**КОНТРОЛЬНАЯ РАБОТА**

**По дисциплине «Иностранный язык»**

**Направление 15.03.02 «Технологические машины и оборудование»**

**8 семестр**

**(полный курс)**

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

1. Причастие настоящего: времени: функции и перевод (Participle I).
2. Причастие прошедшего времени: функции и перевод (Participle II).
3. When, if + причастие прошедшего времени (when, if + Participle II).
4. Зависимый и независимый причастный оборот (The Absolute Participle Construction), определение и перевод.
5. Использование англо-русского технического словаря.

**Вариант 1**

**I. Перепишите следующие предложения и переведите, обращая внимание на разные значения слов** ***it, that, one***.

1. As for the energetic crisis, we consider that it is a part of the whole global crisis.

2.One can believe that the future is only for the solar energy.

3.It is evident that destroying nature we destroy the surroundings of mankind.

**II*.*Перепишите предложения и переведите, обращая внимание на разные значения *to be, to have, to do***.

1. You have to be quite strong to set up your own business.

2.The treatment and keeping of radioactive wastes do the economic damage to biosphere.

3.We are to create special conditions to obtain this material.

4.The periods of changing for the majority of technologies do not exceed 5 to 7 years.

**III**. **Перепишите предложения и переведите, обращая внимание на бессоюзное подчинение.**

1. We know solar cells help to supply power to remote mountain, taiga and arctic areas.

2. The new technique the Russian scientists developed converts sunlight to electric power.

**IV**. **Перепишите предложения и переведите их, обращая внимание на функцию инфинитива.**

1.То solve the problems of environment protection we must create ecological banks with the state and local authorities and businessmen's support.

2.Experiments help him to discover the properties of new chemical elements.

3.Our idea was to have the state programme on forest complex problems.

4.The Russian scientists were the first to obtain clean energy from silicon.

**V. Прочитайте и письменно переведите текст**

**Components of Tractors**

Nowadays tractors are widely used in agriculture and in industry. In agriculture tractors are used in such jobs as plowing, planting, cultivating, fertilizing, harvesting, transport works, etc.

In different branches of industry tractors are used as road transport tractors hauling heavy loads. They are also used for different building purposes.

Tractors may be agricultural tractors, road transport tractors and special tractors.

Agricultural tractors are subdivided into: the general tractors designed for hauling agricultural machinery; cultivators designed for specific agricultural jobs; tractors for operation on soft boggy ground.

Road transport tractors are equipped with a load carrying platform.

Special tractors are usually equipped with auxiliary devices. Tractors may belong either to wheeled-typetractors or totrack-layingtype tractors.

The construction of a tractor includes the following main units:

1.Power unit which includes the engine with all auxiliary devices – a radiator, a fan, a starter device, a fuel tank, a pump, etc.

2.Transmission which consists of a clutch, a speed control unit, universal joints, gearing mechanisms, shafts, steering mechanisms, a final drive, axles.

3.Driver which includes driving, supporting and controlling mechanisms.

4.A steering unit.

5.The tractor frame.

6.Working and auxiliary equipment.

Tractor engines have internal combustion engines as the source of power. Tractor engines requirements differ considerably from the requirements of the automotive engines. Automotive engines are generally unsuitable for tractors.

**VI. Письменно ответить на вопросы.**

1.Tractors are widely used in agriculture and in industry, aren’t they?

2.What jobs are tractors used in agriculture for?

3.How may all tractors be classified?

4.What groups are agricultural tractors subdivided into?

5.What are road transport tractors equipped with?

6.What are special tractors usually equipped with?

7.What type may tractors belong to?

**Вариант 2**

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

1. It is the growth of industrialisation that is changing the climate of the planet.

2.The simpliest materials are those which have only one kind of atoms.

3.That elecricity is clean and easily regulated is its great advantage.

