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**АНГЛИЙСКИЙ ЯЗЫК  
ДЛЯ СТУДЕНТОВ-ЗАОЧНИКОВ**

*Методические указания*

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Цель методических указаний – помочь студентам разобраться в наиболее сложном грамматическом материале и успешно выполнить контрольную работу, а также совершенствовать свои разговорные навыки в рамках тем, предусмотренных программой по немецкому языку для высших учебных заведений. Первая часть состоит из 2 разделов, включающих грамматический материал с системой заданий, тематические тексты со словарем и лексическими упражнениями. Методические указания могут использоваться как на аудиторных занятиях, так и самостоятельно.

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## UNIT IV

### Неличные формы глагола (Non-Finite forms of the verb)

К неличным формам глагола в английском языке относятся инфинитив, герундий и причастие.

Неличные формы глагола характеризуются следующими общими чертами:

1. Не выражают лица, числа и наклонения.
2. Не могут выражать времени действия, указывая лишь соотношенность во времени, т.е. является ли действие или состояние, выражаемое ими, одновременным с действием или состоянием, выраженным личной формой глагола, или предшествует ему.

He **is able to do** it now. - Он **в состоянии сделать** это сейчас.

He **was able to do** it yesterday. - Он **был в состоянии сделать** это вчера.

He **will be able to do** it tomorrow. - Он **будет в состоянии сделать** это завтра.

В каждом из этих предложений инфинитив относится к тому времени, в котором стоит глагол-сказуемое предложения, т.е. действие, выраженное инфинитивом, является **одновременным** с действием, выраженным личной формой глагола. Употребление Perfect Infinitive указывает, что действие или состояние, выраженное им, предшествует действию или состоянию, выраженному личной формой глагола.

Electricity **is considered to have been known** to man in static form for centuries. - **Считают**, что электричество в его статической форме **было известно** человечеству в течение столетий.

3. Неличные формы глагола выражают залог.

Инфинитив: to write (действительный залог),  
being written (страдательный залог).

### Инфинитив (The Infinitive)

Инфинитив имеет следующие формы:

	<b>Indefinite</b>	<b>Continuous</b>	<b>Perfect</b>	<b>Perfect Continuous</b>
<b>Active</b>	<b>to write</b>	<b>to be writing</b>	<b>to have written</b>	<b>to have been writing</b>
<b>Passive</b>	<b>to be written</b>	-	<b>to have been written</b>	-

Отрицательная форма инфинитива образуется с помощью отрицательной частицы **not**, которая ставится перед инфинитивом: not to write, not to be writing.

### Функции инфинитива

Инфинитив может выполнять в предложении функцию какого-либо члена предложения или входить в состав какого-либо члена предложения.

1. Подлежащее.

To read English books is necessary. - Читать английские книги необходимо.

2. Часть простого сказуемого в сочетании со вспомогательными глаголами.

I'll open the discussion myself. - Я открою обсуждение своим выступлением.

3. Часть составного глагольного сказуемого в сочетании с модальными глаголами и с такими глаголами, как to begin, to start, to continue, to end, to stop, to want, to decide и т.п., -выражающими начало, продолжение или конец действия.

We can actually begin the experiment. - Теперь мы действительно можем начать опыт.

4. Дополнение (после глаголов to help, to assist, to like, to prefer, to forget, to ask, to beg, to promise, to recommend).

He forgot to wind the watch when he went to bed. - Он забыл завести часы, когда ложился спать.

5. Определение.

He was the first to come. - Он первым пришел сюда.

6. обстоятельство.

a) цели (при переводе на русский язык перед инфинитивом употребляется союз чтобы, для того, чтобы).

We have come to the station to see them off. - Мы пришли на станцию, чтобы проводить их.

To reach the lecture hall he had to walk almost half a mile. - Чтобы дойти до лекционного зала, ему пришлось идти почти полмили.

b) следствия.

I was too young to think of my family life at that time. - В то время я был слишком молод, чтобы думать о семейной жизни.

**Предикативные инфинитивные обороты** – выступают в роли сложного дополнения и сложного подлежащего.

**1. Сложное дополнение**, выраженное предикативным инфинитивным оборотом (объектный инфинитивный оборот) состоит из:

существительного в общем падеже  
или  
местоимения в объектном падеже  
(me, him, her, it, us, you, them) } + инфинитив

He wanted me to show this laboratory. - Он хотел, чтобы я показала ему эту лабораторию.

We know her to be a good pilot. - Мы знаем её как хорошего пилота.

Этот оборот употребляется после глаголов:

to want – хотеть

to watch / to observe-наблюдать

to wish – желать

to consider - считать

to know – знать

to feel - чувствовать

to believe – полагать

to see - видеть

should (would) like – хотелось бы

to notice - замечать

to think – думать

to hear - слышать

to expect – ожидать

to have / to make - заставлять

to find – находить.

После глаголов, выражающих физическое восприятие и ощущения (см. выделенные глаголы) и после глаголов “to have” и “to make” в значении “заставлять” инфинитив употребляется без частицы “to”.

**Eric watched him go** from group to group. - Эрик наблюдал, как он ходит от группы к группе.

**He made me do it.** - Он заставил меня сделать это.

В объектном инфинитивном обороте инфинитив может употребляться также в пассивной форме.

