.

Предлагаемые аутентичные тексты отвечают динамике современного научно-технического прогресса, специфике изучаемых в университете специальностей, а также требованиям программы по английскому языку для студентов-заочников высших учебных заведений технического профиля.

Актуальность предлагаемых учебно-методических заданий обусловлена потребностью подготовки конкурентоспособных специалистов для отраслей промышленности, имеющих высокий уровень лингвопрофессиональной компетенции.

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2004

МЕТОДИЧЕСКИЕ УКАЗАНИЯ

I. Структура курса

Учебный процесс по дисциплине "Английский язык" для студентов второго курса заочного факультета включает аудиторные занятия, самостоятельное изучение программного материала, выполнение письменных контрольных заданий 4, 5, и 6, субботние консультации, подготовку и сдачу нормы внеаудиторного чтения (4000 п.зн. в семестр), собеседования, сдачу зачетов и экзамена.

II. Содержание контрольных заданий

Контрольные задания содержат:

- перечень изучаемого грамматического материала;
- по пять вариантов контрольного задания, каждый из которых включает:
 - ✓ контрольно-проверочные упражнения, связный текст и комментарии к нему;
 - ✓ контрольный вопрос на проверку понимания отдельных частей текста.

III. Требования на зачете и экзамене

К зачету допускаются студенты, изучившие учебный материал рекомендованных учебников в объеме, предусмотренном программой, сдавшие норму внеаудиторного чтения и получившие зачет по контрольным работам.

Для получения зачета студент должен уметь

1. Прочитать и перевести со словарем общетехнический текст, содержащий изученный грамматический материал в объеме 800 п.зн. за один час письменно или тест объемом 1200 п.зн. устно.
2. Прочитать и понять без словаря текст, содержащий не более восьми незнакомых слов на 800 п.зн. и передать содержание прочитанного на русском или английском языке.

К экзамену допускаются студенты, сдавшие зачеты за предшествующие экзамену семестры, получившие зачет по контрольным работам и сдавшие нормы внеаудиторного чтения.

КОНТРОЛЬНОЕ ЗАДАНИЕ 4

Для того чтобы правильно выполнить задание 4, необходимо усвоить следующие разделы курса английского языка по рекомендуемому учебнику.

1. Сложные формы инфинитива (Passive Infinitive, Perfect Infinitive). Обороты, равнозначные придаточным предложениям: объектный инфинитивный оборот, субъектный инфинитивный оборот.
2. Причастия (Participle I, II). Независимый (самостоятельный) причастный оборот.
3. Условные предложения.

Используйте образцы выполнения упражнений.

Образец выполнения I (к упр. I)

1. We knew the test to have been made. Мы знали, что испытание уже было проведено.
2. I want him (trainee) to work at this problem with us. Я хочу, чтобы он (стажер) работал над этой проблемой вместе с нами.

3. They expect a new computer programme to be compiled next month.
Они ожидают, что новая компьютерная программа будет составлена в следующем месяце.

Образец выполнения II (к упр. II)

1. Computers made it possible to develop structures employing the freest of forms, paving the way for the creation of an enormous diversity of new constructional systems.
Компьютеры позволили разрабатывать структуры самой произвольной формы, открыв дорогу для создания огромного разнообразия новых конструктивных систем.

2. Having obtained the necessary results they stopped their experimental work.
Получив необходимые результаты, они остановили эксперимент.

3. Computer software having been developed, high degree of accuracy the process of testing equipment have been modeled.
После того как разработали программные средства, был смоделирован, с высокой степенью точности, процесс испытания оборудования.

Образец выполнения III (к упр. III)

1. Provided we get the implements, we shall check the power line.
При условии, что мы получим инструменты, мы проверим электропроводку.

2. If he had had more experience, we could have given him new types of equipment.
Если бы у него было больше опыта, мы смогли бы обеспечить его новым оборудованием.

3. He would not agree to compile computer programme even you asked him.
Он не согласится составить компьютерную программу, даже если бы вы его об этом попросили.

ВАРИАНТ I

I. Перепишите и письменно переведите на русский язык следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения I).

1. All the man's knowledge in the field of electricity is known to have been obtained during the last 400 years or so.

2. Physicists consider nuclear energy to be the prime source of heat energy.

3. They found radon to be three times as heavy as hydrogen.

II. Перепишите и письменно переведите на русский язык следующие предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов (см. образец выполнения II).

