**КОНТРОЛЬНАЯ РАБОТА**

**По дисциплине «Иностранный язык»**

**Направления 18.03.01 «Химические технологии»**

**1 семестр (полный курс)**

Для того, чтобы правильно выполнить контрольную работу, необходимо усвоить следующие разделы курса английского языка:

1. Инфинитив, функции инфинитива, перевод инфинитива на русский язык.

2. Определение и перевод оборотов с инфинитивом:

* Субъектный инфинитивный, оборот (сложное подлежащее);
* Объектный инфинитивный оборот (сложное дополнение);
* For + существительное (местоимение) + инфинитив.

1. Перевод условных предложений. Перевод предложений, содержащих союзы "if", "unless", "provided".
2. Использование русско-английского словаря.

**Вариант № 1**

**Задание 1.** Прочтите, перепишите предложения, переведите на русский язык.

1. The building to be constructed will be very high.

2. I am glad to have designed a new device.

3. The article to be translated is published in our journal.

4. The purpose of these experiments was to observe the properties of the element involved.

**Задание 2.** Прочтите, перепишите и переведите предложения, обращая внимание на обороты с инфинитивом.

1. They found the gas to be oxygen.

2. He is believed to have carried out a number of tests.

3. It is difficult for him to believe that this method is good.

4. The science of chemistry is known to deal with substances.

5. I know your colleagues to work hard.

**Задание 3.** Прочитайте, перепишите и переведите предложения, содержащие союзы "if", "provided" на русский язык.

1. The volume of gas will be proportional to its absolute temperature provided its pressure remains constant.
2. If you this book, you would like it.

**Задание 4.** Прочтите и переведите письменно на русский язык текст.

**The Biosphere: to be or not to be**

The scientific foundation for the optimum man- nature interaction is the integrated theory of the biosphere worked out in the first half of the XX century by Academician Vladimir Vernadsky, a Russian scientist and thinker of genius.

Academician Vernadsky interpreted the biosphere as the global envelope produсed on the Earth with the development of life. The proportion of living matter, in terms, of weight, is insignificant compared to the mass of the Earth. Taken separately, a living or­ganism produces a seemingly negligible portion of the all circu­lation of matter on the planet. Taken together, however, the living organism during the three thousand million years of the biosphere's history have formed a planetary phenomenon of a truly cosmic scope.

With the present-day scientific and technical progress, man's influence is to change the biosphere. The biosphere proves to pass into a new state (a man-controlled sphere), where man's wisdom is be­coming the main factor which changes the world. In many instances, however, man's activity is known to violate natural processes and so unbalance the set pattern of the biosphere. These violations are manifold. The circulation of substances and the flow of energy ere accelerated and increased. Man creates new compounds, new substances, pure chemical elements which are unknown to the biosphere. For instance, man is known to produce great volumes of fertilizers, biocides, pure iron and pure aluminium which never existed in the world before.

These substances do not belong to the natural circulation of patter. Many of them were found to disrupt the established mecha­nisms of the biosphere, to have no part in it and to act as ballast. World science is faced, with, the all – important task of brin­ging them into the general circulation of natural processes, of finding effective means of protecting the biosphere from pollutants.

**Задание5.** Переведите вопросы на русский язык и ответьте на них, используя текст.

* + 1. What is believed to be the main factor that changes the aspect of the world?
    2. What natural processes are being violated by man's activity?
    3. In what way synthetic compounds affect the established mechanisms of the biosphere?

**Задание 6.** Переведите предложения на английский язык, используя текст.

1. Теория биосферы была разработана советским академиком Вернадским.

2. Количество живой материи незначительно по сравнению с массой Земли.

3. Известно, что в некоторых случаях деятельность человека нарушает естественные процессы.

**Вариант № 2**

**Задание 1.** Прочтите, перепишите предложения, переведите на русский язык.

1. To repeat the words is very useful.
2. To understand this phenomenon well one must know the structure of the material.
3. The scientist wanted to find new products of this substance.
4. The apparatus to be used in our work was constructed in our laboratory.
5. In order to liquity a gas at a temperature below its critical temperature, it is practically necessary only to compress the gas.

