

МИНИСТЕРСТВО ОБРАЗОВАНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ
«БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ТРАНСПОРТА»

Кафедра иностранных языков

И. Н. КОМИССАРУК, В. И. КОМИССАРУК

АНГЛИЙСКИЙ ЯЗЫК

Пособие по выполнению контрольных заданий № 4, 5 для студентов
факультета безотрывного обучения специальности
«Подвижной состав (Локомотивы)»

Гомель 2004

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Под редакцией *Н. А. Гришанковой*

Одобрено методической комиссией ФБО

Гомель 2004

УДК 802.0(075.8)
К 632

Рецензенты: ст. преп. кафедры теории и практики английского языка **Г. Н. Игнатюк** (ГГУ им. Ф. Скорины); ст. преп. кафедры иностранных языков **А. И. Макарова** (БелГУТ).

Комиссарук И. Н., Комиссарук В. И.

К 632 Английский язык: Пособие по выполнению контрольных заданий № 4, 5 для студентов факультета безотрывного обучения специальности «Подвижной состав (Локомотивы)» / Под ред. *Н. А. Гришанковой*. – Гомель: БелГУТ, 2004. – 28 с.

Каждая контрольная работа включает пять вариантов и является продолжением контрольных заданий № 1, 2, 3 для студентов I курса ФБО всех специальностей.

Цель данного пособия – обучить студентов ФБО чтению и переводу литературы на английском языке по специальности, усвоению особенностей грамматического строя английского языка, необходимого для перевода и понимания текстов, обогатить специальными терминами словарный запас студента.

Предназначено для студентов ФБО, изучающих специальность Т.04.04.00 "Подвижной состав (Локомотивы)".

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КОНТРОЛЬНОЕ ЗАДАНИЕ № 4

Чтобы правильно выполнить задание № 4, необходимо повторить грамматический и лексический материал предыдущих заданий, прочесть и перевести тексты методических указаний, рекомендуемых кафедрой, закрепить слова и выражения, усвоить следующие грамматические темы:

1 Сложные формы инфинитива (Passive Infinitive). Обороты, равнозначные придаточным предложениям: объектный инфинитивный оборот, субъектный инфинитивный оборот.

2 Причастия (Participle I, II). Независимый (самостоятельный) причастный оборот.

3 Условные предложения.

4 Функции инфинитива (повторение).

Образец выполнения 1 (к упражнению I)

To read English is a great pleasure.	Читать по-английски – большое удовольствие.
--------------------------------------	---

(в функции подлежащего)

His task was to read and to translate the text	Его задачей было прочесть и перевести текст.
--	--

(в функции именной части составного сказуемого)

He likes to read English	Ему нравится читать по-английски
--------------------------	----------------------------------

(в функции дополнения)

To know a foreign language well you must learn many words.	Чтобы хорошо знать иностранный язык, нужно выучить много слов.
--	--

(в функции обстоятельства цели)

Образец выполнения 2 (к упражнению II)

The device to be tested has been brought to our laboratory.	Прибор, который нужно испытать, принесли в нашу лабораторию.
---	--

(инфинитив в функции определения)

We want the device to be tested in our laboratory.	Мы хотим, чтобы этот прибор испытывался в нашей лаборатории
--	---

(объектный инфинитивный оборот)

The device is said to have been tested at a Research Institute	Говорят, что прибор испытывали в научно-исследовательском институте
--	---

(субъектный инфинитивный оборот)

It is important for the researchers to fulfill their work in time	Важно, чтобы ученые выполнили работу вовремя.
---	---

(инфинитивный оборот с предлогом for)

Образец выполнения 3 (к упражнению IV)

Translating the article he consulted the dictionary	Переводя статью, он пользовался словарем
---	--

(в функции обстоятельства)

The stars shining in the dark sky seemed blue	Звезды, сиявшие в темном небе, казались голубыми
---	--

(в функции определения)

They used the improved methods of work	Они использовали улучшенные методы работы.
--	--

(в функции определения)

When asked this question, the student could not answer it at once	Когда студенту задали этот вопрос, он не смог ответить на него сразу
---	--

(в функции обстоятельства)

The letter was sent last week	Письмо было отправлено на прошлой неделе
-------------------------------	--

(часть глагола-сказуемого)

Образец выполнения 4 (к упражнению VI)

If the weather is good, we shall go skiing	Если погода будет хорошая, мы поедem кататься на лыжах. (условное предложение 1-го типа)
If the plane landed, they would let us know about it	Если бы самолет приземлился, они бы нам сообщили об этом. (условное предложение 2-го типа)
If I had seen him yesterday, I should have told him about the meeting.	Если бы я встретил его вчера, я бы сказал ему о собрании (условное предложение 3-го типа)

В а р и а н т 1

I Перепишите предложения, определите в них функцию инфинитива и переведите предложения на русский язык (см. образец выполнения 1).