1. The name electronics is known to be derived from the word "electron", the electron itself being the basic unit of negative electricity.
2. The Sun being near the zenith, its rays are nearly vertical.
3. The temperature of an object being raised, the velocity of electrons increases.

III. Перепишите и переведите на русский язык следующие сложные предложения. Обратите внимание на перевод условных предложений (см. образец выполнения III).

1. If you invent something, it's a good idea to register a patent for it in the next day!
2. If my mobile phone had been working, I would have got in touch with you.
3. Calculations have shown that a 10° F increase would be enough to melt the polar ice caps.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. to carry out – выполнять
2. to enhance – повышать
3. portable – портативный
4. conventional – обычный, традиционный

Computers

1. Computer is an electronic device that can receive a program (a set of instructions) and then carry out this program by calculating numerical information. The modern world of high technology is possible mainly due to the development of the computer. Computers have opened up a new era in manufacturing by means of automation, and they have enhanced modern communication systems.

2. Personal computers are also called microcomputers or home computers. The most compact are called laptops. They are portable and work on built-in batteries. Personal computers are designed for use at homes, schools, and offices. At home they can be used for home management and for playing computer games, watching films or listening to music. Schoolchildren can use computers for doing their homework and many schools now have computers for independent learning and computer-literacy studies. In the office personal computers may be used for the word processing, bookkeeping, storage and handling of necessary information.

3. Personal computers were made possible by two technical innovations in the field of microelectronics: the integrated circuit, or IC, which was developed in 1959 and the microprocessor that appeared in 1971. The IC permitted the miniaturization of computer-memory circuits, and the microprocessor reduced the size of computer's CPU to the size of a single silicon chip. Because a CPU calculates, performs logical operations, contains operating instructions, and manages data flows, a complete microcomputer as a separate system was designed and developed in 1974.

4. In 1981, IBM Company offered its own microcomputer model, the IBM PC that became a necessary tool for almost every business. The PC's use of faster and more powerful personal computers, and its use of an operating system that was available to all other computer makers led to a standardization of the industry. In the mid – 1980-s, a number of other developments were especially important for the growth of personal computers. One of these was the introduction of a powerful 32-bit CPU capable of running advanced operating systems at high speeds.

5. Another innovation was the use of conventional operating systems, such as UNIX, OS/2 and Windows. The Apple Macintosh computers were the first to allow the user to select icons – graphic symbols of computer

functions – from a display screen instead of typing commands. New voice-controlled systems are now available, and users are able to use the words and syntax of spoken language to operate their personal computers.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

1. What do modern computers allow the user to select from the display screen?

ВАРИАНТ II

I. Перепишите и письменно переведите на русский язык следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения I).

1. A steam power station is known to consist of four main components.
2. The Earth is assumed to have zero potential.
3. Recent research has shown the nucleus to be an exceedingly complex structure.

II. Перепишите и письменно переведите на русский язык следующие предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов (см. образец выполнения II).

1. The Earth's orbit being an ellipse (not a circle), the distance between the Earth and the Sun constantly changes as the Earth revolves around the Sun.

2. A long series of experiments having been carried out, they determined what equipment modifications would be necessary.

3. The method of preparation being the best of the methods described, we used it in our work.

III. Перепишите и переведите на русский язык следующие сложные предложения. Обратите внимание на перевод условных предложений (см. образец выполнения III).

1. When the moon passes between the earth and the sun, there is an eclipse.
2. People might behave differently if they had the chance to repeat their lives.
3. If people hadn't objected to the plans, the building would look much worse.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. Washington's cannon and musket – пушки и мушкеты Георга Вашингтона
2. not unlike ... chimneys – несколько похожи ... на трубы
3. the forced draft – воздушный поток, сквозняк
4. a blacksmith's forge – кузнечный горн
5. B.C. – before Christ – до нашей эры

Iron's Early History

1. No one knows how long man used iron. Iron ore is to be found in almost all countries, and primitive man in many lands knew how to use it many centuries ago. One can only guess as to the way man first learned that ore could be melted and used for his tools. Perhaps some primitive man's camp fire first smelted iron by accident.

