

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ПО ОБРАЗОВАНИЮ

КУРГАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

Кафедра иностранных языков технических специальностей

АНГЛИЙСКИЙ ЯЗЫК

Методические указания и контрольные задания
для студентов заочной формы обучения
технологического факультета
и факультета транспортных систем

Курган 2008

Кафедра иностранных языков технических специальностей

Дисциплина: «Английский язык»

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Утверждены на заседании кафедры

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Оформление и выполнение контрольных работ и заданий

1. В соответствии с учебным планом университета студент выполняет в каждом семестре по одному контрольному заданию по иностранному языку (английский язык).

2. Каждое контрольное задание данных методических указаний имеет пять вариантов. Студент выполняет письменно один вариант контрольного задания в соответствии с последней цифрой студенческого шифра следующим образом: студенты, у которых номер зачетной книжки оканчивается на 1 или 2, выполняют вариант № 1;

на 3 или 4 – вариант № 2;

на 5 или 6 – вариант № 3;

на 7 или 8 – вариант № 4;

на 9 или 0 – вариант № 5.

Все остальные варианты контрольного задания используются в качестве дополнительного материала для лучшей самостоятельной подготовки к зачету или экзамену.

3. Письменные контрольные работы следует выполнять в отдельной тетради или на листах формата А4 без оборотов (печатный вариант).

На титульном листе контрольной работы должны быть указаны: учебное заведение и кафедра, фамилия, имя и отчество, шифр и адрес студента, а также номер варианта выполняемой контрольной работы по данному предмету.

4. Работу следует выполнять четко и аккуратно, соблюдая интервал между строками и оставляя поля для замечаний и объяснений рецензента.

5. Текст каждого задания и содержание задания нужно переписывать полностью на левой странице тетради, а на правой давать ответ или его русский перевод. Образец:

<i>поля</i>	<i>Английский текст</i>	<i>Русский текст</i>	<i>поля</i>
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Каждый абзац текста должен начинаться с новой строки.

6. Выполненные контрольные работы направляются через деканат в установленные сроки для проверки и рецензирования. О результатах проверки справляться в деканате.

7. Если контрольная работа выполнена не в соответствии с указаниями или не полностью, она возвращается студенту без проверки.

Если работа не допущена к защите, следует сделать работу над ошибками или оформить ее заново. Следует обязательно также приложить и ту работу, в которой рецензент сделал замечания.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 1

1 вариант

I. Перепишите следующие предложения. Определите по грамматическим признакам, какой частью речи являются слова, оформленные окончанием -s, и какую функцию это окончание выполняет, т.е. служит ли оно:

- а) показателем 3 лица единственного числа глагола в Present Indefinite;*
- б) признаком множественного числа имени существительного;*
- в) показателем притяжательного падежа имени существительного.*

Предложения переведите.

1. The "Big Ben" clock weighs 13.5 tons.
2. Most of London's places of interest are situated to the north of the river Thames.
3. Hyde Park covers 360 acres.

II. Перепишите следующие предложения и переведите их, обращая внимание на особенности перевода на русский язык определений, выраженных именами существительными.

1. The bus stop is not far from here.
2. All first-year students study foreign languages.
3. There are only daylight lamps in this room.

III. Перепишите следующие предложения, содержащие разные формы сравнения, и переведите их на русский язык.

1. One of the most famous buildings in England is St. Paul's Cathedral.
2. This room is smaller than that one.
3. The longer is the night, the shorter is the day.

IV. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходит в настоящее время.

1. The Port of London is to the east of the City.
2. In a few days she will leave for Sanct-Petersburg.
3. Your brother visited the exhibition last Sunday.
4. This student first came to Moscow in 2005.
5. The National Gallery houses a priceless collection of paintings.

V. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходило в прошлом.

1. The farmer likes to work in his garden every day.
2. Last Saturday his little sister slept till 10 o'clock.
3. I didn't phone him yesterday, I was very busy.
4. The teacher will ask the new grammar rule at the next lesson.
5. Some students in our group know English very well.

VI. Выпишите из упражнений IV и V предложения, действие которых произойдет в будущем, и переведите их.

VII. Прочтите и устно переведите на русский язык с 1 по 7 абзацы текста. Перепишите и письменно переведите 1, 2, 3, 6 и 7 абзацы.

London

1. London is the capital of Great Britain. It lies in the South East of England on both banks of the river Thames. London is one of the largest cities in the world and the largest port and industrial town in England. London is more than twenty centuries old.

2. The heart of the capital is the City (*Сити – деловой центр Лондона*). The territory of the City is only about one square mile, but it is the financial and business centre of the country. It contains almost all important English banks and offices.

3. The West End (*Уэст Энд – район Лондона*) of London is famous for its beautiful monuments and palaces, fine parks, fashionable shops and big hotels. The East End (*Ист Энд – район Лондона*) is quite different from the West End. It is the district of factories, plants and docks. The narrow streets and poor houses of the East End present a contrast to the homes of the rich people in the West End.

4. There are many places of interest in London. One of them is Trafalgar Square with the Nelson's monument 185 feet high. Buckingham Palace is the royal residence. Westminster Abbey is one of the most beautiful buildings in London. It contains the memorials of many famous citizens of Britain.

Across the road from Westminster Abbey are the Houses of Parliament, the seat of the British government. The clock tower is over the Houses of Parliament. It contains "Big Ben" – one of the largest clocks in the world.

6. The Tower of London is one of the most interesting places in London. It was a fortress, a royal residence, a prison, now it is a museum.

7. London is famous for its green parks. Hyde Park is the most popular of them. It is the greatest park in London as well.

8. London is the centre of the museums there. The National Gallery houses a priceless collection of paintings. The famous British Museum is one of the best museums in the world. It contains the most important collection of things from Greece and Egypt, including famous Egyptian mummies.

VIII. Прочтите 8 абзац текста и вопрос к нему. Ответьте на вопрос полным предложением из 8 абзаца.

What is the British Museum famous for?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 1

2 вариант

I. Перепишите следующие предложения. Определите по грамматическим признакам, какой частью речи являются слова, оформленные окончанием –s, и какую функцию это окончание выполняет, т.е. служит ли оно:

а) показателем 3 лица единственного числа глагола в Present Indefinite;

- б) признаком множественного числа имени существительного;
в) показателем притяжательного падежа имени существительного.

Предложения переведите.

1. The Potomac River separates Washington from Virginia to the southwest.
2. Last month my friend read an interesting book on London's history.
3. The inhabitants of the USA are fond of their country.

II. Перепишите следующие предложения и переведите их, обращая внимание на особенности перевода на русский язык определений, выраженных именами существительными.

1. Very interesting is the National Art and Space Museum in Washington.
2. We can transform great steam engine power into mechanical work.
3. Teams of figure skaters and ice-hockey players undergo intensive training at the sports centre.

III. Перепишите следующие предложения, содержащие разные формы сравнения, и переведите их на русский язык.

1. Washington is not the largest city in the United States but it is the most important city in America.
2. The more I thought of that plan, the less I liked it.
3. Your translation is better than mine.

IV. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходит в настоящее время.

1. Each substance melts at a definite temperature.
2. Our teacher explained the meaning of this word.
3. They will begin these experiments next week.
4. He wrote the grammar test without mistakes.
5. They often spend their vacation in the south.

V. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходило в прошлом.