- 1 The task of the engineer is to control heavy trains by radio signals.
- 2 A new comfortable coach was developed to transport people over long distances.
- 3 I am very pleased to meet you.
- 4 To develop national economy is a very complicated task.

II Перепишите и письменно переведите на русский язык предложения. Помните, что инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения 2).

- 1 It is important for the scientists to carry out this experiment.
- 2 The engineer expected the work to be done in time.
- 3 The new plant to be constructed here will be the largest in the country.
- 4 The members of the committee are reported to come to an agreement.
- 5 He wanted us to visit the art exhibition.

III Выпишите из текста 2 предложения с объектным инфинитивным оборотом и 2 предложения с субъектным инфини-

тивным оборотом. Переведите их на русский язык.

IV Перепишите предложения, подчеркните Participle I и Participle II и установите функции каждого из них, т. е. укажите, являются ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык (см. образец выполнения 3).

- 1 The results received were of great importance for further work.
- 2 When constructed the railway was carefully tested.
- 3 While translating the article the student consulted the dictionary.
- 4 This instrument is preferred to all others because of its great reliability.
- 5 The people living in the XVIII century traveled in carriages.

V Перепишите и письменно переведите на русский язык предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов.

- 1 The experiment having been made, everybody was interested in the results.
- 2 The project having been completed, the engineer submitted it to the commission.
- 3 Discussing the design of the device they changed some parts in it.
- 4 Having finished the test he put down the results.
- 5 Not having found the necessary book at home he went to the library.

VI Перепишите предложения. Определите тип условных предложений. Переведите предложения на русский язык (см. образец выполнения 4).

- 1 If I come home early, I shall be able to write my report today.
- 2 If he were at the Institute now, he would help us to translate the article.
- 3 If you had come to the Institute meeting yesterday, you would have met with a well-known English writer.
- 4 You will get good results, if you apply this method of calculation.
- 5 If he had taken a taxi, he would have come in time.

VII Прочтите и устно переведите 1 – 4-й абзацы текста. Перепишите и письменно переведите 1, 2 и 4-й абзацы текста.

KINDS OF LOCOMOTIVES

1 We know diesel locomotives to be actually traveling power plants. They have a diesel engine that works by compressing air in chambers called cylinders.

When air is compressed, its temperature rises. The resulting heat ignites fuel that has been injected into the cylinder. The power produced during this process is then transmitted to the locomotive's driving wheels.

2 Diesel locomotives have a number of advantages. They generate their own power and therefore can operate anywhere that there are rails. Diesel locomotives can also make long runs without refueling or servicing. They can be quickly stopped or started, and they speed up faster than steam engines. They also have a higher fuel efficiency than steam locomotives, require less servicing, and cost less to maintain.

3 A diesel locomotive can be a combination of one to four or more connecting units. These units are known to be of two general types called A and B. An A unit is designed and equipped for use by itself or as a lead unit when a number of units are combined. A B unit does not have the engineer's cab and controls needed to serve as a lead unit, and it is capable of only limited independent movement. A diesel locomotive may consist of a single A unit or of two, three, four, or more A and B units coupled together.

4 Railroads often use locomotives with six or even more units to pull heavy trains at high speeds or on mountain grades. Sometimes one or more radio remote control units are also used on extremely long trains. These units are known to be placed near the middle of the train. The engineer controls them by the radio signals from his cab. We know the cab to be located in the lead unit at the front of the train.

VIII Ответьте письменно на вопросы к тексту:

- 1 What locomotives have a high fuel efficiency?
- 2 How does the engineer control extremely long trains?
- 3 Where is the cab of the engineer located?

В а р и а н т 2

I Перепишите предложения, определите в них функцию инфинитива и переведите предложения на русский язык (см. образец выполнения 1).

- 1 To produce modern locomotives is a very important task.
- 2 To get good results one must work hard.

3 I'm always ready to help.

4 Our aim is to develop national economy.

II Перепишите и переведите на русский язык предложения. Помните, что инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения 2).

1 The English delegation is believed to come at the end of the month.

2 We expect you to show good results.

3 It is important for you to make a report at the conference.

4 The engine to be installed in this locomotive is very powerful.

5 The lecture is said to be very interesting.

III Выпишите из текста 2 предложения с объектным инфинитивным оборотом и 2 предложения с субъектным инфинитивным оборотом. Переведите их на русский язык.

IV Перепишите 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 (см. образец выполнения 3).

1 The new engine was designed by our engineers.

2 Applying this method we get better results.

3 When properly adjusted any installation works well.

4 The explanation given was not complete.

5 The people living in the XX century traveled in automobiles.

V Перепишите и письменно переведите на русский язык предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов.

1 Railways use many types of locomotives, the most powerful of them operating on main lines.

2 Nobody being on the highway, he was driving his car very fast.

3 Having been given all the instructions, they started their tests.

4 Having improved this device, they could use it for many purposes.

5 Not having done the work in time, I had to apologize to them.

VI Перепишите предложения определите тип условных предложений. Переведите предложения на русский язык (см. образец выполнения 4).