2. Legend says that fifteen hundred years B.C. a forest fire showed the people of the island of Crete how to make iron. Pictures which date back to thirty-five hundred years B. C. show Egyptians smelting iron with the

air of a goat-skin bellows. However man may have found out how to make iron, it was made by the same method in ancient times in Africa, in China, in India, as well as in the countries around the Mediterranean. In England Caesar found the Britons making iron very much as the explorer may still find it made in remote parts of Africa and Asia.

3. Even the Romans were unable to make much improvement on the process of making iron. Rome produced thus all the metal with which Caesar armed his victorious legions. The iron which held together the oak of Columbus's ship was made in a simple fire-place like a blacksmith's forge. Iron for Washington's cannon and musket was made in tall furnaces not unlike big stone chimneys. The fire was fed by the forced draft commonly produced by a water wheel.

4. We must not think that because the ancients had difficulty in making iron they could not make good iron. The fact is that their product was as good as, and even better than, most of the iron we have today. The stories are true of the splendid shining swords of ancient heroes.

5. We have learned merely how to make iron more easily and more cheaply. The principle of iron-making has always been the same, whether it was in Central Africa or Rome, in the time of George Washington or Andrew Carnegie; hot fire smelts the iron out of the ore.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:
What principle has iron-making been?

ВАРИАНТ III

I. Перепишите и письменно переведите на русский язык следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения I).

1. A magnet appears to have its magnetism concentrated at two points termed the poles.
2. New devices are said to be perfect.
3. Everybody waited for the new data of the experiment to be published.

II. Перепишите и письменно переведите на русский язык следующие предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов (см. образец выполнения II).

1. At a conference of the Academy of Sciences being held in Moscow, a number of important scientific problems are being discussed.
2. About 24 million visible meteors reach the Earth's atmosphere every 24 hours, their total weight amounting to about 5 tons per day.
3. Having made a number of tests, the researcher got some useful results.

III. Перепишите и переведите на русский язык следующие сложные предложения. Обратите внимание на перевод условных предложений (см. образец выполнения III).

1. If I hadn't seen that programme, I would be less well-informed.
2. If the city center was traffic-free, the council wouldn't have needed to build all these car parks.
3. They must change their product range if they want to survive.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. condensation – уплотнение
2. gradual – постепенный
3. elimination – устранение, исключение, очищение
4. to derive – извлекать
5. excessive – излишний, чрезмерный

Principles and process of polymerization in plastics production

1. Condensation polymerization and addition polymerization are the two main processes in plastics production. The manufacture of plastics depends upon the building of chains and networks during polymerization. A condensation polymer is formed by a synthesis that involves the gradual reaction of reactive molecules with one another, with the elimination of small molecules such as water. The reaction gradually slows down as polymers are built up.

2. An addition polymer forms chains by the linking of small identical units without elimination of small molecules. The most important concept in condensation polymers is that of "functionality", i.e., the number of reactive groups in each molecule participating in the chain build-up. Each molecule must have at least two reactive groups, of which hydroxyl (–OH), acidic endings (–COOH), and amine endings (–NH) are the simplest.

3. Hydroxyl is characteristic of alcohol endings, combining with an acid ending to give an ester, the polymer being known as a polyester. Examples are polyethylene terephthalate obtained by reaction of ethylene glycol containing hydroxyl groups at each end and terephthalic acid containing two acidic groups and polycarbonate resins.

4. Alcohols are a particular class of oxygen-containing chemical compounds with a structure analogous to ethyl alcohol (C–HOH). Amines are various compounds derived from ammonia by replacement of hydrogen by one or more hydrocarbon radicals (molecular groups that act as a unit). Esters are compounds formed by the reaction between an acid and an alcohol or phenol with the elimination of water.

5. Bulk addition polymerization of pure monomers is mainly confined to styrene and methyl methacrylate. The process is highly exothermic, or heat producing. The dissipation of heat (necessary to maintain chain length) is achieved in the case of styrene by intensive stirring of the viscous, partially polymerized mixture, which is then passed down a tower through zones of increasing temperature. Alternatively, polymerization may be completed in containers that are small enough to avoid an excessive temperature rise as a result of the heat released during polymerization.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:
How does polymerization may be completed alternatively?

ВАРИАНТ IV

I. Перепишите и письменно переведите на русский язык следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения I).

1. Our country is known to have put the first atomic power station into operation in 1954.
2. The early artificial satellites showed the Earth to be surrounded by intense radiation.
3. On some occasions scientists may consider the acceleration of gravity to be constant.