1. In two years my brother will become an engineer.
2. I always leave the house at 7.30 o'clock morning.
3. American astronauts brought rocks to the Earth after their Moon landing.
4. They equipped the laboratory with modern devices.
5. With its beautiful buildings Washington attracts a lot of visitors.

VI. Выпишите из упражнений IV и V предложения, действие которых произойдет в будущем, и переведите их.

VII. Прочтите и устно переведите на русский язык с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 2 и 5 абзацы.

Washington

1. Washington, in full Washington, D.C. (“District of Columbia”), is city and capital of the United States of America. The city is located on the banks of the Potomac River, which separates it from Virginia to the southwest. Washington is not the largest city in the United States but in the political sense it is the most important city.

2. Washington is one of the few capital cities of the world founded expressly as a seat of government and as a centre for international representation. Washington has one major business and that business is government. Many people living in Washington work for the federal government. At 1600 Pennsylvania Avenue there is the White House where the President lives and has his office.

3. The Capitol (*Капитолий*), with its great Hall of Representatives and the Senate, is the highest building in Washington. There is a law against building structures more than 90 feet high in the capital. With its beautiful buildings and its tree-lined avenues Washington attracts a lot of visitors.

4. Nearly every significant national organization has its headquarters or a major branch in the District. The city is the main point of the nation for sightseers and for seekers after the spirit of the American past and present.

5. The modern city also has the nation’s most sacred monuments and the most meaningful artifacts of its history, and an impressive collection of the national art treasures. The capital has world-known art galleries, museums and monuments. One of the most interesting museums in Washington is the National Art and Space Museum. The museum has aircraft and spacecraft that were important in aviation history. There even rocks that the astronauts brought to the Earth after their Moon landing.

VIII. Прочтите 3 абзаца текста и вопрос к нему. Ответьте на вопрос полным предложением из 3 абзаца.

Why is the Capitol the highest building in Washington?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 1

3 вариант

I. Перепишите следующие предложения. Определите по грамматическим признакам, какой частью речи являются слова, оформленные окончанием –s, и какую функцию это окончание выполняет, т.е. служит ли оно:

- а) показателем 3 лица единственного числа глагола в Present Indefinite;*
- б) признаком множественного числа имени существительного;*
- в) показателем притяжательного падежа имени существительного.*

Предложения переведите.

1. The lecturer gave several examples of the scientists’ international ties (*связи*).
2. The foundation of New York dates back to 1626.
3. The author mentions this phenomenon in his article.

II. Перепишите следующие предложения и переведите их, обращая внимание на особенности перевода на русский язык определений, выраженных именами существительными.

1. Yesterday we had lecture on physics about light wave theory.
2. This installation has four steam engine cylinders.
3. Not long ago our family moved into a large three-room flat.

III. Перепишите следующие предложения, содержащие разные формы сравнения, и переведите их на русский язык.

1. New York is the most populous and the most international city in the country.
2. This room is smaller than that one.
3. The more I studied English language the more I liked it.

IV. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходит в настоящее время.

1. The student made no mistakes in his translation.
2. The dean will come here later.
3. Plasma is the fourth state of matter
4. Madison Avenue means the advertising industry.
5. Yesterday I came home from the institute at half past eight.

V. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходило в прошлом.

1. New York is the city of skyscrapers.
2. My friend finished school 5 years ago.
3. In 1626 the Dutch bought Manhattan Island from the local Indians for twenty-four dollars.
4. Our group will visit this exhibition next Sunday.
5. Rockefeller Centre houses all kinds of offices, enterprises and theatres.

VI. Выпишите из упражнений IV и V предложения, действие которых произойдет в будущем, и переведите их.

VII. Прочтите и устно переведите на русский язык с 1 по 6 абзацы текста. Перепишите и письменно переведите 1, 2, 4 и 5 абзацы текста.

New York

1. New York is one of the largest cities in the world. It is situated on the Hudson River. In 1626 the Dutch bought Manhattan Island from the local Indians for twenty-four dollars. At present Manhattan Island is the centre of New York and its business section.

2. New York City is in reality a collection of five boroughs (*borough – один из пяти районов Нью-Йорка*) – Manhattan, Brooklyn, the Bronx, Queens, and Staten Island. New York is the most populous and the most international city in the country. Its population is more than 8 million inhabitants.

3. New York is the city of skyscrapers. The highest skyscraper is the Empire State Building. It has 102 storeys and its height is 380 meters. Not far from the Empire State Building is Rockefeller Centre. Rockefeller Centre houses all kinds of offices, enterprises, theatres and music halls.

4. No other city contributes more images to the collective sense of Americans: Wall Street means finance, Broadway is synonymous with theatre, Fifth Avenue is automatically associated with shopping, Madison Avenue means the advertising industry, Greenwich Village stands for bohemian lifestyle, Seventh Avenue signifies fashion, and Harlem evokes images of the Jazz Age and African American slums.

5. Wall Street is the financial heart of the USA. The National Bank and large offices are situated there. Broadway is the longest street in the city. It is 29 kilometers long. Broadway is the street of the best known theatres and cinemas.

6. The Statue of Liberty greets everybody who comes to New York by sea. Millions of emigrants from all parts of the world cross the ocean, hoping to find a better and happier life there.

VIII. Прочтите 3 абзаца текста и письменно ответьте на вопрос к нему:
What is the highest building in New York?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 1

4 вариант

I. Перепишите следующие предложения. Определите по грамматическим признакам, какой частью речи являются слова, оформленные окончанием –s, и какую функцию это окончание выполняет, т.е. служит ли оно:

- а) показателем 3 лица единственного числа глагола в Present Indefinite;*
- б) признаком множественного числа имени существительного;*
- в) показателем притяжательного падежа имени существительного.*

Предложения переведите.

1. Australia is the world's largest island.
2. Australian summer starts in December, winter starts in June.
3. There are a lot of trees and a big lake in the centre of Canberra.

II. Перепишите следующие предложения и переведите их, обращая внимание на особенности перевода на русский язык определений, выраженных именами существительными.

1. These parts are result of a chain reaction.
2. This festival represents an objective picture of the national film industry's state.
3. The Sydney Opera House is the most famous building in Australia.

III. Перепишите следующие предложения, содержащие разные формы сравнения, и переведите их на русский язык.

1. Australia is the smallest but oldest continent in the world.

2. The more experiments we carry out, the more data we obtain.
3. Sydney and Melbourne are much older than Canberra.

IV. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходит в настоящее время.

1. Until 1901 Australia was a British colony.
2. In some places of Australia it sometimes doesn't rain for years.
3. The extra-mural students will take exams in June.
4. People of different nationalities live in Australia.
5. This meeting took place last Tuesday.

V. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходило в прошлом.

1. The scientists achieved great results in their work.
2. Hot winds blow from the north in Australia.
3. This article will be very interesting with new data.
4. He spoke English well.
5. Our faculty trains engineers on different specialties.

VI. Выпишите из упражнений IV и V предложения, действие которых произойдет в будущем, и переведите их.

VII. Прочтите и устно переведите на русский язык с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 2, 4 и 5 абзацы текста.

Australia

1. Australia is full of strange and wonderful places, unusual animals and amazing culture. Australia is an island, a continent and a country. It is the world's largest island and its smallest (but oldest!) continent. But a lot of it is empty. The population of Australia is only 20 million people. Australia is a federation of six states and two territories.