- 1 If you press the button, the device will start working.
- 2 If the speed of the body were 16 km per second, it would leave the solar system.
- 3 If he had not been so late now, I should have gone to the country.
- 4 The design would be ready by the end of the year, if they supply us with all the necessary equipment.
- 5 If the air were only composed of nitrogen, burning would be impossible.

VII Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 1, 2, 4-й абзацы текста.

THREE TYPES OF DIESEL LOCOMOTIVES

1 There are three types of diesel locomotives: 1) diesel-electric, 2) diesel-hydraulic, and 3) diesel-mechanical. Each transmits power from the engine to the driving wheels in a different way. Diesel electric locomotives are by far the most common type. We know almost all locomotives on the railroads to be diesel-electrics. In these locomotives, the engine drives a machine called a generator, which produces an electric current. The current is then fed to traction motors, which drive gears that turn the locomotive's driving wheels.

2 Most diesel-electrics are known to have generators that produce direct current (DC), a kind of current that flows in only one direction. Generators on some newer, larger diesels produce alternating current (AC). Which reverses direction many times every second. Most diesels have traction motors that operate on direct current. Therefore, locomotives with an AC generator must rectify (convert) the alternating current into direct current before it goes to the motors. Devices called silicon rectifiers perform these conversion.

3 Diesel-hydraulic locomotives. In this type of locomotives, the engine drives a torque converter instead of a generator. A torque converter is known to be a device that uses fluids under hydraulic pressure to transmit and regulate power received from the engine. The converter includes a pump and a turbine. The turbine changes energy from the fluids into a force that can be used to perform a work.

4 Diesel-mechanical locomotives transmit the power from the engine in much the same way that automobiles do - through a clutch and a system of gears and shafts. We know the clutch to connect the engine to the

transmission. The gears and shafts fit together to transmit the power and drive the wheels. This mechanical drive delivers less power than do other systems, and so it works well only on small locomotives

VIII Ответьте письменно на вопросы к тексту:

- 1 What are the types of diesel locomotives?
- 2 What do most diesels have?
- 3 What does the converter include?

В а р и а н т 3

I Перепишите предложения, определите в них функцию инфинитива и переведите предложения на русский язык (см. образец выполнения 1).

- 1 A very important task is to produce modern locomotives.
- 2 We were glad to take part in that expedition.
- 3 We stopped to have a rest.
- 4 To drive a car in a big city is very difficult.

II Перепишите и письменно переведите на русский язык предложения, помните, что инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения 2).

- 1 We thought him to have taken part in their experiment.
- 2 It is necessary for you to achieve better results.
- 3 The speed to be attained by modern trains is often limited by the conditions of the track.
- 4 The delegation is reported to arrive tomorrow
- 5 These two scientists happen to work at the same problem.

III Выпишите из текста 2 предложения с объектным инфинитивным оборотом и 2 предложения с субъектным инфинитивным оборотом. Переведите их на русский язык.

IV Перепишите 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 (см. образец выполнения 3).

- 1 The constructed railway was 150 miles long.

- 2 When asked this question, the student could not answer it at once.
- 3 The scientists carrying out research in nuclear physics deal with the most difficult problems.
- 4 Developing his new theory he was making many experiments.
- 5 All the work will be done by automatic machinery.

V Перепишите и письменно переведите на русский язык предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов.

- 1 The locomotive tested, some improvements had to be made in its design.
- 2 All the problems having been solved, they stopped the discussion.
- 3 Having obtained the necessary results, they stopped their experimental work.
- 4 The designer changed some details while testing the device.
- 5 Having arrived two days before the opening of the conference they had enough time to go sightseeing.

VI Перепишите предложения и определите тип условных предложений. Переведите предложения на русский язык (см. образец выполнения 4).

- 1 If it were necessary to increase the speed of this particular engine, it could be achieved by using a special device.
- 2 If the road had been better, we should have been here in time.
- 3 If the books on that subject were available in our library, I should be able to make a good report.
- 4 If he had all the necessary materials, he would accomplish his model in time.
- 5 If they had met with such difficulties before, they would have known what to do now.

VII Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 1-3-й абзацы текста.

STEAM AND ELECTRIC LOCOMOTIVES

1 Steam locomotives produce heat by burning coal or fuel oil in a firebox. The heat turns the water in the locomotive's boiler into steam which is fed into cylinders. There, the pressure produced by the steam drives steel rods called pistons. We know the pistons to be connected to piston rods, main rods, and side rods, which move the driving wheels.

A steam locomotive has an attached car called a tender that carries the fuel and water.

2 Steam locomotives have several disadvantages. For example, a steam locomotive needs frequent care, especially to keep the fire burning in the boiler. A long time is known to be required to light the fire and to heat the boiler so that steam can be produced. In addition, steam locomotives can not maintain the high average speeds of diesel and electric locomotives. They also have low fuel efficiency.