**She didn't want him to be laughed at.** - Она не хотела, чтобы над ним смеялись.

## 2. Сложное подлежащее (субъектный инфинитивный оборот) состоит

из:

существительного в общем падеже  
или  
местоимения в именительном падеже  
(I, you, he, she, it, we, they) } + инфинитив

**All bodies are known to possess weight.** - Известно, что все тела обладают весом.

**He is said to have played chess well in his youth.** - Говорят, что он в молодости хорошо играл в шахматы.

**I happened to be there at that time.** - Я случайно был там в это время.

Субъектный инфинитивный оборот употребляется после следующих глаголов в страдательном залоге:

to think, to believe – считать, полагать

to say - говорить

to suppose – предполагать

to state - утверждать

to consider – считать

to make - заставлять

to know – знать

to hear - слышать

to report – сообщать

to see - видеть

to expect – ожидать, полагать

to notice - замечать

to mean – иметь в виду

to find – обнаруживать, находить

**Задание 1.** *Переведите предложения. Следите за правильностью перевода форм инфинитива.*

1) Mary wants to teach you English.

2) Henry wants to be taught English.

3) My friend likes to read.

4) Our little daughter likes to be read to.

5) Eddy is happy to have been invited to the conference.

6) I intended to have left the next day.

7) Physicists are known to have been doing a vast amount of work within the past two years.

8) I'm glad to have invited them.

**Задание 2.** *Определите функцию инфинитива в следующих предложениях. Предложения переведите на русский язык.*

1) She was the first to offer her help.

- 2) I went out to buy "Morning Star".
- 3) The text was too difficult to translate.
- 4) The molecules are too far from each other to repel each other.
- 5) How to tell him about it is a problem.
- 6) This is the letter to be translated.
- 7) I'm waiting to be told the results of my exam.
- 8) He is hard to deal with.

**Задание 3.** *Измените предложения, употребив пассивную форму. Переведите предложения на русский язык.*

e.g. We are glad to meet you.

We are glad to be met by you.

- 1) I'm glad to invite them.
- 2) I don't like to interrupt you.
- 3) She is happy to paint you.
- 4) I don't want to ask about it.
- 5) She wants to tell the truth.

**Задание 4.** *Составьте предложения:*

I've got	a call	to lose
We've got	things	to say
He's got	a question	to be proud of
Have you got	nothing	to help me
	something	to worry about
	anything	to ask
	some news	to complain of
	nothing important	to consult
		to be afraid of
		to add

**Задание 5.** *Переведите предложения.*

- 1) У меня много дел.
- 2) У нас есть что вспомнить.
- 3) Нам нечего терять.
- 4) Ему есть чем гордиться.
- 5) Им нужно ответить на много писем.
- 6) Ему есть чего бояться.

**Задание 6.**

*а) Составьте предложения, используя объектный инфинитивный оборот.*

I want	you	to forget it.
She wants	me	to remember that.
They want	us	to take care of her mother
		to tell the truth.
We want		the proposal to be adopted.
They don't want		the problem to be solved.
Would you like		the job to be done right away.
I wouldn't like		the review to be published
We expect		the fact to be proved
He ordered		everything to be arranged

*б) Переведите на русский язык.*

- 1) Do you want me to go with you?
- 2) They want the computer to be switched on again.
- 3) I want you to stay.
- 4) He wants me to forget everything.
- 5) We want you to look through this article.

*в) Переведите предложения на английский язык.*

- 1) Мне бы хотелось, чтобы вы проконсультировались со специалистом.
- 2) Он хочет, чтобы вы напомнили ему задание.
- 3) Нам бы хотелось, чтобы эта статья была опубликована.
- 4) Ей хотелось, чтобы её дочь стала дизайнером.
- 5) Елена хочет, чтобы вы позаботились о её детях.

**Задание 7.** *Переведите предложения на русский язык. Объясните, почему перед инфинитивом отсутствует частица "to".*

- 1) He watched the planes take off.
- 2) I saw him get on the bus.
- 3) Did you see him enter the metro?
- 4) He heard the telephone ring.
- 5) Nobody noticed her put the paper in her handbag.
- 6) Have you ever heard him sing folk songs?

**Задание 8.** *Переведите на английский язык.*

- 1) Он не видел, как Анна вышла из дома.
- 2) Никто не слышал, как он говорил это.
- 3) Учитель наблюдал, как она консультировалась с соседом.

**Задание 9.** *Переведите предложения.*

- 1) Six helicopters were reported to be taking part in this military operation.
- 2) My son is expected to return from abroad tomorrow.
- 3) He is considered to be an experienced pilot.
- 4) She is believed to have studied English and French in her childhood.
- 5) John was expected to write from London.
- 6) He is sure to be sent there.

**Задание 10.** *Переведите предложения на английский язык.*

- 1) Её считают хорошим специалистом.
- 2) Говорят, что он инженер.
- 3) Сообщают, что авиасалон закрылся.
- 4) Полагают, что эти доклады прозвучат на конференции.
- 5) Говорят, время встречи изменили.
- 6) Известно, что она работает в конструкторском бюро.

**Задание 11.** *Прочитайте текст и выполните задания к нему.*

### **Prospects for Russian Space activity (part I)**

Modern space activity is a complex body of scientific, production, educational, business and public entities in different countries. It is responsible not only for sustained improvement of space technology, but also for wider and stronger interactions with the day to day life of society. This body looks for and finds

possibilities for direct contributions to solution of earthly problems. Current and future national and international space programmes and projects will have to comply with more and more strict criteria of economic efficiency and profitability and demonstrate their competitiveness relative to the “non-space” problems facing contemporary society. This is why the approach of the states to argumentation of the rationale of space programmes as well as to setting priorities for space activity is changing. Russia is no exception in this respect.

Russia is the founder of the practical space activity. Many of us still remember that day almost forty years ago when the routine flow of time broken by news – an artificial Earth satellite is in orbit.

Forty years is not a short period. Within this time practical space activity has energetically emerged into every day life assisting to solve problems of individual countries, large regions and whole continents. As in the past one of the top priorities of the Russian space programme is fundamental scientific research, which comprises experiments in planetary, astro- and plasmaphysical fields. Development of these research projects within the time period to the year 2005 is aimed at the below listed goals.