II. Перепишите и письменно переведите на русский язык следующие предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов (см. образец выполнения II).

1. When being rubbed, some substances produce electric charges.
2. The energy lost in the capacitor appears in the form of heat being generated in the dielectric.
3. Having been insulated with polythene, the line was tested under unfavourable conditions.

III. Перепишите и переведите на русский язык следующие сложные предложения. Обратите внимание на перевод условных предложений (см. образец выполнения III).

1. If photosynthesis is taking place, oxygen is released into the atmosphere.
2. I should have done this work in case I had got the necessary tools.
3. The new cashpoint machines will only pay out if they recognize your thumbprint.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. survey – обзор, обозрение
2. metropolis – столица, метрополия
3. boom – бум, оживление
4. spectacular – эффектный, импозантный
5. acceptance – одобрение
6. rekindle – разжигать, вновь разгораться

Skyscrapers

1. According to a survey carried out in Hong Kong, 90 per cent of the population of this former British Crown Colony would ideally like to live in a skyscraper, even if they could afford to build a house of their own. In the rapidly changing Asian metropolises, high-rise blocks have long been regarded as something quite normal, and urban density is seen as part of the quality of life.

2. Alone in Shanghai with its 17 million inhabitants, several thousand tower blocks have been erected in the past few years. The gigantic construction boom this city has witnessed is unique. Most of the new buildings, however, are quickly erected, mass-produced structures that are neither formally nor technologically inspiring.

3. In Europe, the situation is quite different. In spite of the great constructional quality of high-rise developments, only a few spectacular and exceptional structures have found acceptance among the public at large. The opponents of tower blocks condemn them as anonymous and environmentally unviable, and argue that they do not fit the image of historical cities.

4. The deep, narrow canyons between the skyscrapers in Shanghai and Hong Kong teem with life, whereas in Europe, even where a high-rise urban ensemble has proved successful, as in Frankfurt, the street space often seems dead and deserted. Cultural differences, monofunctional structures and even things like shop-opening hours all play a role in this respect. Furthermore, the events of 11 September 2001 have raised the question of security in tall buildings and rekindled the debate about their real purpose.

5. In spite of the destruction of the World Trade Center in New York City, high-rise planning is experiencing a boom. Record heights are being attained, especially in Asia; but even in European cities, new tower blocks are soaring into the sky. Foster's Swiss Re tower in London clearly has an emblematic function for the insurance institution; but skyscrapers also have to demonstrate that they are an enrichment socially and in terms of urban planning.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:
Why, in fact, do skyscrapers exist?

ВАРИАНТ V

I. Перепишите и письменно переведите на русский язык следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения I).

1. Until quite recently scientists thought the space between the Sun and the Earth and the planets to be empty.
2. The efficiency of this apparatus is expected to be about 28 per cent.
3. The improvement of the technological process is supposed to ensure lower cost of power.

II. Перепишите и письменно переведите на русский язык следующие предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов (см. образец выполнения II).

1. Using machines he had developed himself in part, he was able to apply metal moulding and processing methods to large-area construction and the creation of new building components.
2. That plant produced large quantities of pig-iron, most of the pig-iron being turned into steel.
3. Having been tested under different conditions, the motors were put to use.

III. Перепишите и переведите на русский язык следующие сложные предложения. Обратите внимание на перевод условных предложений (см. образец выполнения III).

1. You can learn more about our products if you consult our website://www.gbpro.co.uk.
2. If I had known the post was vacant, I would have applied.
3. Defective items will be exchanged if you produce a receipt.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. transmitter – передатчик
2. voltage – вольтаж, напряжение
3. heterodyne – гетеродинный
4. amplification – расширение
5. amplifier – усилитель
6. luminous – светящийся, светлый, яркий

The Television Transmitter. The Television Receiver

1. The television transmitter sends out special signals. These signals are sent out in addition to the picture impulses. The signals synchronize the picture at the receiver with the picture picked up by the camera. At the television receiver, the picture and audio signals are picked up simultaneously by a single antenna.

2. The voltages induced in the receiving antenna are fed into the radio frequency stage of the receiver; and the picture carrier and the sound carrier are converted by superheterodyne conversion method into two separate intermediate frequency signals. One signal corresponds to the sound carrier and the other – to the video or picture carrier.