**Задание 2.** Прочтите, перепишите и переведите предложения, обращая внимание на обороты с инфинитивом.

1. After a number of experiments they dissolved the substance.
2. He is known to work in the field of nuclear physics.
3. For the student to solve this problem was very easy.
4. The new method appeared to be very complex.
5. It is necessary for the reaction to be accelerated.

**Задание 3.** Прочитайте, перепишите и переведите предложения содержащие союзы "if " "unless" на русский язык. If air is cooled sufficiently, it can be converted into a liquid.

1. Gases are characterized by extreme lightness unless they are highly compressed.

**Задание 4.** Прочтите и переведите письменно на русский язык следующий текст.

**The greenhouse effect**

Much is written about the tendency of the earth's temperature to rise and the "greenhouse effect" that would begin to alter the earth's climate by the end of the 1990s.

In faсt, the science of the phenomenon is more interesting than frightening. "The greenhouse effect results when CO2 and certain other gases in the atmosphere allow the sun's ultraviolet rays to penetrate and warm the earth but then absorb the infrared energy the earth radiates back into space – much as glass in a greenhouse effect does – forming a kind of "thermal blanket" around the planet. Burning huge amounts of fossil fields, which release CO2 into the atmosphere, man has raised the CO2 level from 280 to 340 parts per million since 1860. And continued use of coal and other fossil fuels is expected to double the concentration of the CO2 by the year 2050, elevating, the earth's temperature by 3 to 9 degrees Fahrenheit. The greenhouse effect will mean much more than hotter summers and milder winters. It may alter rainfall, affect crop yields and eventually, as glaciers begin to melt raise the level of the sea.

The temperature change is reported to be greater in the polar regions than near the equator. In general, it is said that snowfall will begin later, the growing season will lengthen and higher latitudes will get less rain.

If we can't prevent the greenhouse effect, we can prepare for it. Suggestions include breeding plants that need lees water, improving irrigation systems and many others.

However, not all experts are convinced that the heat is coming. Some think that the use of primary energy sources such as coal could decline 60 per cent by 2050 and, perhaps, if the rate of fossil – fuel use is going down, the amount of CO2 is getting less every year.

**Задание 5.** Переведите вопросы на русский язык и ответьте на них.

1. What is the "greenhouse effect"?
2. What happens in polar regions?
3. What is the role of fossil-fuels in the "greenhouse effect"?

**Задание 6.** Переведите предложения на английский язык, используя текст.  
1. Давайте изучим явление, которое называется "парниковым эффектом".

2. Мы должны быть готовы к тому, что температура Земли может измениться

3. Говорят, что "парниковый эффект" может изменить климат Земли.

**Вариант № 3**

**Задание 1.** Прочтите, перепишите предложения, переведите их на русский язык.

1. It is important to solve this problem.
2. Here is the student to examine this material.
3. He came to the Institute to speak to the teaсher of French.
4. E. Rutherford was the first to change nitrogen to oxygen by bombarding nitrogen atoms with alpha particles.
5. Some of the metals are not active enough to react with water at ordinary temperature.

**Задание 2.** Прочтите, перепишите и переведите предложения, обращая внимание на обороты с инфинитивом.

1. The scientists proved this substance to be an element.
2. This problem is expected to have been solved.
3. It is possible for me to do this work in time.
4. Every crystal has been found to consist of atoms arranged in a definite pattern.
5. During the experiment we saw the temperature to fall rapidly.

**Задание 3.** Прочитайте, перепишите и переведите предложения, содержащие союзы "if", "provided".

1. If the liquid air were allowed to evaporate, different com­ponents would predominate.

2. Such materials are satisfactory, provided they do not form corrosive chlorides.

**Задание 4.** Прочтите и переведите письменно на русский язык следующий текст.

**Pressing Problems**

Atmospheric pollution raises problems of several types. First, there are local problems due to the production of smoke and offensive gases by factories. Secondly, there are regional problems created by industrial agglomerations which may spread the same harmful effects over whole areas. Thirdly, there are some types of pollution such as those arising from nuclear explosives, which cover a con­siderable portion of the globe . And lastly, there appeared one more type of pollution which is threatening the globe as a whole.