3 Electric locomotives, unlike diesels, do not produce their own power. They use electric power supplied by a central power plant that may be miles away. Therefore, an electric locomotive needs wires or rails from which it can get power. We know diesels to be limited to the power they can produce from the fuel they carry. Electric locomotives can be started instantly. They also are quiet and produce no smoke or exhaust gases. Thus, they are sometimes used in heavily populated areas and on railroads that run underground and through long tunnels.

4 Like diesels, most electric locomotives can operate either singly or combined in groups of two or more units. However, electric locomotives can produce more power per unit than diesels can. Therefore, electric locomotives are known to be especially useful for fast, heavy freight trains or high speed passenger trains.

Many kinds of fuel can be used by a power plant to produce the electricity that runs an electric locomotive. Diesel locomotives can run only on diesel oil, which someday may become scarce and costly.

VIII Ответьте письменно на вопросы к тексту:

- 1 How do steam locomotives produce heat?
- 2 What does a steam locomotive have?
- 3 Where are electric locomotives used?

В а р и а н т 4

I Перепишите предложения, определите в них функцию инфинитива и переведите предложения на русский язык (см. образец выполнения 1).

- 1 To produce modern locomotives one must work hard.
- 2 We were delighted to hear of your success
- 3 His aim is to read English books in the original.
- 4 To pull heavy trains at high speeds is very difficult.

II Перепишите и письменно переведите на русский язык предложения. Помните, что инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения 2).

- 1 This plant is considered to be the best in the town.
- 2 It is necessary for the engineers to test this new equipment.
- 3 The major problem to be solved in passenger service is the construction of the locomotives to run at speeds up to 500 kph.
- 4 He made us do the work again.
- 5 We didn't expect the discussion to be so interesting.

III Выпишите из текста 2 предложения с объектным инфинитивным оборотом и 2 предложения с субъектным инфинитивным оборотом. Переведите их на русский язык.

IV Перепишите 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 (см. образец выполнения 3).

- 1 The laboratory is equipped with automatic machinery.
- 2 If properly conducted the experiment must bring the desired results.
- 3 The railways must satisfy the growing needs of national economy.
- 4 The constructed railway carried heavy traffic.
- 5 When studying elements Mendeleev found that they could be divided into nine groups.

V Перепишите и письменно переведите на русский язык предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов.

- 1 Electronics having been introduced, the efficiency of railway operation considerably increased.
- 2 The working day being over, the city transport was overcrowded.
- 3 Having discussed some changes of the design the engineers began testing the device.
- 4 Having finished their research work they published an article.
- 5 Having come to the hotel she made herself comfortable in the room.

VI Перепишите предложения и определите тип условных предложений. Переведите предложения на русский язык (см. образец выполнения 4).

- 1 If the engineer had been informed of the results before, he would have allowed you to repeat the test.
- 2 If the mechanic were there, he would repair the equipment.
- 3 If we had used new methods, we should have saved much time.
- 4 The plan would not have been fulfilled in time if the people had not worked with such energy.
- 5 If the oil supply had stopped even for a moment, serious damage might have resulted.

VII Прочтите и устно переведите 1–5-й абзацы текста. Перепишите и письменно переведите 1-4-й абзацы текста.

DIESEL ENGINE

1 History. The diesel engine is named for Rudolf Diesel, the German engineer who invented it. Diesel patented his design for the engine in 1893. The engine exploded and almost killed him, but it proved that fuel could be ignited without a spark. He operated his first successful engine in 1897.

2 We know diesel engine to be a type of internal-combustion engine used chiefly for heavy-duty work. Diesel engines drive huge freight trucks, large busses, tractors and heavy road building equipment. Diesel engines are known to be used to power submarines and ships, as the generators of electric-power stations in small cities, and emergency electric-power generators. Some automobiles are powered by diesel engines.

3 Kinds of diesel engines. There are two main types of diesel engines. They differ according to the number of strokes required to complete a cycle of air compression, power, exhaust, and intake of fresh air. A stroke is known to be an up or down movement of a piston. These engines are 1) the four-stroke cycle engine and 2) the two-stroke cycle engine.

4 In a four-stroke cycle engine, each piston moves down, up, down, and up to complete a cycle. The first down stroke draws air into the cylinder. The first upstroke compresses the air. The second down stroke is the power stroke. The second upstroke exhausts the gases produced by combustion. A four-stroke engine requires exhaust and air-intake valves.

5 In a two-stroke cycle engine, the intake and exhaust processes occur near the end of the piston down stroke, or power stroke. The two-stroke

cycle engine does not need valves. As the piston rises during the up-stroke, it compresses the air and closes the intake and exhaust ports. We know the fuel to be injected near the end of this compression stroke. As the two-stroke cycle engine has twice as many power strokes as the four-stroke cycle engine, it provides more power.

VIII Ответьте письменно на вопросы к тексту:

- 1 Who invented the diesel engine?
- 2 What do diesel engines drive?
- 3 What are two main types of diesel engines?