3. Two separate intermediate frequency amplifier channels employed, one for the picture signal and the other for the sound signal. The sound intermediate frequency signal is demodulated by a detector. After amplification by the audio amplifier, the sound signal is reproduced by the loudspeaker in the usual way.

4. The picture intermediate frequency signal is amplified by several stages having wide-band frequency characteristics and is then fed into the video (picture) signal which appears in the output of the detector is then amplified in a video amplifier, which corresponds to the audio amplifier in a sound receiver. Only it must pass a much wider range of frequencies.

5. The television receiver includes tube circuits for receiving, amplifying, and synchronizing the signals, and a large cathode-ray tube called a kinescope. It converts the video impulses from the transmitting station into luminous spots on a fluorescent screen. In the kinescope the amplified video signals are applied to the grid, and through it control the intensity of the electron beam.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

What does the television receiver do with the video impulses?

КОНТРОЛЬНОЕ ЗАДАНИЕ 5

Для того чтобы правильно выполнить задание 5, необходимо усвоить следующие разделы курса английского языка по рекомендуемому учебнику:

1. Грамматические функции глаголов *should, would*.
2. Обороты с инфинитивом и причастием, равнозначные придаточным предложениям.
3. Различные значения слов: *used to, as, due to, for, since, both ... and, either ... or, neither ... nor*.

ОБРАЗЕЦ ВЫПОЛНЕНИЯ (к упр. III)

used to

Things like CD players and TVs **used to** be a luxury purchase, but now everybody's got them. Такие вещи, как CD-плеер и телевизор, считались роскошью, а сейчас они у каждого.

as

As you see, people always try to make new technological developments. Как видите, люди всегда пытаются создавать технологические новинки.

due to

He was late **due to** the heavy traffic. Он опоздал из-за транспортных пробок.

for

I shall stay there **for** ten days. Я буду там в течение десяти дней.

since

I have not seen him **since** he returned to Moscow. Я не видел его, с тех пор как он вернулся в Москву.

both ... and

Lomonosov is known all over the world **both** as a scientist **and** as a poet. Ломоносов известен всему миру как ученый и как поэт.

either ... or

The general manager is **either** at the office **or** at the laboratory. Главный менеджер либо в офисе, либо в лаборатории.

neither ... nor

Neither he **nor** I know a secret formula of Coca-Cola. Ни он, ни я не знаем секрета формулы Coca-Cola.

ВАРИАНТ I

I. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения глаголов *should* и *would*.

1. When I worked for the BBC, I **would** have to start at 7.30 am.
2. If governments had been doing their job properly, there **wouldn't** be a hole in ozone layer!
3. We said that we **should** examine the chemical composition of the given substance.

II. Перепишите предложения и переведите их на русский язык, принимая во внимание, что инфинитивные и причастные обороты соответствуют придаточным предложениям.

1. The invention is considered to be of great importance in powder technology.
2. Harold Thimbleby (Professor of Computing Research at Middlesex University) has campaigned for many years to make the gadgets and machines we use less complicated.
3. To increase the resistance to corrosion, the zinc coating can be chromed, oiled or covered with a further coating of plastic.
4. We know the system of telecommunication to be widely used in everyday life and in industry.
5. Some new devices having been obtained, the researchers could make more complex experiments.

III. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения выделенных слов.

1. Concrete construction has a long tradition in Japan, especially **since** the destruction of much of Tokyo in the great earthquake of 1923.
2. A simple substance can **neither** be decomposed **nor** obtained by a chemical combination of other substances.

3. The newest laptop is in wide use *due to* their light weight.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. simultaneously – синхронно
2. utilize – использовать, утилизировать
3. desire – желание
4. multiple – многочисленный
5. laundry machine – стиральная машина

AUTOMATED PRODUCTION LINES

1. An automated production line consists of a series of workstations connected by a transfer system to move parts between the stations. This is an example of fixed automation, since these lines are set up for long production runs, making large number of product units and running for several years between changeovers. Each station is designed to perform a specific processing operation, so that the part or product is constructed stepwise as it progresses along the line.

2. A raw work part enters at one end of the line, proceeds through each workstation and appears at the other end as a completed product. In the normal operation of the line, there is a work part being processed at each station, so that many parts are being processed simultaneously and a finished part is produced with each cycle of the line. The various operations, part transfers, and other activities taking place on an automated transfer line must all be sequenced and coordinated properly for the line to operate efficiently.