Recent scientific research suggests that the protective layer of ozone around our planet seems to be under severe attack. In 1982 researchers first identified a hole over the Antarctic where the ozone layer is the thinnest. This was the first sign of a hole. Five years later the hole was reported, to grow to an area the size of the United States.

The major cause of this weaking of the ozone layer is believed to be the increasing amount of harmful chemicals that are being released into the atmosphere by humankind.

The fundamental importance of the ozone layer is that it acts as a filter intercept most of the sun's radiation including potentially harmful Ultra Violet B-rays which can cause cancer.

Strong evidence now suggests that it is the growing industrial use of chlorine compounds called chlorofluorocarbons (CFCs) which is responsible for the hole.

Researchers believe that the level of CFCs in the atmosphere is actually increasing by 5 per cent each year. Since 1969 the ozone level has fallen by 3 per cent over the densely populated cities of the US, Canada and Europe and by 4 per cent over Australia and New Zeland.

In its "worst scenario" it is supposed that an over - thinning ozone layer could eventually allow a more harmful form of radiation known as ultra violet С to hit the earth Laboratory experiments have shown that Ultra Violet С can penetrate cells in the body and irreparably damage the nucleic acids and proteins which are the building blocks of life.

**Задание 5.** Переведите вопросы на русский язык и ответьте на них, используя текст.

1. How many types of problems arise in the atmospheric pollution control?

1. What was found in 1982 in Antarctic?
2. What is Ultra Violet C?

**Задание 6.** Переведите предложения на английский язык, используя текст.

1. Озоновый слой может действовать как фильтр.
2. Ученые полагают, что озоновый слой становится тоньше.
3. Сообщается, что ученые изучают озоновый слой над плотнонаселенными городами.

**Вариант № 4**

**Задание 1**. Прочтите, перепишите предложения, переведите на русский язык.

1. The main problem is to examine this substance.
2. He is sorry to nave been late.
3. He was the first to examine this material.
4. To establish the molecular weight of oxygen means to find the number of atoms in the oxygen molecule.
5. Where is the mixture to be heated?

**Задание 2.** Прочтите, перепишите и переведите предложения, обращая внимание на обороты с инфинитивом.

1. This scientist thinks laser light, to be different from ordinary light.
2. This question is supposed to be solved soon.
3. It is useful for you to read this book.

4. This element has been discovered to be very useful.

5. Water proved to be a compound.

**Задание 3**. Прочитайте, перепишите, переведите предложения, содержащие союзы: "if", "unless".

1. Unless this material is treated properly it will not be a good insulator.
2. If water had been added to the mixture, more alcohol and' acid would have been formed.

**Задание 4.** Прочтите и переведите письменно на русский язык следующий текст.

**Pollution**

Pollution is known to be of great concern to both science, industry and to humanity as a whole.

There has always been pollution, even when man was not present. When man appeared on earth, he added much to the pollution. As the population of Earth increased, pollution increased too, it was increased in three ways; through the numbers of persons, through the industrial activity, and through man's use of devices such as automobiles that cause pollution. One of the most important tasks to be solved is air pollution. The study of pollution is assumed to be devided into three main parts: pollution of air, of water and of the land mass. It is very important for man to study this problem.

Every smoking chimney appears to be a source of air pollution. The use of natural gas or oil that have a negligible mineral content is believed to be of great help in reducing pollution.

The chief atmospheric gaseous pollutants originating from the earth's surface appeared to be oxides of sulphur, oxides of nitro­gen, incompletely burned hydrocarbons and carbon monoxide.

These gases are known to react with energy from sunlight to produce photochemical smog which can also cause extensive damage to vegetation.