**Задание 12.** *Ответьте письменно на вопросы по тексту.*

1. What is modern space activity responsible for?
2. Is Russia the founder of the practical space activity?
3. How many years ago was the routine flow of time broken?
4. An artificial Earth satellite was in orbit 40 years ago, wasn't it?
5. What does the Russian space programme comprise?
6. What period of time will the research projects be developed?

**Задание 13.** *Соответствует ли следующая информация тексту?*

1. Space programmes will not have to comply with strict criteria of economic efficiency and profitability.
2. The approach of the states to argumentation of the rationale of space programmes is changing.
3. Fifty years ago an artificial Earth satellite was in orbit.
4. As in the 19-th century the top principles of the Russian space programme is fundamental scientific research.
5. In 1999 all research projects were completed.

**Задание 14.** *Расположите следующие предложения в соответствии с повествованием.*

1. Within this time practical space activity has emerged into every day life assisting to solve different problems.
2. Modern space activity is a complex body of educational, business and public entities in different countries.
3. Forty years is not a short period.
4. Russia is the founder of the practical space activity.

### Причастие, его формы и функции в предложении (The Participle)



Причастие – это неличная форма глагола, совмещающая в себе свойства глагола, прилагательного или наречия. В современном английском языке имеется развитая система форм причастия.

		Действительный залог	Страдательный залог
Participle I	Indefinite	writing	being written
	Perfect	having written	having been written
Participle II	Indefinite		written / studied

Причастие выполняет только две синтаксические функции в предложении – определения и обстоятельства.

#### Функции Participle I

<b>Неперфектная (non-Perfect)</b>	<b>Перфектная (Perfect)</b>
<b>Определение</b> The rising sun was hidden by the clouds - <b>Восходящее</b> солнце было скрыто тучами. The man <b>smoking</b> a cigarette is my brother. – Человек, <b>курящий</b> сигарету, мой брат.	<b>Не употребляется</b> В этом случае перевод делается придаточным предложением. At last they saw the man <b>who saved</b> their son.
<b>Обстоятельство</b> (времени, причины, образа действия – часть с союзами when, while). <b>When (while) going</b> home I met my brother. – <b>Идя</b> домой, я встретил брата. Часть простого глагольного сказуемого. – He <b>is carrying out</b> the experiment now. – Сейчас он <b>проводит</b> эксперимент.	<b>Обстоятельство</b> <b>Having lived</b> in Moscow for many years he knew that city very well. – <b>Прожив</b> в Москве много лет, он знал этот город очень хорошо.

#### 1. Определение соответствует русскому причестию.

a **falling** star – падающая звезда  
the people **waiting for** you – люди, ожидающие вас  
a **recorded** talk – записанная на пленку беседа  
the army **defeated** армия, потерпевшая поражение

#### 2. Обстоятельство соответствует русскому деепричастию или целому придаточному предложению.

I spent most of the time **answering** questions – ... отвечая на вопросы  
**Having turned out** the light we left the house – Выключив свет ...  
**Well done** the device will function properly – Если устройство **хорошо выполнено** ...  
**When arranged** the elements exhibited... - При **соответствующем расположении** ...

**The Participle II (The Past Participle)** выражает действие, законченное по отношению к действию, выраженному сказуемым и соответствует русским причастиям настоящего времени на - **ый, -щийся**, и прошедшего времени, оканчивающихся на - **нный, -тый, -вшийся**.

e.g. A broken cup was lying on the table. – Разбитая чашка лежала на столе.

### Функции Participle II

Функция	Пример
<b>Определение</b> к существительному (левое или правое)	She mended the <b>torn sleeve</b> of her dress. (левое) – Она починила <b>порванный</b> рукав своего платья. <b>The books taken</b> from the library must be returned next week. (правое) – Книги, <b>взятые</b> в библиотеке, должны быть возвращены на следующей неделе.
<b>Обстоятельство</b> (часто с союзами when, if, unless)	<b>When treated</b> by a good specialist, the sick man began to feel better. – Когда больного начал лечить хороший врач, он почувствовал себя лучше.
<b>Сказуемое или часть сказуемого</b>	They <b>listened</b> to a very interesting concert yesterday. (сказуемое) – Вчера они <b>слушали</b> интересный концерт. He <b>has already translated</b> the text. (часть сказуемого).

**Задание 1.** Раскройте скобки, употребляя глаголы в Present Participle или Perfect Participle.

1. (to do) his homework, he was thinking hard. 2. (to do his homework, he went for a walk. 3. (to sell) fruit, he looked back from time hoping to see his friends. 4. (to sell all the fruit, he went to see his friend. 5. (to eat) all the potatoes, she drank a cup of tea. 6. (to run) in the yard, I fell and hurt my knee. 7. (to look) through some magazines, I came across an interesting article about UFOs. 8. (to write) out and (to learn) all the new words, he was able to translate the text easily. 9. (to sit) near the fire, he felt very warm.

**Задание 2.** Переведите на русский язык, обращая внимание на Participle I и Participle II.

- A fish taken out of water cannot live.
  - A person taking a sun-bath must be very careful.
  - Taking a dictionary, he began to translate the text.
- The word said by the student was not correct.
  - The man standing at the door of the train carriage and saying goodbye to his friends is a well-known musician.
  - Standing at the window, she was waving her hand.
- A letter sent from St. Petersburg today will be in Moscow tomorrow.
  - He saw some people in the post office sending telegrams.

c) When sending the telegram she forgot to write her name.

Объектный предикативный причастный оборот – это сочетание существительного в общем падеже (или личного местоимения в объектном падеже) с причастием, выступающим в предложении как единый член предложения – сложное дополнение.

He watched **them (the students) working**. - Он наблюдал, как они (студенты) работали.