3. Modern automated lines are controlled by programmable logic controllers, which are special computers that can perform timing and sequencing functions required to operate such equipment. Automated production lines are utilized in many industries, mostly automobile, where they are used for processes such as machining and pressworking.

4. Machining is a manufacturing process in which metal is removed by a cutting or shaping tool, so that the remaining work part is the desired shape. Machinery and motor components are usually made by this process. In many cases, multiple operations are required to completely shape the part. If the part is mass-produced, an automated transfer line is often the most economical method of production. Many separate operations are divided among the workstations.

5. Pressworking operations involve the cutting and forming of parts from sheet metal. Examples of such parts include automobile body panels, outer shells of laundry machines and metal furniture. More than one processing step is often required to complete a complicated part. Several presses are connected together in sequence by handling mechanisms that transfer the partially completed parts from one press to the next, thus creating an automated pressworking line.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:
How does an automated pressworking line work?

ВАРИАНТ II

I. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения глаголов *should* и *would*.

1. Our project *should* always be seen in the context of the surrounding urban fabric and landscape.
2. If you could see the volume of rubbish in industrial dustbin over a year, you *would* be horrified.

3. You *should* try to build up a library of CD-ROM material.

II. Перепишите предложения и переведите их на русский язык, принимая во внимание, что инфинитивные и причастные обороты соответствуют придаточным предложениям.

1. This scheme is to be introduced all over Mobile Phone Company.
2. Copper is of great value, being a good conductor of electricity.
3. To reinforce the metal engineers use artificial fibres.
4. We saw the experienced worker operating a new very complex machine with great skill.
5. Most of the laboratories equipped by our shop are of improved quality.

III. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения выделенных слов.

1. In contrast to projects in the 1960s, in which the principles of timber construction were simply applied to concrete, the elements of the present building were not cast in-situ, but manufactured *as* prestressed concrete elements.
2. The atomic weight is the sum of the protons and the neutrons *since* for all practical purposes the weight of electrons is not taken into account.
3. In those experiments they *didn't use to* hold crystals together with electrical forces.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. according to – в соответствии
2. but rather – а скорее
3. attraction – притяжение, тяготение

GRAVITATION

1. Gravitation is a very important force in the universe. Every object has a gravitational pull which is like magnetism. But unlike magnetism, gravitation is not only in iron and steel. It is in every object large or small; but large objects, such as earth, have a stronger pull than small ones.

2. Isaac Newton, the great scientist of the seventeenth century, first studied gravitation. When he was a boy, he often saw how apples fell to the ground. He wondered why they fell towards the earth and why they did not fly up into the sky.

3. According to the law which he later produced everything in the universe attracts everything else towards itself. The sun attracts the earth and the earth attracts the sun. Although the bigger object has the stronger attraction, all objects, in fact, have some attraction too but we do not notice the gravitational pull of a book because the pull of the earth is very much greater.

4. Why does the earth always move round the sun, and not fly off into cold space? The sun's gravitation gives the answer. The earth always tries to move away in a straight line, but the sun always pulls it back. So it continues on its journey round and round the sun. The sun is one of the stars in the galaxy, in which there are about 100,000 million stars. It is not in the middle of the galaxy, but rather near one edge. There are millions of galaxies in the universe and so there are thousands of millions suns. Many astronomers believe that some of these suns have planets as our sun does.

5. Gravitation is the force which holds all the atoms of a star together. It holds us on the earth. Einstein produced a new law of gravitation. Its main results are the same as the results of Newton's law; but in very small and fine matters Einstein's law gives different results. One of these is that gravitation bends light a little;

but according to Newton's law gravitation has very little effect on light. Einstein showed this fact by means of mathematics and not by experiment. And astronomers later proved by experiments that Einstein was right.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

What is the difference between two laws of gravitation?

ВАРИАНТ III

I. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения глаголов *should* и *would*.

1. It **should** be noted that the gap between quality of design and quality of execution must be overcome.
2. Which single gadget or device **would** you take to a desert island?
3. If we cooled oxygen to -192.98 C , we **should** achieve its boiling point.

II. Перепишите предложения и переведите их на русский язык, принимая во внимание, что инфинитивные и причастные обороты соответствуют придаточным предложениям

1. One answer to both these problems is to construct specially designated bicycle paths across and through the city.
2. The application of this device is certain to give better results.
3. This energy can make an electron pass from one orbit to another.
4. The new mobile phone is reported to have been put into mass production.
5. Going into chemical combinations elements entirely change their properties.

III. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения выделенных слов.

1. **As** a result of fire regulations and time and cost constraints, however, concrete ultimately proved to be a more suitable material.
2. Many other discoveries have been made **since** radioactivity was discovered.
3. The Body Shop International is against using animals in testing cosmetics, very active in community projects, and particularly well known **for** its involvement in environmental causes.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. damage – вред, повреждение; ущерб
2. devastate – опустошать, разорять
3. extinction – ликвидация, искоренение

PLANET EARTH – OUR COMMON HOME

1. Ecology is a science which is concerned with the interrelations of organisms and their environment, that is with everything that surrounds them. The ecologists are faced by a lot of problems in the modern world – the air we breathe, the water we drink, the food we eat, the soil we stand on, the great projects we construct...

2. There are about 6 billion people in the world at present. The population is growing very fast and scientists believe that in a few decades it will be too big for the earth to support. The Earth is being constantly damaged in different ways. Speaking about the growth of population we have to admit the increase of industries and

their harmful effects on the environment – the pollution of air from choking factory chimneys and the pollution of water because of industrial wastes.

3. Among the other serious problems which our planet is facing are: the increasing consumption of energy and water, the pollution of air by car exhausts, the increasing hole in the atmospheric ozone layer, the rivers that are poisoned by industrial and agricultural chemicals, the forests that are felled and vast forest territories that are devastated by fire and acid rains. Besides, armed conflicts and local wars add to the critical situation on the planet.

4. The Earth is just a huge spaceship and mankind is its crew. Can quarrels and killings among the crew be permitted? What will then happen to the spaceship? What will happen to mankind? If we realize the coming danger, we'll see that we should find solutions to all the problems to survive.

5. What should be done to change the situation for the better?

- We must change people's attitude towards the environment.
- We should stop the pollution of air and water.
- We must save more energy and water and try to use other sources of energy (solar and tidal energy, the energy of the wind, subterranean hot waters, etc).
- We must protect the ozone layer from harmful industrial products.
- We should prevent animals from extinction.

These and many other steps should be taken already now to make our planet a safer and better place to live in. We, human beings, must act.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

What must human beings do to make our planet better place to live in?

ВАРИАНТ IV

I. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения глаголов *should* и *would*.

1. Where an area of copper is situated above an area of zinc, for example, the zinc **would** be subject to corrosion damage.

2. There is no lift in the building, since this **would** have interfered with the sensitive magnetic fields of the centre's trial facilities.

3. You **should** acquire certain skill before beginning the work you are so interested in.

II. Перепишите предложения и переведите их на русский язык, принимая во внимание, что инфинитивные и причастные обороты соответствуют придаточным предложениям.

1. The plant being built in our district will produce radio sets.

2. The use of this device permits more complex experiments to be carried out.

3. This laboratory appears to be working out new possible applications of a laser.

4. Being built of coloured stone and plastics, the cinema will look fine.

5. Unless made some valuable remarks the motor must not be tested on highway.

III. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения выделенных слов.

1. Such **as** aluminium it is preferable to steel for certain parts of electric machinery.

2. Not many years have passed **since** man began to use a modem which enables computers to exchange data.

3. A fax machine allows **both** transmitting **and** receiving copies of documents rapidly.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. band – стержень
2. can be woven – могут быть сотканы
3. stainless steel – нержавеющая сталь
4. wavelike line – волнообразная форма
5. sunshading – завеса от солнца
6. pretensioned element – предварительно напряженный элемент
7. avalanche – лавина

METAL FABRICS

1. Round or flat wires, bands or cables can be woven to form various kinds of metal fabric. Commonly used materials include stainless steel, titanium, chromium-nickel steel and even copper and brass. Where the individual wires or strands have a diameter of more than 3 mm, their wavelike line should be preformed (without pretensioning).

2. Using various classical weaves, strips up to 8m in width can be produced. Metal fabrics are available in a natural form or with various surface treatments: painted, anodized, pickled, etc. They have great stability and can be used over large areas without intermediate seams or connecting elements. Metal fabrics can be obtained in roll and strip form, or cut to size. In recent years, these materials have been increasingly used in architecture.