2. Until 1901 Australia was a British colony. It is still a monarchy and Queen Elisabeth II of Great Britain is also Queen of Australia. But now Australia is an independent state. Australian society is essentially British and there is a small but important (and growing) Aboriginal population.

3. Australia lies in the Southern Hemisphere (*полушарие*) of our world, so everything there is the other way round. Hot winds blow from the north; summer starts in December, winter starts in June. Australia is the flattest and second driest continent (after Antarctica). Two-thirds of the land is desert. In some places it sometimes doesn't rain for years!

4. Canberra, the capital of Australia, is the newest city in the country. Canberra is an Aboriginal word, meaning "meeting place". It was designed by Walter Griffin, an American architect, in 1912, and became the capital in 1927. Unlike other capitals, it is very quiet. There are a lot of trees and a big lake in the centre.

5. The largest cities in Australia are Sydney and Melbourne. Sydney is also the oldest city. Sydney is home to one of the country's most famous landmarks (*ориентир*) – the Sydney Opera House. The roof of this beautiful building looks like sails. Melbourne was once the capital of Australia. Today it is the “sporting capital” of the country.

VIII. Прочтите 3 абзац текста и письменно ответьте на вопрос к нему:
Why is everything the other way round in Australia?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 1 **5 вариант**

I. Перепишите следующие предложения. Определите по грамматическим признакам, какой частью речи являются слова, оформленные окончанием –s, и какую функцию это окончание выполняет, т.е. служит ли оно:

- а) показателем 3 лица единственного числа глагола в Present Indefinite;*
- б) признаком множественного числа имени существительного;*
- в) показателем притяжательного падежа имени существительного.*

Предложения переведите.

1. Canada has many large cities such as Montreal, Quebec, Toronto.
2. The area of 3,849,674 square miles makes Canada the second largest country in the world.
3. What is the Canada's capital?

II. Перепишите следующие предложения и переведите их, обращая внимание на особенности перевода на русский язык определений, выраженных именами существительными.

1. The scientists developed new synthetic rubber products.
2. This film won the Foreign Language Film nomination.
3. Canada consists of the entire North America continent.

III. Перепишите следующие предложения, содержащие разные формы сравнения, и переведите их на русский язык.

1. The more often you visit this town, the more you like it.
2. Automatic devices make labour safer and easier.
3. The most densely populated areas of Canada are in the south on the U.S. border.

IV. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходит в настоящее время.

1. More than three-fourths of Canada's population lives in urban centres.
2. After classis he will go the canteen.
3. This student took an active part of the conference.
4. Despite its small population Canada is a great industrial nation.
5. After lecture students asked some questions.

V. Перепишите из данных предложений и письменно переведите на русский язык те, действие которых происходило в прошлом.

1. Great Britain consists of many islands, big and small.
2. The population of this country will grow rapidly.
3. Many international commercial air flights track across Canada.
4. The meeting began 20 minutes ago.
5. The teacher divided us into two groups.

VI. Выпишите из упражнений IV и V предложения, действие которых произойдет в будущем, и переведите их.

VII. Прочтите и устно переведите на русский язык с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 3 и 4 абзацы текста.

Canada

1. Canada consists of the entire North America continent except Alaska. Its total area of 3,849,674 square miles makes it the second largest country in the world. In the south it borders on the USA. Canada is divided into ten provinces and three territories. Canada has a strategic global location between the United States and Europe. For this reason many international commercial air flights track across Canada.

2. Almost 90 per cent of Canada has subarctic and arctic climatic conditions. Summer temperatures in some areas are high, but winters are extremely cold. Winter in Canada usually lasts from seven to eleven months. There are many lakes in Canada. The biggest of them are the Great Lakes which are on the US-Canada border.

3. The total population of Canada is over 24 million people. The most densely populated areas are in the south on the US border. More than three-fourths of Canada's population lives in urban centres. People in Canada speak two official languages both English and French, but there are many words of Indian and Eskimo.

4. The capital of Canada is Ottawa. It is situated on the Ottawa River. Ottawa was founded in 1613. Other large cities are Montreal, Quebec, Toronto and Vancouver. Despite its small population Canada is a great industrial nation with a highly developed agriculture. Canada is a world leader in the production of nickel, asbestos and other minerals.

5. The principle form of transport in Canada is railway because it can supply all-weather transportation over great distances. But the well populated sections of country have many roads and highways.

*VIII. Прочтите 2 абзаца текста и письменно ответьте на вопрос к нему:
What is the name of the biggest lakes in Canada?*

КОНТРОЛЬНОЕ ЗАДАНИЕ № 2

1 вариант

I. Перепишите следующие предложения: подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе (б) обратите внимание на перевод пассивных конструкций.

- a) 1. Russian chemical science is successfully solving many complex problems.
2. Radio astronomy has given mankind efficient means for penetration into space.
- b) 1. Becquerel's discovery was followed by an intensive research work of Marie and Pierre Curie.
2. Heat energy is transmitted in two different ways.

II. Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык.

1. Nylon was the first synthetic fibre used in clothing.
2. The atoms forming our planet are built of negative electrons.
3. This kind of treatment when used makes the metals heat-resistant.
4. When passing through an electroscope, X-rays cause its discharge.

III. Перепишите следующие предложения; подчеркните в каждом из них модальный глагол или его эквивалент. Переведите предложения.

1. One object may be larger than another one, but it may weigh less.
2. Mass can also be defined as a measure of inertia.
3. Man-made satellites had to use solar cells as a source of power.
4. Plastics should be reinforced by different kinds of fibres.

IV. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 2 и 3 абзацы.

Herman Helmholtz (1821-1894)

1. Herman Helmholtz is celebrated for his contributions to physiology and theoretical physics. A delicate child, Helmholtz early displayed a passion for understanding things, but otherwise developed slowly, and had no marked early talent for mathematics. Although he wished to study physics, he was persuaded by his father to take up the study of medicine, entering the Medical Institute at Berlin in 1838.

2. His researches into physiological optics began about 1850 with the discovery of the ophthalmoscope (1851), followed by investigations into colour, including the problem of colour-blindness. He also made fundamental contribution to the understanding of the structure and mechanism of the human eye.

3. Helmholtz's first and most celebrated paper in theoretical physics was his article on the conservation of total energy of a system of particles which were interacting through central forces depending only on the masses and separations of the particles. Other important work in theoretical physics included the famous paper on vortex motion (1858), and the application of the principle of at least action to electro dynamical problems.

4. Helmholtz was undoubtedly the most versatile of nineteenth-century scientists. From 1871 onwards he was perhaps more famous as a theoretical physicist than as a physiologist. But it seems probable that apart from his work on the conservation of energy he will ultimately be remembered more for his epoch-making researches in physiological optics and acoustics in which his talents as physiologist, physicist, mathematician and experimentalist of genius were most vividly displayed.

V. Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:

For what researches will Helmholtz be remembered?

1. ... for his celebrated paper in theoretical physics.
2. ... for his epoch-making researches in physiological optics and acoustics.
3. ... for his paper on vortex motion.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 2

2 вариант

I. Перепишите следующие предложения: подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе (б) обратите внимание на перевод пассивных конструкций.

- a) 1. Today scientists are still looking for the substance as a source of energy.
2. The Mendeleev system has served for almost 100 years as a key to discovering new elements.
- b) 1. Synthetic rubber products were developed between 1914 and the 1930s.
2. The intensity of this process is influenced by many factors.

II. Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык.

1. Molecular crystals are solids constructed of molecules held together by relatively weak forces.
2. A body moving with a certain velocity carries within itself the kinetic energy of motion.

3. While absorbing the energy of cosmic rays the upper atmosphere becomes radioactive.
4. Only properly treated the metals must be applied for space technology.

III. Перепишите следующие предложения; подчеркните в каждом из них модальный глагол или его эквивалент. Переведите предложения.

1. Energy can exist in many forms and each form can be transformed into the other.
2. Computers should become an integral part of the organization of industrial processes of all types.
3. These metal parts had to be subjected to X-ray examination.
4. The chemists may use the reactor to analyze various substances for their exact composition.

IV. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 2 и 3 абзацы.

D.I. Mendeleev (1834-1907)

1. A Russian name appeared in 1964 on the honorary board (*доска почета*) of science at Bridgeport University, USA: Mendeleev was added to the list of the greatest geniuses – Euclid, Archimedes, Copernicus, Galileo, Newton and Lavoisier. D.I. Mendeleev, the explorer of nature, is the greatest chemist of the world. The Mendeleev system has served for almost 100 years as a key to discovering new elements and it has retained its key capacity until now.

2. D.I. Mendeleev was the fourteenth, and last child of the Director of the Gymnasium at Tobolsk. At 16 he was taken by his mother to St. Petersburg to seek higher education. He entered the Pedagogical Institute where his father had also studied. In 1856 he took a degree in chemistry and in 1859 he was sent abroad for two years for further training. He returned to St. Petersburg in 1861 as Professor of Chemistry.

3. In 1868 Mendeleev began to write a great textbook of chemistry, known in its English translation as the “Principles of Chemistry”. In compiling this (*собирая все материалы и факты*), he tried to find some system of classifying the elements – some sixty in all (*всего около шестидесяти*) then known – whose properties he was describing. This led him to formulate the Periodic Law, which earned him lasting international fame. He presented it verbally (*устно*) to the Russian Chemical Society in October 1868 and published it in February 1869.

4. In this paper he set out clearly his discovery that if the elements are arranged in order of their atomic weights, chemically related elements appear at regular intervals. The greatness of Mendeleev’s achievement lies in the fact that he had discovered a generalization that not only unified an enormous amount of existing information but pointed the way to further progress.

V. Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:

What can you say about the greatness of Mendeleev's discovery?

1. The greatness of Mendeleev's achievement lies in the fact that his Periodic Law pointed the way to further progress in chemistry.
2. Mendeleev had discovered several new elements.
3. Mendeleev created the system of classifying chemical elements.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 2

3 вариант

I. Перепишите следующие предложения: подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе (б) обратите внимание на перевод пассивных конструкций.

- a) 1. The reactor is fast becoming a major source of heat and electricity.
2. Scientists have found ways of measuring the sizes and positions of bodies in the Universe.
- b) 1. Elements are transformed into other elements both by man and by nature.
2. The first electric lamp was invented in 1873 by A.N. Lodygin.

II. Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык.

1. These reactions convert hydrogen into helium, giving off a great amount of light and heat.
2. The formula $E=mc^2$ deducted by Einstein is perhaps the most well known equation in the world.
3. Soils containing too much sand or clay are of less value in agriculture.
4. Plastics articles are often difficult to repair if broken.

III. Перепишите следующие предложения; подчеркните в каждом из них модальный глагол или его эквивалент. Переведите предложения.

1. Laser light can be used to transmit power of various types.
2. The application of computers should include all forms of automatic control in science and industry.
3. These new materials had to withstand much higher temperatures than metals.
4. Ethylene gas may be obtained by cracking petroleum.

IV. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 2 и 3 абзацы.

Lisa Meitner (Майтнер) (1878-1968)

1. In 1938, an Austrian physicist named Lisa Meitner announced the splitting of the atom in the laboratory. That announcement confirmed once again the beginning of the Atomic Age. At that time Lisa Meitner was one of the few persons in the world who had a thorough understanding of atomic energy and the uses which could be made of this great power.

2. Lisa Meitner, the daughter of a lawyer, was born in Vienna on the 17th of November 1878. She grew interested in science when she read of the Curies' discovery of radium. The example of Marie Curie showed that a woman was able to achieve something in science. Lisa Meitner became the first woman in the history of the University of Vienna who earned her doctorate (*докторская степень*) in physics.

3. In 1906 she went to the University of Berlin to continue her studies by attending the theoretical lectures of Max Planck and by doing experimental work. There she began her research in the new field of radioactivity. She focused her attention on the behaviour of beta radiation from radioactive elements, experimenting with the primitive methods then available (*доступные в то время*) for measuring and analysing radioactivity. Meitner's work in the 1920s and early 1930s emphasized the physical aspects of radioactivity.

4. During the II World War Meitner was concerned with the properties of new radioactive isotopes, produced by the cyclotron. Her career was illustrious (*прославленный*) and productive (*плодотворный*) (she published more than 135 scientific papers). In 1960 she moved to Cambridge, England, where she died in 1968.

V. Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:

Why can we say that Meitner's career was illustrious and productive?

1. ... because she was concerned with the study of thermic conductivity in non-homogeneous bodies.
2. ... because she was measuring and analyzing radioactivity.
3. ... because she published more than 135 scientific papers.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 2

4 вариант

I. Перепишите следующие предложения: подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе (б) обратите внимание на перевод пассивных конструкций.

- a) 1. Quantum mechanics has greatly influenced the nuclear theory.
2. The problem of the structure of matter is constantly occupying the minds of scientists.

- b) 1. Today many polymeric materials are produced on a massive scale.
2. Many compounds can be decomposed when they are acted upon by different forms of energy.

II. Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык.

1. Natural rubber is a thermoplastic material that becomes soft when heated and hard when cooled.
2. Matter composed of any chemical combination is called a compound.
3. The smallest particle having all the characteristics of an element is called an atom.
4. While bombarding the upper layers of the atmosphere, cosmic rays reach the surface of the earth.

III. Перепишите следующие предложения; подчеркните в каждом из них модальный глагол или его эквивалент. Переведите предложения.

1. Heat can be divided into three different types.
2. A great number of plastics should find their application in the electrical industry.
3. Chemical means had to be used for the separation of compounds into their elements.
4. You may use this device in your experiment.

IV. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 2 и 3 абзацы.

CH.V. Raman (Раман) (1888-1970)

1. Raman was an Indian physicist, pre-eminent (*выдающийся*) in molecular spectroscopy and acoustics. He created the Indian Academy of Sciences in 1934 and was its president until his death in 1970. He was justly considered as the father of Indian science and the Indian Government honoured him with the first of its National Professorships. In 1957 he became an International Lenin Prize Winner.

2. The son of a teacher and lecturer, Raman entered the College in Madras in 1903 and achieved the highest distinctions in the examinations for scientific degrees. As scientific research was at this time almost completely neglected in India, he then entered the Civil Service (*государственная служба*) and was appointed to a position (*назначать на должность*) in the Finance Department in 1907. He retained this employment for ten years, mostly in Calcutta. When he was eighteen years old he published his first original optical research in the "Philosophical Magazine". He continued scientific work in his spare time; some thirty papers testified to (*свидетельствовать о*) his ability and energy and helped to make his name familiar to scientists in Europe and America.