It has been found that some chemical processes, such as the manufacture of lime, cement s[teel](file:///C:\Local%20Settings\Application%20Data\Local%20Settings\Application%20Data\Opera\Opera\temporary_downloads\atfte.li) tend to give off much dirt.

Lead, bromide and [chloride](file:///C:\Local%20Settings\Application%20Data\Local%20Settings\Application%20Data\Opera\Opera\temporary_downloads\chlpri.de) emitted from the exhausts of cars which burn lead-containing gasoline produce a lead-chloride-bromi­de aerosol which is considered to be a common air contaminant in urban areas.

There are many problems tobe solved concerning the pollution of air.

**Задание 5.** Переведите вопросы на русский язык и ответьте на них, используя текст.

1. What can cause pollution now?
2. What chemical processes are connected with pollution?
3. What are the chief atmospheric gaseous pollutants?

**Задание 6.** Переведите предложения на английский язык, используя текст.

1. Промышленная деятельность человека увеличивает загрязнение природы.
2. Необходимо изучить все источники загрязнения.
3. Известно, что смог может нанести серьезный ущерб растительности.

**Вариант 5**

**Задание 1.** Прочтите, перепишите предложения, переведите на русский язык.

1. He has to solve this problem.

2. He tried to finish his work in time»

3. The material to be used was examined»

4. The aim of these research workers is to find out the required element.

5. As a result of many experiments involving combining weights, chemists have been able to determine the relative weights of different elements.

**Задание 2.** Прочтите, перепишите и переведите предложения, обращая внимание на обороты с инфинитивом.

1. We supposed this substance to have liberated heat when the temperature had been greatly raised.
2. He is known to be preparing for his exams.
3. The "only conclusion for him to make was the 'following»
4. This article appeared to be very interesting.
5. They are likely to come here.

**Задание 3.** Прочитайте, перепишите и переведите предложения, содержащие cоюзы "provided", "if".

* 1. If the relative humidity were low, evaporation would occur rapidly.
  2. Great increase in labour productivity would be made, provided mechanization of manufacturing process were used.

**Задание 4.** Прочтите и переведите письменно на русский язык следующий текст.

**Water and Earth pollution**

In addition to air and water, the solid part of the earth is also in danger from pollution solid wastes that include such things as: metal cans, glass bottles, plastic containers, ashes from the combustion of coal and wood, and radioactive isotopes. The problems created by pollution are very difficult to be solved, but great pro­gress is being made in their solution.

The main task to be solved immediately is to protect the land, its mineral and water resources, plants and animals. The atmosphere over cities should be the object of constant care and attention on the part of the government.

Hundreds of new devices to trap and neutralize the harmful substances contained in discharged gases have been constructed. Extensive measures should be taken to set up reservations and to carry through biotechnological measures for the protection and reproduction of species of animals, birds and valuable fish.

The problems of water pollution are to be solved immediately - some cities simply run their raw sewage directly into nearby natural waters. This is one of the worst types of water pollution.

Another type of pollution of sea and ocean water is petroleum oil. It should be also noted that unfortunately there is as yet no satisfactory method of overcoming the effects of oil spills, although many methods have been tried and are under investigation.

Much money is being spent on water and earth protection, but money alone is not enough to protect the environment. The attitude of people is vital. There will never be complete success unless human beings are taught to use nature with care.

**Задание 5.** Переведите вопросы на русский язык и ответите на них, используя текст.

1. What should be the object of constant care?
2. What is the worst type of water pollution?

3. What is the role of petroleum oil in the sea and ocean pollution?

**Задание 6.** Переведите предложения на английский язык, исполь­зуя текст.

* 1. Необходимо использовать биотехнологические средства защиты природы от загрязнения.
  2. Металлические отходы представляют опасность для природы.

Считают, что проблемы загрязнения природы очень трудно решить

**Требования к выполнению контрольной работы**

Контрольная работа выполняется письменно в рабочих тетрадях. Титульный лист и регистрация обязательны.