3. The scope for rolling them makes them suitable for sunshading and visual screening purposes. They are also used for filter heads, safety barriers, infill panels, windbreaks and even partitions. Materials of this kind require little maintenance and can be simply cleaned. The fact that they can be built in as pretensioned elements has the structural advantage of a load-bearing function combined with low weight.

4. Special fixing details have to be developed to ensure an efficient transmission of loads at the points of connection. In addition to fabrics, grilles and gratings can be formed. Structures of great strength can be created by welding or pressing the wires together at their points of intersection. A wide range of products is available in a variety of mesh dimensions, wire thicknesses and metals, including galvanized steel, aluminium and stainless steel.

5. Large-mesh wire structures are used for fences and enclosures. Woven wire-mesh materials are also employed in mountain regions as safety nets to resist snow or avalanches. In building, wire netting can be used in conjunction with other materials to stabilize dry stonework. The flexibility, stability and extreme lightness of wire mesh makes it suitable for large-area structures such as aviaries.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

What is the characteristic of wire mesh?

ВАРИАНТ V

I. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения глаголов *should* и *would*.

1. If you had a mobile phone you **would** make and receive calls wherever you were.
2. I wish you **would** use E-mail which enables you to send and receive messages and files via your computer.

3. Today's engineer has no need for the skill of precise manual calculation of complex structures, but he *should* know the principal laws of construction mechanics, sense the 'play' of forces in a structure, have knowledge of the principles governing the operation of various types of constructional system, and be able to evaluate the results of calculation.

II. Перепишите предложения и переведите их на русский язык, принимая во внимание, что инфинитивные и причастные обороты соответствуют придаточным предложениям.

1. This metal is too brittle to be used in our case.
2. Heat causes most materials to become slightly bigger.
3. The atom is known to emit rays of different length.
4. Under these conditions the output of the plant is likely to increase.
5. Having done a given number of operations, the machine stopped automatically.

III. Перепишите предложения и переведите их на русский язык, обращая внимание на различные значения выделенных слов.

1. *As* construction technologies developed, the functions of the zodchy were split among three main categories of specialist, each with his own different area of responsibility: the architect, the engineer, and the builder.

2. *Since* the hydrogen ion is composed of one proton the terms hydrogen iron and proton are synonymous.

3. *Either* you work out a new type of installation *or* our laboratory will never make more complex experiments.

IV. Прочитайте и устно переведите с первого по пятый абзацы текста. Перепишите и письменно переведите первые четыре абзаца.

Пояснения к тексту

1. management information systems – системы информационного управления
2. to avoid errors – чтобы избежать погрешностей (ошибок)
3. generally speaking – вообще говоря
4. it must be coupled in design – при проектировании его необходимо соединить вместе
5. no longer – больше не

A MACHINE SHOULD WORK, A MAN THINK

1. The robots of our time resemble humans very little. According to specialists, the main thing for them is not to look like people, but to do their work for them. Factories which are equipped with automatic machine tools, transfer lines and management information systems place a lot of hope in them. Automation sought out areas where a robot can operate as well as a person but where people don't like to work. In other words, man has created the robot so as not to become a robot himself.

2. The first generation of robots appeared in the 60s and they were complex and capricious in maintenance. They could perform operations of the type "take off – put on" or "pick up – bring". They could pick up items only from definite positions determined by a rigid programme. Today, to avoid errors, robots are supplied with vision (TV camera) and hearing (microphone). They can perform more complex productions – painting, soldering, welding and assembly work.

3. A more complex task lies ahead – to remove people completely from production areas where there are harmful fumes, excessively high or low temperatures and pressure. People should not work in conditions that are dangerous. Let the robots replace them there – and the sooner, the better. Generally speaking a single robot

by itself is hardly of any use in production. It must be coupled in design with other equipment, with a system of machine tools and other devices. We must set up easily and quickly to an output of new goods.

4. Flexible production systems consist, as a rule, of several machine tools with numerical programmed control or of processing centers – machine tools equipped with microprocessors. An all-purpose computer controls the entire cycle, including the storage facilities. One hundred per cent automated production is no longer a dream.

5. There is already talk of making thinking robots. Apparently, robots will appear which will be able to acquire the ability to study. Maybe they will be able to enrich our concepts about the world around us. But one thing is certain – a robot will never be able to grasp even the semblance of such emotions as love, honour, pride, pity, courage and selflessness.

V. Прочитайте пятый абзац текста и ответьте письменно на следующий вопрос:

What will a robot never be able to grasp?