Употребляется после глаголов “to hear” - слышать, “to see” - видеть, “to feel” - чувствовать, “to watch” - наблюдать, “to find” - обнаруживать, находить, “to like” - нравиться, “to dislike” – не нравиться, “to want” – хотеть.

He saw **the police struggling with the crowd**. - Он видел, как полиция сражалась с толпой.

При употреблении причастия II в “объектном причастном обороте” причастие выражает не процесс, а результат действия.

He saw **all his plans destroyed**. - Он видел, что все его планы разрушены.

Субъектный предикативный причастный оборот – это сочетание существительного в общем падеже (или местоимения в именительном падеже) в функции подлежащего с причастием в качестве второй части составного глагольного сказуемого. Служебную часть этого сказуемого составляют глаголы в форме страдательного залога, примыкающие к причастию.

The teacher (he) was seen **coming**. - Видели, как преподаватель (он) пришел.

“Субъектный причастный оборот” употребляется со следующими глаголами в страдательном залоге: “to see” - видеть, “to hear” - слышать, “to feel” - чувствовать, “to watch” - наблюдать, “to find” – находить, обнаруживать.

An airplane was **heard flying over the wood**. - Было слышно, как самолет летел над лесом.

**Независимый причастный оборот (The Independent Participle Construction)** – причастная конструкция, в которой причастию предшествует существительное (в общем падеже) или местоимение (в именительном падеже), выполняющее роль подлежащего по отношению к причастию и не являющееся подлежащим всего предложения. В состав этого оборота может входить причастие в любой его форме, а вся конструкция всегда отделяется запятой от остальной части предложения.

На русский язык переводится:

1) Придаточным обстоятельственным предложением, вводимым союзами “когда; т.к.; после того, как; если” и др.

**All preparations being made, they started the experience.** - Когда все приготовления были сделаны, они начали эксперимент.

2) Простым предложением, входящим в состав сложносочиненного предложения путем бессоюзного соединения или вводимого союзами “причем; и; а”.

The article deals with our life, particular attention **being paid** to students. - Статья посвящена нашей жизни, **причем** основное внимание уделено студентам

**Задание 3.** *Найдите сказуемое. Определите синтаксическую функцию причастия в предложениях и переведите причастия на русский язык.*

- 1) The students spoken about at the meeting yesterday completed this work successfully.
- 2) The task set was not an easy one.
- 3) Some very complicated models are investigated in the paper.
- 4) For the investigation being conducted at present the lack of such data is of no importance.
- 5) The latest model now being tested accounts for many of the previously unknown phenomena.
- 6) The result obtained showed the stability of the system under condition given above.

**Задание 4.** *Переведите следующие предложения на русский язык, обращая внимание на перевод причастия II с наречиями.*

So / thus – так, таким образом      so far / thus far – до сих пор

- 1) The values thus found are of some interest.
- 2) The results so far received are not accurate enough.
- 3) The problem so explained was easily understood.
- 4) The articles thus far written on the subject are of no interest.
- 5) The work so done provided us with new data.
- 6) The results thus achieved were of great help.

**Задание 5.** *Выберите подходящее по смыслу причастие I или причастие II, данные в скобках.*

- 1) Newton assumed that light was made up of many small particles (moving/moved) at high speeds.
- 2) The experiments (carrying/carried) out at our laboratory are rather interesting.
- 3) The metal (using/used) in that experiment was titanium.
- 4) The results (receiving/received) changed with material used.
- 5) The problem (concerning/concerned) must be considered in detail.
- 6) The period (following/followed) this invention was very productive.

**Задание 6.** *Определите тип причастного оборота. Предложения переведите.*

- 1) There being a lot of things to discuss, the conference lasted for a long time.
- 2) In London there are a lot of museums, the largest being the British Museum.
- 3) The situation being favorable, they bought the cottage.
- 4) He was disappointed of not being invited to the party.
- 5) It being Sunday, the shops were closed.
- 6) An airplane was heard flying over the world.
- 7) Look at this star and you will find it rising upward.
- 8) The Don waters were seen flowing into the new canal.

**Задание 7.** *Определите функцию -ed форм в следующих предложениях и переведите их на русский язык.*

- 1) I want him saved.
- 2) The man saved our Russia pilot.
- 3) He described the method used by this engineer.
- 4) The paintings discussed attracted the attention of many visitors.
- 5) We would like it explained again.

- 6) Explained again, the rule became quite clear to everybody.
- 7) She wants this name remembered.
- 8) The engineer used the method described in the article.

**Задание 8.** *Переведите следующие предложения на английский язык.*

- 1) Ученые, приглашенные на конференцию, уже приехали.
- 2) Письма, полученные вчера, лежали на столе.
- 3) Работа, проделанная вами, очень интересная.
- 4) Я хочу, чтобы телеграмма была отправлена немедленно.
- 5) Студенты, писавшие тест, были из моей группы.
- 6) Читая книгу, он делал пометки.
- 7) Я видел, как он фотографировал памятник.
- 8) При испытании двигателя инженер обнаружил поломку.

**Задание 9.** *Найдите в предложении причастие (или причастную конструкцию). Определите его (её) синтаксическую функцию и переведите предложения на русский язык.*

- 1) I heard him explaining this phenomenon.
- 2) We found the first series of experiments completed.
- 3) Speaking on this subject, mention should be made of high radiation intensity.
- 4) The methods of measurements developed lately differ greatly from the old ones.
- 5) While making the experiment we made use of all the data available.
- 6) The experiments of many other scientists following Rutherford's research proved his predictions.

### Герундий (The Gerund)

Герундий – это неличная форма глагола, совмещающая в себе свойства глагола и существительного и дающая отвлеченное понятие о действии, не указывая на лицо, число и наклонение.