В а р и а н т 5

I Перепишите предложения, определите в них функцию инфинитива и переведите их на русский язык (см. образец выполнения 1).

- 1 To pull heavy trains at high speed one must use modern locomotives.
- 2 To read English magazines in the original is not easy.
- 3 I like to speak English.
- 4 Our plan is to start at once.

II Перепишите и письменно переведите на русский язык предложения. Помните, что инфинитивные обороты соответствуют придаточным предложениям (см. образец выполнения 2).

- 1 The first steam locomotive to haul a load along a railway came in 1804.
- 2 It is necessary for the scientists to fulfill their research work in time.
- 3 The results of the test are expected to be very interesting.
- 4 They wanted the plan to be improved.
- 5 She seems to know English and French.

III Выпишите из текста 2 предложения с объектным инфинитивным оборотом и 2 предложения с субъектным инфинитивным оборотом. Переведите их на русский язык.

IV Перепишите 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 (см. образец выполнения 3).

- 1 When conducting the experiment, he used up-to-date equipment.
- 2 When repaired the automobile moved at high speed.
- 3 The speeds developed by electric locomotives are enormous.
- 4 The law defining the properties of inertia was formulated by Newton.
- 5 The experiments will be completed by the end of the week

V Перепишите и письменно переведите на русский язык предложения. Обратите внимание на перевод зависимого и независимого (самостоятельного) причастных оборотов:

- 1 The goods having been loaded, the workers left the railway station.
- 2 Hard manual labour having been replaced by machines, the construction work takes less time and money.
- 3 Having been tasted for a long time the device was recommended for application.
- 4 Having waited for him for half an hour they went home.
- 5 Having read Petrov's report attentively the teacher came across a few mistakes in it.

VI Перепишите предложения и определите тип условных предложений. Переведите предложения на русский язык (см. образец выполнения 4).

- 1 If they change some details, they will be able to improve the design.
- 2 If I had seen him yesterday, I should have told him about the meeting.
- 3 If you had planned your time better, you wouldn't have come to the station one minute before.
- 4 If we had repaired the engine yesterday, we should have left the town before sunrise.
- 5 If you go there by plane, you will come in time for the conference.

VII Прочтите и устно переведите с 1–5-й абзацы текста. Перепишите и письменно переведите 1–4-й абзацы текста.

ENGINES

1 There are two main types of internal combustion engines – gasoline engines and diesel engines. The gasoline engine, found in most cars, is a spark-ignition engine. It uses electricity and spark plugs to ignite the fuel and air mixture in the engine's cylinders. The diesel engine is a compression-ignition

engine. It compresses the air in the cylinders, causing the temperature of the engine to rise. Fuel injected into the hot, compressed air immediately ignites.

2 Diesel engines have a high thermal efficiency, or ability to convert the stored chemical energy in the fuel into mechanical energy. Diesel engines are known to be suited for heavy-duty work because they are larger and heavier than gasoline engines or equal power and therefore can better withstand heavy loads. In addition, diesel engines burn diesel oils which require less refining and are cheaper than higher-grade fuels such as gasolines.

3 We know engine to be a machine that converts energy into mechanical work. An engine may get its energy from any of a number of sources, including fuels, steam and air or water under pressure.

4 Gasoline engines use the chemical energy of burning gasoline to push one or more pistons. We know gasoline engines and steam engines to be called heat engines because they convert heat energy into mechanical work.

5 The steam engine is known to be an external-combustion engine. External-combustion engines get their energy from heat that is produced outside the engine. In hydraulic engines water pressure is used to produce mechanical work. The pressure may be created by a pump or by water flowing downward from a level above the engine.

VIII Ответьте письменно на вопросы к тексту:

- 1 What are main types of internal-combustion engines?
- 2 What do diesel engines burn?
- 3 What do gasoline engines use?

КОНТРОЛЬНОЕ ЗАДАНИЕ № 5

Чтобы правильно выполнить задание № 5, необходимо усвоить материал следующих разделов грамматического справочника:

- 1 Грамматические функции глаголов *should*, *would*.
- 2 Обороты с инфинитивом и причастием, равнозначным придаточным предложением.
- 3 Различные значения слов: *as*, *because*, *because of*, *due to*, *since*, *both*, *and either...or*, *neither...nor*.
- 4 Герундий.

В а р и а н т 1

I Перепишите и письменно переведите предложения на русский язык. Обратите внимание на грамматические функции глаголов *should* и *would*.

- 1 I said that we should have a meeting on Monday.
- 2 You should have asked permission before you took the book.
- 3 He would often stay late in the laboratory and do experiments.
- 4 If we received the documents tomorrow, we should start loading the goods on Monday.
- 5 If I had seen him yesterday, I should have asked him about it.

II Перепишите и письменно переведите предложения на русский язык. Помните, что обороты с инфинитивом и причастием равнозначны придаточным предложениям.