3. In 1917 Raman was offered the professorship of physics at the Calcutta University. He occupied the chair (*возглавлял кафедру*) from 1917 to 1933. Raman brought (*привлек*) to Calcutta many talented young Indians to undertake research into optical phenomena, acoustics and other branches of physics.

4. During the years in Calcutta Raman emerged (*проявил себя*) as a truly international figure. In 1930 he was awarded the Nobel Prize in Physics (for his work on the scattering of light and for the discovery of the effect named after him). Raman was honoured by universities and scientific institutions in Russia, Europe and America as well as in his own country.

V. Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:

Why was Raman honoured by many universities and scientific institutions of different countries?

1. ... because he was awarded the Nobel Prize.
2. ... because he brought to Calcutta many young talented Indians.
3. ... because of his work on the scattering of light for the discovery of an effect named after him.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 2

5 вариант

I. Перепишите следующие предложения: подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе (б) обратите внимание на перевод пассивных конструкций.

- a) 1. Astronomers have measured the exact length of the day.
2. Astronomers find that day is increasing by 0.002 seconds each century.
- b) 1. The chemical properties of an element are determined by the orbiting electrons.
2. As a rule one great discovery is generally followed by numerous others.

II. Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык.

1. The cloud chamber (*камера Вильсона*) is one of the devices used to detect the presence of radioactivity.
2. Matter consists of one or a number of basic elements occurring in nature.
3. One can use several modern devices while detecting and measuring radioactivity.
4. When heated to a certain temperature, this alloy increases in volume.

III. *Перепишите следующие предложения; подчеркните в каждом из них модальный глагол или его эквивалент. Переведите предложения.*

1. We can think of heat as a special form of kinetic energy.
2. A computer should solve complicated problems many millions of times faster than a mathematician.
3. New types of plastics had to be obtained for space technology.
4. To measure the vast distances between different planets scientists have to use special instruments.

IV. *Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 2 и 3 абзацы.*

G.F. Powell (Пауэлл) (1903-1969)

1. Powell was a prominent English scientist noted for his techniques and discoveries in particle physics (*физика элементарных частиц*). He was also deeply concerned with problems relating to the social responsibility of scientists. Powell was a leader in the World Federation of Scientific Workers in the mid-1950s and was a founder of the Pugwash Conferences (*Пагоушские конференции*) on Science and World Affairs in 1957. As a public man and in his published articles Powell stressed the perils of destructive weapons and the need for international cooperation.

2. Powell was born in December 1903 in England. His parents were poor and they were determined (*были полны решимости*) to give their children a good education to increase their opportunities for a better life. In 1921 Powell won a scholarship (*получил по конкурсу стипендию*) of one of the colleges at Cambridge which he graduated in 1925 with first-class honours in science. He started his scientific career at the Cavendish laboratory headed by Ernest Rutherford. After gaining his scientific degree at Cambridge in 1928 Powell accepted a position (*должность*) at the new Physics laboratory in the University of Bristol. Powell spent the rest of his career there advancing to professor in 1948 and director of the laboratory in 1964.

3. In 1947 Powell's Bristol group identified a new particle in the cosmic radiation. Powell and other two scientists discovered the π -meson and demonstrated that this sub-nuclear particle (*субъядерная частица*) was produced directly in nuclear reactions and rapidly decayed in flight, producing the μ -meson. The discovery solved a complicated scientific problem and helped open a new era of particle physics.

4. Powell continued to develop and apply the photographic method of Bristol. His laboratory became the source of new experimental discoveries in meson physics and an international training for physicists of many countries. In 1950 he was awarded the Nobel Prize for his development of the photographic method and his meson discoveries.

V. *Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:*

For what discovery was Powell awarded the Nobel Prize?

1. ... for the role he played in the establishment of the European Centre for Nuclear Research.
2. ... for his development of the photographic method and his meson discoveries.
3. ... for a new technique for detecting high-energy particles.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 3

1 вариант

I. Перепишите следующие предложения, определите в каждом из них видо-временную форму и залог глагола-сказуемого. Переведите предложения.

1. When much material had been looked through and some problems had been solved, the article was published.
2. Electric cars will be widely used in future.
3. Today plastics are being applied for car bodies.

II. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения слов it, that, one.

1. It is proved that light needs time to travel any distance.
2. One must take part in scientific work.
3. Specialists consider that in future city transport will reject gasoline.

III. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения глаголов to be, to have, to do.

1. You have to come to the dean after this lecture.
2. This material does not possess elastic properties.
3. Scientists had to create new materials for industry.
4. The exam was to start in the morning.

IV. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на бессоюзное подчинение.

1. We know electricity produces heat.
2. The new materials the Russian chemists developed were used in space technology.

V. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию инфинитива.

1. It is necessary for a Russian specialist to know a foreign language.
2. The Russian scientists were the first to construct and launch the space rocket.
3. Our idea was to design a new device for automatic control.
4. To operate this complex device you must have some skills.

VI. Прочтите и устно переведите с 1 по 4 абзацы текста. Перепишите и письменно переведите 1 и 3 абзацы.

Cars: Passion or Problem?

1. For many people cars are more than a convenient form of transportation: they are a source of passion and pleasure. But cars can also be a source of many problems. In 1903, Ford Motors became the first to mass-produce cars. This made the car available to large numbers of people. It has brought people much closer to places of work, study and entertainment. Many people also work in car-related industries: fixing cars, washing cars, advertising cars and selling car products such as stereos phones.

2. Many Americans buy a new car every six years. In fact, there are more cars than people in the United States. In New York City, 2.5 million cars move in and out of the city each day. In this traffic, the average speed is sometimes 8.1 miles per hour. This speed could easily be reached by riding a horse instead of driving a car.

3. Many people around the world are unhappy with car traffic and pollution but they cannot imagine their life without driving. Therefore we need cars which would not damage the environment so much. Still, there is an important question that must be answered: What kind of fuel will be used when gasoline is no longer available? To solve this problem, car companies in Korea, Japan, Europe and the US develop electric cars that will not require gasoline at all.

4. The electric car is not a new idea. Being pollution-free, quiet and easy to start, it had a success with women in the 1900s. But gasoline-powered cars were faster and soon became much more popular. In the 1970s, when there were serious problems with the availability of oil, car companies began to plan for a future without gasoline again. Another way is to develop a solar-powered car.

*VII. Прочтите 4 абзаца текста и ответьте письменно на вопрос к нему.
What cars will become more and more popular?*

КОНТРОЛЬНОЕ ЗАДАНИЕ № 3 2 вариант

I. Перепишите следующие предложения, определите в каждом из них видо-временную форму и залог глагола-сказуемого. Переведите предложения.

1. When much had been done in the study of ecology by our institute it became an important scientific centre.
2. Iron filings are most strongly attracted to the poles of the magnet.
3. The research of planets will be developed with the help of cosmic apparatus.

II. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения слов it, that, one.

1. It is necessary to find new sources of cheap energy.
2. It was Einstein who came to the conclusion that the electromagnetic field is influenced by the gravitational field.

3. This metro station was opened last year, and that one will be put into operation in two years.

III. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения глаголов to be, to have, to do.

1. Man had to learn to obtain electric power directly from the Sun.
2. Now most of the industrial enterprises have their own electric power stations.
3. Specialists do not use solar cells in industry as they are too expensive.
4. Old machinery is to be replaced next month.