#### Видовременные формы герундия

	Действительный залог	Страдательный залог
<b>Indefinite</b>	<b>Asking</b>	<b>Being asked</b>
<b>Perfect</b>	<b>Having asked</b>	<b>Having been asked</b>

#### Функции герундия в предложении

1. Подлежащее (переводится существительным или неопределенной формой глагола).

**Reading is useful** - Чтение – полезно (Читать полезно).

2. Часть сказуемого (переводится существительным или неопределенной формой глагола).

**They began arguing.** - Они начали спорить.

3. Дополнение (переводится неопределенной формой глагола, существительным или глаголом в личной форме в составе придаточного предложения).

а) прямое:

**He always preferred staying at home.** - Он всегда предпочитал оставаться дома.

б) предложное:

We succeeded in **converting** industry to war production. - Нам удалось перевести промышленность на военное производство.

4. Определение (с предлогом "of" или "for"). Переводится существительным в родительном падеже, существительным с предлогом или неопределенной формой глагола.

She gave up the idea of **becoming** a pilot. - Она отказалась от мысли стать пилотом.

5. обстоятельство (всегда с предлогом "in", "on", "from", "after", "by", "without"). Переводится существительным с предлогом, деепричастием несовершенного или совершенного вида или глаголом в личной форме в составе придаточного предложения.

He went in. The clock greeted him by **striking** the half-hour. - Он вошел. Стенные часы приветствовали его, пробив полчаса.

**Сложный герундиальный оборот** — это сочетание притяжательного местоимения или существительного в притяжательном или общем падеже с герундием. Переводится придаточным предложением с союзами "что; то, что; о том, чтобы; в том, чтобы".

We know of **the earth behaving** as a large magnet. - Мы знаем, что земля ведет себя, как большой магнит.

Mankind is interested in **atomic energy being used** only for peaceful needs. - Человечество заинтересовано в том, чтобы атомная энергия использовалась только в мирных целях.

We were against **Mr. Bond's (Mr. Bond, his) going** to Switzerland. - Мы возражали против того, чтобы м-р Бонд (он) ехал в Швейцарию.

**Задание 1.** Определите, является ли -ing-форма причастием или герундием. Дайте соответствующий русский перевод.

Model: 1. Swimming is my favourite sport – Плавание ...

2. Swimming in cold water he caught cold. – Плавая...

1) Testing will begin in a few minutes.

2) Testing these devices we sometimes find defects in them.

3) Reading stories about adventures and travellings excited the boy's imagination.

4) Reading stories about adventures he remembered his green years.

5) Increasing the pressure we increase the force of friction (трение).

6) Ice melting begins at 0° C.

7) Heating makes the molecules move faster.

**Задание 2.** Замените формы причастия в функции обстоятельства соответствующими формами герундия с предлогом "on" или "in".

Model: (While) making – In making

Having made – On making

Having been made – On being made

1) While melting the ice keeps the same temperature.

2) Having been heated to a sufficient temperature any body becomes a source of light.

3) Leaving the metal surface the electrons can produce considerable currents.

- 4) Having made a lot of experiments Faraday discovered the electromagnetic induction.

**Задание 3.** *Определите функцию герундия. Предложения переведите.*

- 1) I gave up smoking.
- 2) He left without saying a word.
- 3) On learning the news she decided to go and see her cousin.
- 4) Ann insisted on your making a report immediately.
- 5) Learning rules without examples is useless.
- 6) The man's coming so early surprised us.

**Задание 4.** *Переведите предложения, используя ту же самую конструкцию, которая дана в образце.*

Model: After leaving school; (Having left school;) my daughter went to work at a hospital.

- 1) Прочитав книгу, она вернула её подруге.
  - 2) Попрощавшись с гостями, мы уехали в аэропорт.
- Model: Thinking that he was out, I decided to lock the door.
- 1) Сказав, что ему плохо, он остался дома.
  - 2) Подумав, что у него еще много времени, он пошел в Русский музей.
  - 3) Она не пошла на вечеринку, сказав, что ей нечего одеть.

**Задание 5.** *Переведите текст письменно со словарем.*

### Prospects for Russian Space Activity (part II)

Special attention is paid to exploration of Mars.

"Mars-96" was the first project of the large Martian programme, which unfortunately failed. After failure of "Mars-96" space probe the programme of planetary research will be somewhat changed.

Planetary research programme will be further developed in the "Mars-Globe-1", "Mars-Aster", "Mars-Globe-2" and "Mars-Globe-3" projects. The last project of the Martian programme "Mars-Phobos-Grunt" is aimed at the delivery of soil samples from Mars and Phobos to Earth alongside with expansion of the data bank.

Studies of the Sun and solar-terrestrial physics are being carried out within the framework of the "Interball" and "Coronas" projects.

Astrophysical research is aimed at further study of physical processes in the Universe and at forecast of its evolution. In this field the "Spektr" programme is the major one. The "Newton" project plans gravity experiments with electromagnetic signals in close vicinity from the Sun (4-9 radii).

**Задание 6.** *Перепишите и переведите предложения на английский язык.*

1. Особое внимание уделяется исследованию Марса.
2. Программа «Mars-96» была первым проектом, который, к сожалению, провалился (не удался).
3. Изучение солнца проводится в рамках проектов "Interball" и "Coronas".
4. Астрофизическое исследование нацелено на дальнейшее изучение физических процессов, происходящих во вселенной.
5. Проект «Ньютон» планирует гравитационные эксперименты с электромагнитными сигналами в непосредственной близости от солнца.

**Задание 7. Перепишите текст и переведите его:**

**Commuter Bridges**

Denmark's Aarhus airport is one of the first airports in Europe to install low-cost boarding bridges for commuter airline passengers. The bridges have been designed to stow parallel to the terminal building and a number of configurations are available.