**II. Перепишите предложения и переведите их, обращая внимание на разные значения глаголов *to be, to have, to do***.

1. We have many various electric devices in our houses.

2.This student is at a language school, where she is studying for her certificate in English.

3.Do they often use these devices in their work?

**III**. **Перепишите предложения и переведите их, обращая внимание на бессоюзное подчинение**.

1. Participants of the conference stayed at the hotel we recommended them.

2.This morning I met my colleague somebody I hadn't seen for ages.

3.He thinks we were to check the prices of these goods.

**IV. Прочитайте и письменно переведите текст**

**Principal Mechanism of Crawler-MountedTractors**

The various types of tractors in use today have an almost identical transmission system. They consist of four main groups of mechanisms mounted on the main frame. They are:

1.The power unit, including the engine and all its accessories.

2.The power train, comprising the engine clutch, the propeller shaft, the transmission, the center drive, steering clutches with brakes and the final drive. The power train transmits torque from the engine to tractor tracks.

3.The crawler running gear, including the chain, drive sprockets, the idler, truck wheels and support rollers and a suspension. The suspension connects the tractor frame to the running gear.

4.Controls, consisting of the steering clutch, brakes, and mechanisms controlling fuel feed.

In addition, the tractor carries the hood, the cab and fuel tanks.

Tractors are usually steered by friction clutches mounted on the live axle after the center drive. These clutches, known as steering clutches, consist of a number of friction disks.

The weight of the tractor is transmitted to the ground through support rollers which run on the track. They are connected with the tractor frame by a suspension. The suspension damps shocks when the tractor moves on uneven ground.

Disconnecting one of the steering clutches, partly or completely, reduces the speed of rotation of the corresponding sprocket and its track. And the tractor will turn towards the side of the sprocket lagging behind.

Small-radiusturns cannot be made by slowing down one sprocket using the steering clutches. Therefore, the tractor controls include a special device for stopping the free track by means of special brakes, which act upon the driven parts of the steering clutches.

A tractor going down a slope is braked and stopped by using the same brakes applied to both tracks simultaneously.

**V. Письменно ответить на вопросы.**

1.What is the main feature of the various types of tractors in use today?

2.What do crawler-mountedtractors consist of?

3.What mechanisms does the power unit include?

4.What mechanisms does the power train comprise?

5.What is the function of the power train?

6.What mechanisms does the crawler running gear include?

7.What do controls consist of?

**Вариант 3**

**I. Перепишите предложения и переведите их, обращая внимание на разные значения слов *it, that, one***.

1. It has become evident that ecological problems can be solved only on the global scale.

2.One must realize that increasing number of cars brings about considerable pollution of the air.

3.That the earth is round was unknown for a long time.

**II. Перепишите предложения и переведите их, обращая внимание на разные значения глаголов *to be, to have, to do****.*

1. With some airlines, female flight attendants have to be young, very attractive and single.

2.You are to wear a seat belt if you sit in the front seat of a car.

3.He took another week's holiday because he didn't have to go back to work.

**III. Перепишите предложения и переведите их, обращая внимание на бессоюзное подчинение.**

1. The food people eat is associated with certain colors.

2.We know Robert Burns is the most famous Scottish poet.

3.The knowledge you acquire is very useful.

**IV*.*Перепишите предложения и переведите их, обращая внимание на функцию инфинитива.**

1. There remains one more test to be carried out before using this device.

2.Don’t forget to air the laboratory after the experiment.

3.To automate these operations we are to produce more systems working topre-programmedplan.

4.It is interesting to teach and to be taught.

**V. Прочитайте и письменно переведите текст**

**Components of the Automobile**

The automobile consists of three basic parts: the power plant, the chassis and the body. The power plant or engine is the source of power that makes the car wheels rotate and the car move. It includes the electric, fuel, cooling and lubricating systems.

The chassis consists of a power train and a frame with axles, wheels and springs. The chassis includes the brake system and the steering system as well.