VI. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на бессоюзное подчинение.

1. The methods we have just described are very effective.
2. The instruments our plant produces help to automate production processes.

V. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию инфинитива.

1. The teacher told her students to translate this text without a dictionary.
2. Faraday was first to produce the electric current from a magnetic field.
3. To translate a sentence is to discover its meaning.
4. To reduce the frictional force we must use a suitable lubricant.

VI. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 1 и 2 абзацы.

Sun-driven Engines

1. It is common knowledge that certain metals and their alloys are attracted by a magnet. After heating, this property vanishes: it is restored after cooling down. A new magneto-heat engine (магнитно-тепловой двигатель) works on this principle. This invention relates to devices which transform thermal power, for instance, the power of the sun rays, into a mechanical power of rotation.

2. We know solar power is inexhaustible (неисчерпаемый) and its use does not harm the environment. That's why such importance is attached to the devices which make it possible to apply the idea of direct use of solar power, transforming it into mechanical forms of power. The development of an engine directly driven by a heat source such as solar power, makes it possible to simplify and make power generation considerably cheaper, in comparison to the existing thermal engines we use today.

3. The rotor of the new engine is made of an alloy that loses its magnetic properties already at 100°C. If the rotor is heated on one side, the cold side of the rotor will turn toward the magnet. Since heating countries, the rotor goes on rotating, too. Thus solar power can be used as a source of heat in this case. The magneto-heat engine can drive pumps in waterless districts, can also be widely used for watering greenery in cities and settlements.

4. By using thermomagnetic alloys it is possible to develop a lot of automatic devices, for example, solar clocks, thermometers, etc. Mention should be made that these devices can withstand extreme temperatures. To organize the production of the necessary alloys is simple as there is no need for rare materials or complex technology.

VII. Прочтите 4 абзац текста и вопрос к нему. Из приведенных вариантов ответа укажите номер предложения, отвечающего на вопрос:

Why are thermomagnetic alloys used in the production of automatic devices?

1. ... they resist to acids. 2. ... they resist to heat. 3. ... they resist to pressure.

КОНТРОЛЬНОЕ ЗАДАНИЕ № 3

3 вариант

I. Перепишите следующие предложения, определите в каждом из них видо-временную форму и залог глагола-сказуемого. Переведите предложения.

1. The radar has been used for the automatic control of ground-transport.
2. Today plastics are being widely used instead of metals.
3. The construction of the dam has been completed this month.

II. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения слов it, that, one.

1. It is a number of electrons within the atom that determines the properties of a substance.
2. The territory of Moscow is larger than that of London.
3. In London one must get used to the left-side traffic

III. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения глаголов to be, to have, to do.

1. Some substances do not conduct heat.
2. Our plant is to increase the output of consumer goods.
3. Soon our industry will have new and cheap sources of energy.
4. These computers will have to perform millions of operations per second.

IV. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на бессоюзное подчинение.

1. The hostel our students live in is situated not far from the metro station.
2. I think he has made a mistake in his calculations.

V. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию инфинитива.

1. They promised to supply us with the necessary equipment.
2. The purpose of this book is to describe certain properties of metals.
3. The experiment to be carried out is of great importance for our research.

4. To convert chemical energy into electrical energy we must use an electrical cell.

VI. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 1 и 2 абзацы.

1. The bulk of our electricity is produced by conventional energy converters that are based on mechanical, indirect conversion of energy. The chemical energy of our fossil fuels is first converted into heat energy. The heat energy is then converted by turbines into mechanical energy which, in turn, produces electricity by generators. The efficiency of these systems is low – the level generation of mechanical energy results in a 70 percent loss of energy. As a consequence of this, for many years scientists and engineers have been seeking ways to convert energy directly into electricity without the use of an intermediate mechanical energy converter.

2. It is interesting to note that not one of the advanced methods of direct energy conversion is really new in theory. These concepts were developed a long time ago, along with the development of classical physics. But to make these ideas work required a technological sophistication that became available only in the past few decades.

3. The main groups of direct energy converters are the photoelectric, thermoelectric, thermoionic, magnetohydrodynamic, and electrochemical devices. Their names indicate the physical processes by which they work. The converters listed above are those by which we now can produce electric energy in quantities sufficient for practical use. Other physical effects producing electricity are piezoelectric, piroelectric, fission-electric, thermomagnetic, and chemomagnetic effects. These produce small amounts of current and are used mainly in scientific measuring devices rather than as energy producers.

VII. Из приведенных вариантов ответа укажите номер предложения, содержащий правильный ответ на вопрос по данному тексту.

What does the text mainly discuss?

- | | |
|---------------------------------|--|
| 1. Loss of energy | 2. Production of heat energy |
| 3. Methods of energy conversion | 4. Procedures for measuring energy expenditure |

КОНТРОЛЬНОЕ ЗАДАНИЕ № 3

4 вариант

I. Перепишите следующие предложения, определите в каждом из них видо-временную форму и залог глагола-сказуемого. Переведите предложения.

1. The automatic equipment is being installed in our shop.
2. The construction of this house will be completed in a month.
3. The engineer was asked about the new technology used at the plant.

II. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения слов it, that, one.

1. The successes in chemistry made it possible to obtain a lot of new materials.
2. One must apply the material that can be machined easily.
3. It is the energy of falling water that is used to drive turbines.

III. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения глаголов to be, to have, to do.

1. The operators dealing with radioisotopes must have protective suits.
2. The engineers are to study the problem of using solar energy.
3. The chemical industry is one of the leading branches of our economy.
4. Russian fabrics have acquired good reputation abroad.

IV. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на бессоюзное подчинение.

1. I think the drawing will be ready by tomorrow.
2. Every substance a man comes in contact with consists of molecules.

V. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию инфинитива.

1. To design new buildings is the work of an architect.
2. To measure volumes we must know the dimensions of a body.
3. Our plant was the first to install the automatic equipment.
4. Architects have built houses to be heated by solar radiation.

VI. Прочтите и устно переведите весь текст. Перепишите и письменно переведите 1 и 2 абзацы.

Robot Technology

1. Robots are machines of special type. They are considered to replace man wherever he is to do hard, monotonous or hazardous (*опасная*) work. Robots are sophisticated (*сложный*) machines. Many of them are fitted with artificial systems, special programming devices and electronic controllers. Their development required the work of specialists in several technical fields, together with specialists in biophysics and physiology.

2. The idea of robot technology was born in the forties, when the foundations of atomic power engineering (*энергетика*) – the basis of technological progress – were laid. The materials scientists must deal with are radioactive. Besides, the equipment used in obtaining and studying them is dangerous for man. At the same time work with radioactive substances, assembly and disassembly of atomic reactors, the servicing of machines and devices in radioactive zones require human effort. Remote-controlled equipment (*оборудование с дистанционным управлением*) helps to solve this problem.

3. Research into radioactive materials is becoming ever more complicated, new problems arising in atomic power engineering and space technology. This calls for (*требовать*) newer manipulators and devices to be handled by an operator. An analysis of these ideas and their solutions show two entirely different approaches.

4. Robot technology emerged at the junction of two sciences – machine mechanics and control theory. Its further progress requires a wide application of modern control machines and systems, handled by scientists specializing in the theory of working processes, biology and physics.