The airbridges are designed as conventional bridges, that is, around a circular rotunda, but operate at ground level on wheels. They cost around a third the price of traditional units and the forward telescopic bridge is driven by a belt in the roof. The extension length of a single tunnel is 25 m, which can be extended further to 50 m.

The Swedish aircraft gate support systems provider has also won a contract to supply 34 passenger-boarding bridges to the new main airport under construction at Gardermoen Oslo.

The telescopic bridge is equipped with a number of safety related systems. Including a "smart bumper" which prevents contact of the bridge with the aircraft skin, an autolevelling system, and safety shoe" – a failsafe back-up to ensure that changes in aircraft height do not result in damage to aircraft door units.

There are several advanced computer control systems in the Noseloader and Mobile Telescopic designs, and there is a minimum number of moving parts to support a service life of over 20 years with low maintenance.

**Контрольная работа**

**Вариант I**

**Задание 1.** *Перепишите предложения. Подчеркните -ing-формы, объяснив их употребление. Предложения переведите.*

- 1) I don't remember hearing it before.
- 2) Feeling tired, she sat down on a sofa.
- 3) Swimming against the current was not possible.
- 4) The main thing is our starting in time.
- 5) The electrons leaving the metal surface can produce current.

**Задание 2.** *Переведите предложения, пользуясь образцом.*

**Model:** On learning the news, my father looked (became) pale.

- 1) Получив письмо, она сразу же поехала на станцию.
- 2) Прибыв в аэропорт, мы сразу же обратились в справочное бюро.
- 3) Узнав, что сын нездоров, мы сразу же забрали его из отеля.

**Задание 3.** *Перепишите и переведите следующие словосочетания.*

- |                      |                   |
|----------------------|-------------------|
| 1. a broken cup      | 3. a split milk   |
| 2. a deserted island | 4. a faded flower |

**Задание 4.** *Укажите правильный перевод подчеркнутых слов.*

Measuring distances to the planets and stars has a lot of difficulties.

- |                             |                            |
|-----------------------------|----------------------------|
| 1. Измеряя расстояние ...   | 3. Измерять расстояние ... |
| 2. Измерение расстояния ... | 4. Измерив расстояние ...  |



**Задание 5.** Найдите и подчеркните сложный герундиальный оборот или причастную конструкцию. Предложения переведите.

- 1) After Polzunov's inventing the first steam engine his work remained unknown for more than a century.
- 2) Using their minds and working together men can solve almost any problem.
- 3) Scientists working together is of great advantage for science.
- 4) About 24 million meteors reach the Earth's atmosphere every 24 hours, their total weight amounting to about 5 tons per day.

**Задание 6.** Объясните, какое из русских предложений соответствует предъявленному английскому.

- 1) The scientist is sure to have made a great contribution to science.
  - а) Ученый уверен, что он сделал большой вклад в науку.
  - б) Ученый несомненно сделал большой вклад в науку.
  - в) Ученый обязательно должен сделать большой вклад в науку.
- 2) The doctor must be sent for as soon as possible.
  - а) Доктора необходимо туда как можно скорее.
  - б) За доктором необходимо послать как можно скорее.
  - в) За доктором необходимо было послать как можно скорее.

**Задание 7.** Перепишите и письменно переведите текст со словарем.

*только переписать*

### Space Exploration

Exploration of outer space in the 20<sup>th</sup> century has produced discoveries and inventions that will forever change the way people live, learn and interact.

The dream of space travel is as old as history but in the 20<sup>th</sup> century the dream became reality with astonishing swiftness. As you recall, the first aeroplane flight occurred in 1903 and in 1926 the first liquid-fuelled rocket was launched that travelled 200 feet.

After World War II the superpower opposition between the USA and our country stimulated rocket research and development. Both nations realized that large rockets can be used to attack an enemy from thousands of miles away and that satellites put into orbit around the Earth by rockets could transmit messages.

Our country launched sputnik, the first man-made object to overcome gravity and began the space age. In early 1960s the United States organized the Apollo space programme. This research programme concentrated on landing a man on the moon. Two Americans, Neil Armstrong and Edwin Aldrim, walked on the lunar surface in July 1961.

Since the first moon landing, many nations have developed programmes of space exploration. A network of communication satellites made world-wide television and telephone service possible. Space shuttles allowed regular trips between Earth and space.

Scientific progress resulted in hundreds of benefits for mankind from the weather satellites to determining from outer space the natural resources which are hidden in the earth and discovering areas which are becoming deserts.

**Задание 8.** Ответьте письменно на вопросы.

- 1) How has the space exploration changed the life of mankind?
- 2) Why can you say that the dream of space travel became reality?
- 3) What benefits for mankind has space exploration brought?

## Вариант II

**Задание 1.** *Перепишите предложения. Подчеркните -ing-формы. Объясните их употребление. Предложения переведите.*

- 1) Designing a new engine the engineers used some special methods/
- 2) The temperature of boiling water is 100° C.
- 3) Our delegate insisted on banning the tests immediately.
- 4) Arriving at the station, he found his train gone.
- 5) Swimming in such cold water was dangerous for him.

**Задание 2.** *Переведите предложения, пользуясь образцом.*

Model: Having caught a bad cold, he was taken to the hospital.

- 1) Прожив год в английской семье, она стала хорошо говорить по-английски.
- 2) Окончив школу с золотой медалью, дочь сдавала только один вступительный экзамен в университет.
- 3) Потеряв паспорт, мой друг не мог взять деньги из банка.

**Задание 3.** *Перепишите и переведите следующие словосочетания.*

- |                     |                      |
|---------------------|----------------------|
| 1. unknown designer | 3. unforgotten party |
| 2. a retired pilot  | 4. a grown-up girl   |

**Задание 4.** *Укажите правильный перевод подчеркнутого слова.*

The idea of (создания) a multi-stage rocket belongs to Tsiolkovsky.