- 1 He doesn't seem to have been discouraged by his failure.
- 2 The students knowing English well, the examination did not last long.
- 3 The captain watched the goods being discharged.
- 4 The expedition was reported to have reached the North Pole.
- 5 The article having been translated, the student showed it to the teacher.

III Перепишите и письменно переведите следующие предложения:

- 1 They didn't go there because of the heavy rain.
- 2 He was late due to the heavy traffic.
- 3 Franklin is known all over the world both a scientist and a political leader.
- 4 As soon as you finish your calculations, we shall begin the test.
- 5 I gave him the book so that he could prepare the task at home.

IV Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию и перевод герундия.

- 1 Reading English technical magazines is important for an engineer.
- 2 They finished installing the apparatus only on Saturday.
- 3 The problem of obtaining power was solved.
- 4 After receiving good results they stopped experiments.
- 5 His hobby is driving a car.

V Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 1, 3 и 4-й абзацы текста

HEAVY OIL ENGINES

1 Rudolf Diesel made long series of experiments which resulted in the design of an engine. It was one of the remarkable successes of this century. Here is an engine capable of working with the cheapest oil fuel, which is easily stored, occupies little space and is capable of undertaking all the ordinary duty that modern manufacture and transport impose.

2 It will be interesting to examine the principle upon which the diesel engine is based. The efficiency of an internal combustion engine depends largely upon the degree of compression. But it will be recollected that when the compression of a mixture of oil or gas and air reaches a certain point ignition takes place, and there is therefore a limit to the compression that can be employed. Owing to high pressure employed the engine is very heavily built, and many firms now make what is called a semi-Diesel in which the principle is the same, but the initial pressures are lower. Both two-and four-stroke engines of Diesel and semi-Diesel types are made.

3 The uses of the internal combustion engine range over nearly the whole field for which power is ordinary required. The small oil or petrol engine is admirable for domestic purposes, such as driving a vacuum cleaner, or pumping water or driving a dynamo to light a house that is far from a town supply; and to mow the lawns, drive milk separators etc. The crude oil-engine is being used for electric light and power station, for pumping water and for driving the machinery of factories and workshops.

4 For the motor-car and the airplane the petrol-engine, reciprocating or jet, alone stands. Improvements in steel and light alloy manufacture have enabled it to be made so light and yet so powerful that two new forms of locomotion have arisen - forms which were dreamt of for centuries and have now emerged into development.

VI Прочтите 2-й абзац текста и письменно ответьте на следующий вопрос:

Why is the engine very heavily built?

В а р и а н т 2

I Перепишите и письменно переведите предложения на русский язык. Обратите внимание на грамматические функции глаголов should и would.

- 1 I said that I should be glad to see him.
- 2 If you wish to succeed you should have more patience.
- 3 Last year he would get up early and go for long walks.
- 4 If I saw my friend tomorrow, I should ask him about it.
- 5 If the goods have been loaded quickly, we should have received them in time.

II Перепишите и письменно переведите предложения на русский язык. Помните, что обороты с инфинитивом и причастием равнозначны придаточным предложениям:

- 1 He seems to know everything on this subject.
- 2 The letter having been delayed, the news reached us too late.
- 3 We watched him slowly approaching the gate.
- 4 Mendeleev discovered the Periodic Law of elements, the table of elements bearing his name.
- 5 This young lecturer appears to know his subject well.

III Перепишите и письменно переведите следующие предложения:

- 1 Neither he nor I know French.
- 2 The fisherman didn't go into the open sea because of the storm.
- 3 He achieved these results due to his hard work.
- 4 As soon as you finish your calculation, we shall begin the test.
- 5 The invitations were sent beforehand in order that the delegates might arrive in time for the conference.

IV Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию и перевод герундия.

- 1 There are different ways of obtaining this substance.
- 2 The car needs repairing.
- 3 He insisted on repeating the experiment.
- 4 He was happy to have a chance of working several years under the guidance of this well-known scientist.

5 On seeing the approaching train we hurried to the platform.

V Прочтите и устно переведите 1–5-й абзацы текста. Перепишите и письменно переведите 2 - 5-й абзацы текста.

ROAD DIESEL-ELECTRIC LOCOMOTIVES ABROAD

1 Many experimental units for road service have been built since the first production models of switcher locomotives established themselves. In the middle of the XX century Electro-Motive Division of the General Motors Corporation produced a 5,400-hp. freight diesel electric locomotive of four units, each with a 1,350-hp. diesel engine. It was followed almost immediately by several 4,000-hp. all-purpose diesel-electric road locomotives composed of two units, each containing two 1,000-hp. diesel engines.

2 The new type of road locomotives though not much different in outer appearance have undergone radical changes in the interior design and the flexibility of these new locomotives, is far beyond that thought possible in the middle of the XX century. Road locomotives may be obtained with any combination of gearing and horsepower that may be desired.

3 Road freight locomotives are generally built with four-wheel trucks having all of the weight of the locomotive on the drivers to give the high starting and continuous tractive efforts necessary for heavy freight work.