The power train carries the power from the engine to the car wheels. It consists of the clutch, the gear box, the propeller shaft, the rear axle, and the final drive, etc.

The body has a hood, fenders and accessories: a heater, lights, a radio, a windshield wiper, a convertible top raiser and so on. The body is designed to contain and protect not only the engine and other car components, but it provides protection to the occupants from wind, dust, cold, and rain as well.

To guide the car it is necessary to have some means of turning the front wheels, so the car can be pointed in the direction required. The steering wheel in front of the driver is connected by the gears and levels to the front wheels for this purpose. The front wheels are on the pivots so they can be swung to the left or right.

The brakes are necessary to slow or stop the car. They are the most important mechanisms on the car. Upon their proper work the safety and lives of people riding in the car depend. Most braking systems are hydraulic. But many vehicles now use power brakes.

The frame is the structural center of some vehicles. It provides support for engine, body, wheels and power train members. It is usually made of U-shapedsections. TheseU-shapedsections are carefully shaped and then welded or riveted together. Cross members reinforce the frame and also provide support for the engine and wheels. The frame is extremely rigid and strong. It can withstand the shock blows, vibrations and other strains to which it is put on the road.

The engine is attached to the frame in three or four points. Noise and some vibrations are inherent in engine operation. To prevent this noise the engine is insulated from the frame by some form of a rubber pad at each point of support.

**VI. Письменно ответить на вопросы.**

1.What does the automobile consist of?

2.What does the power plant include?

3.What does the chassis consist of?

4.The power train carries the power from the engine to the car wheels, doesn’t it?

5.What is the body designed for?

6.What is it necessary to guide the car?

7.Are the brakes the most important mechanisms on the car?

**Вариант 4**

**I. Перепишите предложения и переведите их, обращая внимание на разные значения слов *it, that, one***.

1. It is well-knownthat technological progress is impossible without electronics, computers, robots and new materials.

2.That ecological problems have become the most important ones at present is evident to all.

3.It is difficult for mankind to predict changes in the environment accurately.

**II**. **Перепишите предложения и переведите их, обращая внимание на разные значения глаголов** ***to be, to have, to do****.*

1. Mankind has never experienced changes in life and work on such a scale.

2.Electricity has many important applications in industry as well as in our houses.

3.Within a few coming years a quantity production of various materials is to begin in space.

**III**. **Перепишите предложения и переведите их, обращая внимание на бессоюзное подчинение.**

1. The experimental computing machine the scientist demonstrated had been developed for five years.

2. A new method of cooling the laboratory tests can generate cryogenic temperatures of 200°C below zero.

**IV. Перепишите предложения и переведите их, обращая внимание на функцию инфинитива.**

1. The radar detects the stationary objects ahead of the car to warn the driver about them and slow down the speed.

2.Copernics was the first to explain properly our solar system.

3.To work with computer was not new to many of us.

4.It was pleasant to be helping him again.

**V. Прочитайте и письменно переведите текст**

**Air Conditioning**

The term air conditioning has been widely and loosely used, it includes any ventilation system with fan and heater. True air conditioning involves means for warming and humidifying air in winter and for cooling and dehumidifying in summer. Air conditioning is finding an ever widening application in industry. Accurate control of atmospheric conditions is very important for industrial processes. Air conditioning systems vary in complexity and cost. Complex systems are finding their application in air conditioning of a multi-storeyoffice block, factory, cinema or theatre.

For many years air has been introduced into buildings after heating, dehumidifying and in some cases, cooling it. And we have called that process ventilation. In recent years much greater stress has been laid on the treatment of air and we call the process air conditioning. Air conditioning systems are divided into three types - winter, summer and complete. Winter air conditioning includes cleaning, heating, humidifying and circulating of air. It is finding its application in offices, auditoriums, schools and residences. Summer air conditioning includes cleaning, cooling, dehumidifying and circulating of air. The people are using summer air conditioning in stores.