VII. Прочтите 4 абзац текста и письменно ответьте на вопрос:

What does further progress of robot technology require?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 3

5 вариант

I. Перепишите следующие предложения, определите в каждом из них видо-временную форму и залог глагола-сказуемого. Переведите предложения.

1. Many 16-storey houses with all modern conveniences are being built in this part of Moscow.
2. The sputniks are used for the research of magnetic fields and cosmic rays.
3. The properties of materials are affected by solar radiation.

*II. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения слов *it, that, one*.*

1. It is necessary to obtain accurate data on the possibility of living and working in space.
2. We know that the properties of steel are different from those of iron.
3. We had to find new methods of investigation because the old ones were unsatisfactory.

*III. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на разные значения глаголов *to be, to have, to do*.*

1. A programme for the construction of new types of spaceships is to be carried out this year.
2. Some students do not want to learn English.
3. We had to change the design of this machine.
4. The speed of electrons is almost the same as that of light.

IV. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на бессоюзное подчинение.

1. We know radio and radar system play a very important role at any airport.

2. The information science gets about other galaxies come through radiotelescopes.

V. Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию инфинитива.

1. The Russian science was the first to make great contribution to the development of space technology.
2. In order to make interplanetary flights in the future it is necessary to know factors affecting the human organism.

VI. Прочтите и устно переведите весь текст. Перепишите и письменно переведите 1, 3 и 5 абзацы.

Computers

1. Computers (*from "to compute" – считать*) are electronic machines. They communicate with the user, perform different kinds of arithmetic operations, such as addition, subtraction, division and multiplication and solve a series of logical problems. Modern computers operate quickly and accurately.

2. Every computer consists of software (*программное обеспечение*) and hardware (*техническое обеспечение*). Information in the form of programmes and data is called software, but the pieces of equipment that make up the system are known as hardware.

3. The first general-purpose electronic digital computer came out in the USA in 1946. It was called ENIAC (Electronic Numerical Integrator And Computer). ENIAC contained about 18,000 vacuum tubes, weighed more than 30 tons, occupied more than 1,500 square feet of floor space, and consumed 150 kilowatts of electricity during 5,000 additions and 1,000 multiplications per second and was very slow.

4. In the late 1950s the second generation of computers appeared and these perform work ten times faster than the first computers. The reason for this extra speed was the use of transistors instead of vacuum tubes. The third-generation computers appeared in 1965. They performed a million calculations per second, which was 1000 times as many as first-generation computers.

5. By the late 1960s many large businesses depended on computers. During this time computer technology improved rapidly. In the 1970s there appeared a microprocessor. And in 1975 American engineers devised the first personal computer, Altair. Millions of individuals, families and schools began to use PCs.

*VII. Прочтите 2 абзац текста и письменно ответьте на вопрос
What does software mean?*

КОНТРОЛЬНОЕ ЗАДАНИЕ № 4

1 вариант

I. Перепишите и письменно переведите следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям.

1. The German engineer Rudolf Diesel is known to be the inventor of the diesel engine.
2. For a long time, special paper impregnated with paraffin was considered to be the main non-conductor used for manufacturing small capacitors (*конденсатор*).
3. The metal to be poured into a mold for casting may contract or expand on solidifying.

II. Найдите и подчеркните в предложении герундий, предложения перепишите и переведите на русский язык.

1. A capacitor is used for storing electricity.
2. Marconi was only twenty-one years old when he succeeded in transmitting signals by radio waves.
3. You can get an electric shock by touching a faulty apparatus.

III. Перепишите и письменно переведите следующие предложения. Обратите внимание на перевод условных предложений.

1. If the computer's electronic memory had recorded all the operator's commands, the picture of deviation from the required parameters would have been produced.
2. If biological experiments are continued, the problem of developing the technology for growing plants in space conditions will be solved.
3. It would be impossible to protect metal from corrosion without the films.

IV. Прочтите и устно переведите с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 2, 3 и 4 абзацы.

Corrosion

1. During a year almost 200 million tons of metal objects are considered to be destroyed by corrosion. Considering that about 600 million tons of metal a year are produced in the world, it is easy to understand the losses of objects without which our life could not be imagined.

2. The situation is very serious, because not only metal is destroyed but also a great amount of articles, instruments, and tools whose cost exceeds many times (во много раз) the cost of the metal used for their manufacture.

3. Combating against (*борьба против*) the corrosion of metals has now become a key problem in all industrialized countries. The scientific and technical achievements in the field of raising the corrosion resistance of construction

materials are the basis of technical progress in different branches of industry, an indicator of the country's economic potential.

4. A large amount of "anti-corrosion" work is being carried out in Russia. The results are evident: Russian-made inhibitors (*ингибиторы*), изготовленные в России), varnishes, paint covers are being well known throughout the world. Gas pipelines, metal structures, the bodies of atomic reactors and ships, etc. have been reliably protected against corrosion.

5. Russia also exports special equipment and some kinds of technology designed to weaken corrosion. Anti-corrosion varnishes, paints, insulating materials and equipment are purchased abroad.

V. Прочтите 5 абзац текста и ответьте письменно на вопрос
What materials weakening corrosion does Russia sell?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 4

2 вариант

I. Перепишите и письменно переведите следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям.

1. This motor car is considered to be safe.
2. Samples of semiconductors with improved properties are reported to be obtained on a new installation.
3. Scientific discoveries to be practically applied in industry and agriculture are paid special attention to.

II. Найдите и подчеркните в предложении герундий, предложения перепишите и переведите на русский язык.

1. Connecting an ammeter to a circuit one can measure electrical current.
2. Earthing of electrical devices is brought about by connecting the metal body directly to the earth with a thick conductor.
3. Being a light metal aluminium is widely used in electric engineering industry.

III. Перепишите и письменно переведите следующие предложения. Обратите внимание на перевод условных предложений.

1. If liquids expand upon freezing, an increase of pressure lowers the freezing point.
2. If the metal had been heated slowly, the first changes in its appearance would have occurred at a temperature of 1000 K.
3. It would be impossible to determine the properties of these materials without intensive studies in our research laboratory.

IV. Прочтите и устно переведите с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 2, 3 и 4 абзацы.

Creative Fire

1. All the industries today are in need of new methods of joining metals together. And not only metals with metals but also joining metals with glass, plastics and many other materials. The work done by the Paton Institute of Electric Welding (*институт электросварки им.Патона в Киеве*) is considered to be the solution of these problems. For example, how to weld a 1,000 km-long pipeline? The Institute has developed a machine for welding pipelines. The welding section in each pipe exceeds 100,000 sq. mm. It would take 6-8 hours to perform this work by hand. The machine does it in two minutes.

2. The machine was tested in production conditions, the results being excellent.

3. It would seem strange to compare the steel constructions that produce oil in the Caspian Sea with a space station orbiting the Earth. What do they have in common? But they do (*а они все-таки имеют*) – it is the need for making repairs, and repairs mean cutting metal and doing welding work.

4. The rapid development of the oil and other mineral resources of the ocean made the problem of underwater welding especially up-to-date. The equipment developed by Kiev's scientists is very effective. New semi-automatic machines for underwater welding increased divers productivity by 25-30 times.

5. And what about welding in outer space? The scientists understood that welding had to be done in conditions of weightlessness, in nearly complete vacuum and within a broad range of temperatures – from 150°C below to 130°C above zero. The equipment, of course, must be reliable and safe. And the Institute developed such equipment.