4 Road passenger locomotives are usually built with six-wheel trucks having two driving axles and one idler axle. These locomotives have a higher horsepower rating than the freight locomotive and therefore greater weight.

5 The operation of recently built road locomotive has become nearly automatic with all of the controls of the engine and electrical equipment concentrated in the operating cab of the locomotive and various warning bells and lights located there have to indicate the failure of equipment in the engine room.

The outward arrangement of road locomotives seems to be established with the engineman's cab in front and a short nose section is to protect the crew in case of accident.

VI Прочтите 1-й абзац текста и письменно ответьте на вопрос:

What locomotives did the Electric-Motive Division produce in the middle of the XX century?

В а р и а н т 3

I Перепишите и письменно переведите предложения на русский язык. Обратите внимание на грамматические функции глаголов should и would.

- 1 He said that he would come soon.
- 2 You should ring her up and apologize.
- 3 In summer we would go swimming.
- 4 If you have arrived a little earlier, you would have found me there.
- 5 If my colleague had time now, he would consult you on that problem.

II Перепишите и письменно переведите предложения на русский язык. Помните, что обороты с инфинитивом и причастием равнозначны придаточным предложениям.

- 1 The goods are known to have been shipped on May, 15.
- 2 The petrol being exhausted, they could go no further.
- 3 We watched them doing the experiment.
- 4 I happened to be there at that time.
- 5 This house is said to have been built two hundred years ago.

III Перепишите и письменно переведите следующие предложения:

- 1 I gave him the book so that he could prepare the task at home.
- 2 The chief engineer is either at the office or at the laboratory.
- 3 I went to the post office in order to send the telegram.
- 4 They didn't go to the country because of the rain.
- 5 Owing to the new system of regulation the number of accidents went down.

IV Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию и перевод герундия.

- 1 Before writing about those events he decided to go to the places where they happened.
- 2 His experience in driving a car will be useful for his future work.
- 3 He began determining the properties of the new material.
- 4 Our being invited to take part in such conference is very important for us.

5 At the meeting they discussed different ways of improving their work.

V Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 2-4-й абзацы текста.

SWITCHING LOCOMOTIVES ABROAD

1 A wide variety of diesel-electric switching locomotives are available from 20-ton, 150-hp. industrial locomotives to 2,400-hp. transfer units weighing 180 tons. These various sizes are of all types, some with two engines and generators; some are equipped for multiple-unit operation in any desired combination.

2 The smaller diesel-electric switchers were originally developed for service in the steel mills where the tonnage was light, the curves sharp, and the clearances much less than those on a railroad. This type of locomotive was soon found to be practical and economical for light plant shifting that would not justify the investment necessary for standard rail road sizes. As a result the popular 44-ton to 50-ton types were developed with horsepower ratings from 300 to 410 horsepower. The 44-ton size has met with general favour on the railroads for light road freight pickups and duty in remote yards and terminals where the intermittent and standby time is an important factor.

3 Larger size range upwards to the 70-to 100-ton 600-hp. and the 115-to 125-ton 1,000-hp. switchers with single engines. The 1,200-, 1,500-, and 2,400-hp units with weights from 115-ton to 160-ton are used in heavy transfer, hump, classification yards and terminal service where the higher horsepower ratings are of value to start and keep moving large tonnages.

4 The heavier switchers have two four-wheel trucks with a motor on each axle and the total locomotive weight on the driving axles for high starting effort. Where axle load is of an important consideration, they may be provided with six-wheel trucks, with four driving axles. A few have been built with six motors where motor capacity was of extreme importance.

VI Прочтите 1-й абзац текста и письменно ответьте на следующий вопрос:

What variety of diesel-electric switching locomotives is produced?

В а р и а н т 4

I Перепишите и письменно переведите предложения на русский язык. Обратите внимание на грамматические функции глаголов should и would:

- 1 I told him that you would leave the city on Monday.
- 2 You should be more careful when you work in the laboratory.
- 3 He would for hours doing nothing.
- 4 If your instructions had been received ten days ago, the goods would have been shipped yesterday.
- 5 He would leave the city tonight if he got the necessary documents.

II Перепишите и письменно переведите предложения на русский язык. Помните, что обороты с инфинитивом и причастием равнозначны придаточным предложениям:

- 1 Oil has been known to exist in Azerbaijan since ancient times.
- 2 The preparations being completed, they began the experiment.
- 3 He wants the work to be done immediately.
- 4 They are certain to participate in the meeting.
- 5 The gaseous fuel is assumed to be both cheap and efficient.

III Перепишите и письменно переведите следующие предложения:

- 1 Both the bridge and the tunnel will be finished in time.
- 2 I could find him neither at home nor in his office.
- 3 I'll telephone you as soon as I return home.
- 4 The train did not arrive in time due to the snow storm.
- 5 The new equipment was used in order to test the vibration of the engine.

IV Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию и перевод герундия.