Complete air conditioning involves winter and summer functions. It is used in theatres, large department stores. Each type of air conditioning depends upon the climatic conditions.

Developments of the last twenty years have changed our conception of air conditioning. Air conditioning is required for offices, department stores, hospitals, hotels and dwelling houses. But the techniques of air conditioning have not kept pace with the increasing demand. The cost of an air conditioning system influences the cost of the building, as it needs the additional height and floor areas to mount this air conditioning system.

Some efforts have been made to reduce the space occupied by air conditioning systems. But they have not been definitive, except some methods that have been used for many years. Air conditioning is rapidly being adopted in passenger ships and automobiles. Car heaters have been employed for some time. But recently new equipment has been designed to maintain car interiors at a comfortable temperature in summer and winter.

**VI. Письменно ответить на вопросы.**

1.What term includes any ventilation system with fan and heater?

2.Air conditioning systems vary in complexity and cost, don’t they?

3.What has much greater stress been laid on in recent years?

4.Where is air conditioning finding application?

5.What does the cost of an air conditioning system influence?

6.Where is air conditioning being adopted?

7.What has new equipment been designed for?

**Вариант 5**

**I. Перепишите предложения и переведите их, обращая внимание на разные значения слов *it, that, one***.

1. The aim of today’s foreign policy is that peace in the world should be permanent.

2. Last summer I read many English articles, and my friend read some German ones.

3.It is important to understand the fundamentals of this science.

**II. Перепишите предложения и переведите их, обращая внимание на разные значения глаголов *to be, to have, to do***.

1.Car drivers have to obey traffic rules.

2.We didn’t have a microwave earlier but we do now.

3.“Aborigines” are the first or original inhabitants of a country.

**III**. **Перепишите предложения и переведите их, обращая внимание на бессоюзное подчинение.**

1.The scientist I know went to India on business last year.

2.It is the most exciting holiday she has ever had.

3.The problem they wanted to discuss was very difficult.

**IV*.*Перепишите предложения и переведите их, обращая внимание на функцию инфинитива.**

1.Another passenger on board helped to save passengers.

2.One of the best ways to keep the car speed steady is to use a computer.

3. To understand why light from the laser is so concentrated you must know that light travels in waves.

4.The optical disks were and are used to record video-films,but in a continuous spiral rather than digitally.

**V. Прочитайте и письменно переведите текст**

**Systems of Heating**

The number of different heating systems is almost unlimited. Various systems of heating are being used at the present day. They are: direct, indirect, water heating systems, steam heating systems and so on.

A direct system is that in which the fuel is consumed in the room. It is being used for intermittent heating, or for heating isolated rooms. An indirect system is that in which the fuel is consumed outside the room. In this system the heat is being conveyed to the room by a medium such as steam or hot water. Indirect system is being used for the continuous heating of a number of rooms or large buildings. It begins from one central source and that’s why it is named Central Heating.

Steam heating systems are classified according to the following features: piping arrangement, pressure or vacuum conditions, obtained in operation and method of returning condensate to the boiler. A steam heating system is known as a one-pipingandtwo-pipesystem. Inone-pipingsystem a single main supplies steam to the heating unit and conveys condensate from it. Intwo-pipesystem each heating unit is being provided with two piping connections. Steam and condensate flow in separate branches. Steam heating systems are classified as high pressure, low pressure (vapour) and vacuum systems. This classification depends on the pressure conditions under which the system is designed to operate. The system is known as a gravity return system. Condensate is returned to the boiler by gravity. All heating units are being elevated above the water line of the boiler.

**VI. Письменно ответить на вопросы.**

1.What systems of heating are used at the present day?

2.What heating is the direct system used for?

3.What heating is the indirect system used for?

4.How are steam heating systems classified?

5.What do you know about one-pipingsystem?

6.What do you know about two-pipesystem?

7.What can you say about gravity return system?