- |                   |                        |
|-------------------|------------------------|
| 1) being created  | 3) having been created |
| 2) having created | 4) creating            |

**Задание 5.** *Найдите и подчеркните сложный герундиальный оборот или причастную конструкцию. Предложения переведите.*

- 1) I never doubted his working in this field of science.
- 2) We must not forget that there are many problems remaining still unsolved.
- 3) Polzunov's inventing the first steam engine gave the future inventors the possibility of designing new types of engines.
- 4) Stars differ in size, the largest ones being several times the size of the sun.

**Задание 6.** *Перепишите и переведите предложения. Объясните употребление инфинитива.*

- 1) I was the last to leave our family.
- 2) She wanted us to take care of her children.
- 3) You've got nothing to worry about.
- 4) How to explain to her the rule it is a problem.

**Задание 7.** *Перепишите и письменно переведите текст со словарем.*

## Plastics

Many of us cannot imagine our life at present without plastics. But we cannot realize what a great part they play in raising our standard of living. You cannot go

through a single day without some association with plastics. Your toothbrush, the cap of your toothpaste tube, your comb, the handle of your table knife, your pen, the doorknob ... These are but few examples. Plastics are everywhere. No other material can be used as limitlessly as plastics. Very few materials are as durable and simple in production as plastics. Plastics have become the raw material only since 1928. But during that short period of time furniture, footwear, building materials, textiles, etc. have been manufactured from plastics.

Almost all plastics are produced from coal, air and water. But each material possesses different properties. Knowing the structure of plastics you can, for instance, produce from polyvinyl/chloride a hard sheet or a soft film. Nylon is a non-conductor of electricity and that is very important in electrical industry. Unlike metals, plastics require no finishing.

**Задание 8.** *Ответьте письменно на вопросы.*

- 1) What part do plastics play in raising our standard of living?
- 2) What are the properties of plastics?
- 3) What is manufactured from plastics?
- 4) What are the properties of different kinds of plastics?

### Вариант III

**Задание 1.** *Переписиите предложения. Подчеркните -ing-формы, объяснив употребление. Предложения переведите.*

- 1) We suggested putting the engine to test.
- 2) Soon we met a steamer moving slowly upstream.
- 3) On reaching the bay we dropped the anchor.
- 4) Passing the channel we took a pilot.
- 5) Weather permitting, we shall leave the harbour at midnight.

**Задание 2.** *Переведите предложения, пользуясь образцом.*

Model: Having come to Odessa, we began to overhaul the engine.

- 1) Поставив самолет в ангар, мы отправились домой.
- 2) Написав письмо, я немедленно отправил его.
- 3) Проверив документы, офицер пропустил машину.

**Задание 3.** *Переписиите и переведите следующие словосочетания.*

- |                  |                 |
|------------------|-----------------|
| 1. heated water  | 3. cooled steam |
| 2. the bent beam | 4. burnt coal   |

**Задание 4.** *Укажите правильный перевод подчеркнутого слова.*

(Работая) at his new device, the engineer made some improvements.

- |                  |                       |
|------------------|-----------------------|
| 1) having worked | 3) having been worked |
| 2) working       | 4) being worked       |

**Задание 5.** *Найдите и подчеркните сложный герундиальный оборот или причастную конструкцию. Предложения переведите.*

- 1) The mechanic has repaired the engine, the work being done very carefully.
- 2) We learned about her coming two days ago.
- 3) Different systems are known to be tested in our laboratory.

4) The body being heated, the motion of molecules increases.

**Задание 6.** *Определите функцию инфинитива в предложениях. Дайте перевод.*

- 1) To include this material into the report one must first discuss it.
- 2) To develop national economy is our main task.
- 3) To read English books is necessary.
- 4) To learn new words is easy if one reads a lot.

**Задание 7.** *Перепишите и письменно переведите текст со словарем.*

### Thomas Alva Edison

Most people know that Thomas Edison invented the first working light bulb, but they don't know anything else about him. Edison had almost no formal schooling, yet he invented over 1000 different things.

Among Edison's inventions are: the phonograph (record player), the movie camera and the movie projector. Thomas Edison invented his electric bulb in 1879 but there was still much work to do. No one knew about how to use electricity outside of a laboratory before Thomas Edison. He and his workers had to create a safe electric system. First they had to build a factory. Then they had to build a dynamos (generators) to make the electricity. Next they had to send out the electricity.

To show people that he was serious, Edison began his project in New York City. By 1887, much of New York City had electricity. Edison founded the Edison Electric Light Company and continued to supply electricity to New York and other places.

Thomas Edison lived until 1931. He continued to invent all his life.

After the War, he tried to invent a substitute for rubber because of the shortage that the war caused. Thomas Edison was a true genius, but he never went to a college or university. The only time Edison attended school was when he was seven years old. He stayed for three months and never returned. Thomas Edison was a school dropout, yet he became one of America's most famous and most honoured man.

**Задание 8.** *Ответьте письменно на вопросы по тексту.*

- 1) What were Edison's inventions?
- 2) What did he have to do before the electric bulb was useful to the public?
- 3) What part did he play in supplying electricity to New York?
- 4) What did he do during and after World War I?
- 5) What education did he get?

### Вариант IV

**Задание 1.** *Перепишите предложения. Подчеркните –ing-формы, объяснив их употребление. Предложения переведите.*

- 1) The engine is working.
- 2) She kept on talking.
- 3) Examining the compressor, the worker noticed the damage.

- 4) Smoking is not allowed in this room.
- 5) The falling water has kinetic energy.

**Задание 2.** *Переведите предложения, пользуясь образцом.*

Model: He left without saying a word.

- 1) Она прошла мимо, не взглянув на меня.
- 2) Он ушел домой, не дождавшись меня.
- 3) Она начала плакать, услышав эту новость.