- 1 Science requires experimenting.
- 2 New possibilities for applying atomic energy open up.
- 3 Speaking foreign languages is of importance for every cultured man.
- 4 After graduating from the University he worked in the Far North.

5 I know of your having read the article.

V Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 1-3-й абзацы текста

DIESEL-ELECTRIC DEVELOPMENT ABROAD.

1 The first diesel-electric locomotives were 300-hp. switchers with one engine in a box-car type of cab. The weight on driving axles was about 124,000 lb, which is somewhat less than the axle loads of a modern 600-hp. switcher. Horsepower-to-weight ratios have been increased, body and cab designs improved, engine horsepower increased and traction motor ratings improved. Engines were let down into the frame, lowering the engine-room hood. Engine ratings have been stepped up by redesign and numerous refinements of parts and auxiliaries.

2 The design of the Diesel-electric locomotive enables standardization. The engines of the various horsepower ratings for any one builder do not differ enough in construction to cause production difficulties; the same is true of the traction motors, generators, frames, trucks and other component parts. This design policy has made possible the unit replacement system. It is seldom necessary to keep a locomotive in the shops more than ten to twelve hours if the railroad is supplied with suitable replacement engines, motors, generators, contactors, compartments and other parts.

3 Standardizing the construction of locomotives reduces the first cost. The flexibility and possible combinations of road locomotives enable any railroad to purchase any type and size of motive power suitable for its particular operations without deviating from the established standards of construction.

4 As the diesel-electric locomotive has been improved and developed more horsepower has become necessary to produce generator excitation, control power, and to pump greater amounts of fuel lubricating oil and cooling water through their respective systems and this additional horsepower must be produced by the engine. Though these parts have become more intricate they have enabled the diesel to function trouble-free for much longer periods than was once thought possible.

VI Прочтите 4-й абзац текста и письменно ответьте на следующий вопрос:

Why has more horsepower become necessary as the diesel-electric locomotive has been improved?

I Перепишите и письменно переведите предложения на русский язык. Обратите внимание на грамматические функции глаголов should и would:

1 He said that he would return soon.

2 You should test the equipment.

3 They would finish the experiment in time if they received all the equipment.

4 He would have completed his research if he had obtained the new data.

5 You should do this work again.

II Перепишите и письменно переведите предложения на русский язык. Помните, что обороты с инфинитивом и причастием равнозначны придаточным предложениям:

1 The invention is considered to be of great importance in shipbuilding.

2 His task having been finished, he left the laboratory.

3 He wants the work to be done immediately.

4 They are said to know the subject well.

5 The results to be expected are of great importance.

III Перепишите и письменно переведите следующие предложения:

1 You can get to this part of the city either by bus or by the underground.

2 As long as you refuse to apply new methods the output will remain unchanged.

3 Special containers were used in order that the supply of food can be improved.

4 According to the information received by us the ship will arrive in the 10-th of April.

5 He left in spite of all my protests.

IV Перепишите следующие предложения и переведите их на русский язык, обращая внимание на функцию и перевод герундия.

1 Your studying much now will help you in your further work.

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2 For many centuries men were interested in obtaining new sources of energy.

3 He improved his report by changing the end.

4 We know of his having been asked to take part in this research.

5 Her having mastered two foreign languages helps her in her work.

V Прочтите и устно переведите 1–4-й абзацы текста. Перепишите и письменно переведите 1, 3 и 4-й абзацы текста.

PRIME MOVERS

1 A prime mover is a device that transforms the potential energy of fuel into mechanical energy capable of performing work. Coal has been a common source of fuel and energy for many years by producing steam to drive reciprocating engines and rotative turbines. More recently, gasoline and other petroleum distillates burned in internal-combustion engines and in jet chambers have supplemented or supplanted coal entirely as a source of energy. Water power, usually for driving turbo-generator combinations, has also played an active role. Nuclear energy and solar energy are entering the scene, some already providing a source of power for rocket propulsion in a magnitude undreamed of a decade ago.

2 Until recent years, steam has been a universal source of energy for most transport systems - for ships, railroads, and pumping stations. The steam engine offers advantages in simplicity of design, construction, and maintenance, because of conservative ratings, most steam engines permit a 10 to 25 per cent operating overload capacity.

3 The steam engine has several disadvantages. The engine itself is usually heavy and bulky, at least for high horse powers. It is often dirty and noisy, and the problems of water supply are frequently acute.

4 Internal-combustion engines in either the gasoline-burning, spark-ignited or oil-burning compression type are constant-speed devices requiring some form of speed control through reduction gearing, transmission, or torque converter. Such devices have been bulky, complicated, and not always dependable for large installations such as ships, pumping stations, or small power plants on automobiles, trucks and buses. The gasoline engine has found a wide field of usefulness in the airplane, in which the reduction gearing is not necessary.

VI Прочтите 2-й абзац текста и письменно ответьте на следующий вопрос:

What are advantages of the steam engine?