V. Прочтите 5 абзац текста и ответьте письменно на вопрос
What are the conditions of welding in space?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 4

3 вариант

I. Перепишите и письменно переведите следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям.

1. The Sun and stars are proved to be able to produce great quantities of energy by means of certain nuclear reactions.
2. For the experiment we need several electrical devices to be connected in series.
3. Lasers are known to have found application in medicine.

II. Найдите и подчеркните в предложении герундий, предложения перепишите и переведите на русский язык.

1. Oxygen can form oxides by combining with metals.
2. The idea of utilizing the energy of oceans and seas for man's needs is not new.
3. One of the effects of heat is turning a solid into liquid.

III. Перепишите и письменно переведите следующие предложения. Обратите внимание на перевод условных предложений.

1. If the gathered data had been presented in time, the results of the experiments would have been different.
2. If you had answered six questions in the competition, you would have won the first prize.
3. It would be impossible to carry on a careful study of the process without the new device.

IV. Прочтите и устно переведите с 1 по 5 абзацы текста. Перепишите и письменно переведите 2, 3 и 4 абзацы.

Environmental Problems

1. People have designed and produced up-to-date machines and technologies to make their life easier and more comfortable. But all these activities result in air and water pollution.

2. One of the most important problems is the oceans. A lot of ships crossing the oceans and seas, especially those that carry oil, put their wastes into water, and the water becomes dirty. As a result many birds and fish die because of polluted water, others are getting contaminated and people may get sick from eating them.

3. The second problem is air pollution. Cars and plants pollute the atmosphere with their wastes. They destroy the ozone layer which protects us from the dangerous light of the Sun. They also destroy forests which are dying from acid rains.

The word *smog* comes from *smoke* and *fog*. Smog is a sort of fog with other substances mixed in it, which can be harmful, even deadly. Such diseases as eczema and asthma are linked to air pollution.

4. Materials like paper and glass can be reused, but, unfortunately, many materials, especially plastics cannot be reused and cannot be absorbed by the earth again. Some plastics cannot even be destroyed. As a result of this people face the problem of preservation of our environment.

5. Now people begin to realize the danger of their activities. People are concerned about the air and the water used by everyone, they are also concerned about the future of the planet because they understand that these activities affect the balance of nature.

*V. Прочтите 1 абзац текста и ответьте письменно на вопрос
What do people's activities result in?*

КОНТРОЛЬНОЕ ЗАДАНИЕ № 4

4 вариант

I. Перепишите и письменно переведите следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям.

1. Lomonosov is considered to be a great Russian scientist.
2. We know the wave theory of light to be first proposed by the English physicist Robert Hooke in 1665.
3. Nearly all refrigerators to be used at home are based upon the principle that the rapid evaporation of a liquid or the expansion of a gas produce cooling.

II. Найдите и подчеркните в предложении герундий, предложения перепишите и переведите на русский язык.

1. Measuring distances to the planets and stars has a lot of difficulties.
2. There are different ways of obtaining oxygen.
3. Heating this substance up to 85°C was absolutely necessary.

III. Перепишите и письменно переведите следующие предложения. Обратите внимание на перевод условных предложений.

1. If the pressure of gas remains constant its volume will be proportional to its absolute temperature.
2. If the service life of an instrument had been prolonged, the economic effect would have been increased many times.
3. It would be impossible to ensure the full supply of energy without atomic power stations.

IV. Прочтите и устно переведите с 1 по 5 абзацы текста. Перепишите и письменно переведите 1, 2, 3 и 4 абзацы.

Electronics – Science of the Future

1. In our country much attention is given to electronics, which is playing a major part in economic development. Russian scientists and engineers have many achievements to their credit (*на своем счету*) in this field. One outstanding example is space.

2. Electronics, however, has not only helped us to reach cosmic expanses but has given us an insight into the world of the most minute organisms – viruses. For instance, a modern electronic microscope shows the processes taking place in ultra-microscopic formations of a living cell. Now it is possible to distinguish details being a millionth of a millimetre away from each other.

3. Electronics is in many ways helping us to solve the problem of the peaceful uses of atomic energy, and to study atomic nuclei and elementary particles. We know electronics to have found broad application in industry as a means (*средство*) of automation, control and inspection, and as a direct means of fulfilling such operations as melting, cutting of superhard materials, welding, etc.

4. The electron beam acting like a micro-miniature instrument can cut, bore, mill or plane any material, including tungsten and diamond, with an accuracy to within microns. Quantum generators can focus light in extremely narrow beams, their angular width being in the order of (*порядка, около*) a thousandth of a degree. These instruments are called lasers and they can be used for cutting, drilling, welding and other treatment of materials.

5. The lasers are also used in studying the properties of various substances, in radioengineering, medicine, biology, etc. Scientists believe that such a beam of light will make it possible to establish contact with the stellar system closest to our planet.

V. Прочтите 5 абзац текста и ответьте письменно на вопрос
What branches of engineering and science can lasers be used in?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 4 **5 вариант**

I. Перепишите и письменно переведите следующие предложения. Помните, что объектный и субъектный инфинитивные обороты соответствуют придаточным предложениям.

1. The year 1895 is considered to be the date of the invention of the radio.
2. Conduction is known to be a process by which heat is transmitted through a substance by molecular activity.
3. All the changes of temperature and changes of state to be discussed are shown by a graph in Fig. 2.

II. Найдите и подчеркните в предложении герундий, предложения перепишите и переведите на русский язык.

1. It is common knowledge that automation results in raising productivity.
2. We all know of his designing a new type of solar-powered car.
3. There are several ways of producing electricity.

III. Перепишите и письменно переведите следующие предложения. Обратите внимание на перевод условных предложений.

1. If you had translated the article, you could have used valuable data in your work.
2. If the quality of the equipment were higher, the results of the experiment would be more accurate.
3. It would be impossible to explain chemical phenomena without using the laws of physics.

IV. Прочтите и устно переведите с 1 по 3 абзацы текста. Перепишите и письменно переведите 1 и 3 абзацы.

The Internet

1. The Internet is a global computer network that embraces millions of users all over the world. It dates back to 1969 when it began as a military experiment. Information that people send over the Internet takes the shortest path from one computer to another. Because of this, any two computers on the Internet are connected with each other as long as there is a single route between them. This technology is called packet switching network (*сеть коммутации пакетов*). Owing to (*благодаря*) this technology, if some computers on the network fail, the information just routes around them.

2. One of the most popular Internet services is e-mail (*electronic mail – электронная почта*). Most of the people, who have access to the Internet, use the network only for sending and receiving e-mail messages. However, other popular services are available on the Internet: reading USENET News, using the World-Wide Web and Intranet.

3. However, some problems remain. The most important is security. When you send an e-mail message to somebody, this message travels through many different networks and computers. Special computers that are called routers (*маршрутизаторы*) direct the data towards its destination. That is why it becomes possible to get into any of computers along the route and even change the data that we send over the Internet. This happens because the Internet transmits nearly all the information, which we send without any form of encoding.

V. Прочтите 2 абзац текста и ответьте письменно на вопрос
What other popular services are available on the Internet?

Львова Елена Владимировна

АНГЛИЙСКИЙ ЯЗЫК

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для студентов заочной формы обучения
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