**Задание 3.** *Перепишите и переведите следующие словосочетания.*

1. rejected design
2. adopted method
3. arrested person
4. excited voice

**Задание 4.** *Укажите правильный перевод подчеркнутых слов.*

The sun being near the zenith, its rays are nearly vertical.

1. Чтобы солнце было...
2. Когда солнце находится...
3. Солнце находится...
4. Если бы солнце находилось...

**Задание 5.** *Найдите и подчеркните сложный герундиальный оборот или причастную конструкцию. Предложения переведите.*

- 1) The teacher insisted on our being present at the lecture.
- 2) This scientist is known to have discovered one of the most amazing phenomena.
- 3) These results of tests were followed by others, no satisfactory results being obtained.
- 4) His having obtained good results of the last laboratory work surprised me.

**Задание 6.** *Перепишите и переведите предложения. Объясните употребление инфинитива.*

- 1) Radar is used to detect objects in the air or at sea.
- 2) Vera Lomako was the first woman in the world to fly a fighter plane.
- 3) This ship is reported to develop a speed of 300 mph.
- 4) The metal is too brittle to be used for this purpose.

**Задание 7.** *Перепишите и переведите текст.*

## Science and Technology

In recent years, scientific and technological developments have changed life on our planet as well as our views both of ourselves as individuals in society and of the universe as a whole.

Today science and technology are closely related. Many modern technologies such as nuclear power and space flights depend on science and the application of scientific knowledge and principles. Each advance in pure science creates new opportunities for the development of new ways of making things to be used in daily life.

Technologies refer to the ways in which people use discoveries to satisfy needs and desires, to alter the environment, to improve their lives.

Throughout human history men and women have invented tools, machines, materials and techniques to make their lives easier.

The scientific revolution that began in the 16<sup>th</sup> century was the 1<sup>st</sup> time that science and technology began to work together.

Thus, Galileo, who made revolutionary discoveries in astronomy and physics, also built an improved telescope and patented a system of lifting water. However it was not until the 19<sup>th</sup> century that technology truly was based on science and inventors began to build on the work of science.

For example, Thomas Edison built on the early experiments of Faraday and Henry in his invention of the first practical system of electrical lighting carbon filament for the electrical bulb in a research laboratory. This was the first true modern technological research.

In a sense, the history of science and technology is the history of all humankind.

**Задание 8.** *Ответьте письменно на вопросы.*

- 1) What role has scientific and technological development played in man's life?
- 2) What proves that science and technology are closely related today?
- 3) What was the first true modern technological research?

Тексты для самостоятельного чтения

My Future Profession

Finishing school is the beginning of **independent** (1) life for millions of **school leavers** (2). Many roads are opened before them: vocational and technical schools, institutes and universities. But it is not an easy thing to choose a profession of **more than** (3) 2,000 **existing** (4) in the world. Some pupils do this at industrial training centres, some **follow the advice** (5) of their parents, others can't decide even after leaving school.

As for me I **made** my **choice** (6) long ago. I want to become a teacher of the Russian language and literature. My choice of this **occupation** (7) hasn't come as a **sudden flash** (8). During all school years literature was my favourite subject. I've read a lot of books by Russian and foreign writers.

I understand that reading books helps people in self-education and in **solving** (9) different life problems. I would like to teach my pupils to enjoy reading, to encourage them to learn our national language and literature, which is the **source** (10) of national culture.

My parents are also teachers and I know that teaching is a very **specific** (11) and difficult job. It shouldn't be taken easily. The teacher is a person who is learning as well as teaching all his life. Most jobs can be done within the usual **office hours** (12) from 9 a.m. till 5 p.m., but teacher's work is never done and evenings are usually spent in making exercise books and preparing for the next lesson.

Teachers do not only teach their subjects. They bring up the younger generation in the spirit of high moral ideas. They develop their pupil's intellect, form their views and characters, their attitudes to life and to other people. It's a great responsibility and the teacher must be a model of competence himself. It's not as easy as it may seem at first. But I think that love for children combined with the knowledge I'll get at the University would be quite enough to succeed in my work. I'm applying to the Philological Department and I am sure my dream will come true sooner or later.

Notes:

- |                         |                       |
|-------------------------|-----------------------|
| 1) independent          | - независимый         |
| 2) school leaver        | - выпускник           |
| 3) out of more than     | - более чем из        |
| 4) to exist             | - существовать        |
| 5) to follow the advice | - следовать совету    |
| 6) to make a choice     | - делать выбор        |
| 7) occupation           | - занятие, профессия  |
| 8) sudden flash         | - неожиданная вспышка |
| 9) to solve             | - решать              |
| 10) source              | - источник            |
| 11) specific            | - специфический       |

12) office hours - «присутственные часы»

### Education in Russia

Every citizen of our country has the right to education. This right is guaranteed by the Constitution. It is not only a right but a duty, too. Every boy or girl must get secondary education. They go to school at the age of six or seven and must stay there until they are 14-17<sup>n</sup> years old. At school pupils study **academic subjects** (1), such as Russian, Literature, Mathematics, History, Biology, a foreign language and others.

After finishing 9 forms of a secondary school young people can continue their education in the 10<sup>th</sup> and the 11<sup>th</sup> form. They can also go to a **vocational** (2) or **technical school** (3), where they study academic subjects and receive a profession. A college year gives general knowledge in academic subjects and a **profound knowledge** (4) in one or several subjects.

After finishing a secondary, vocational, technical school or a college, young people can start working or enter an institute or a university. Institutes and universities train specialists in different fields. A course at an institute or a university usually takes 5 years. Many universities have evening and **extramural departments** (5). They give their students an opportunity to study without leaving their jobs. Institutes and universities usually have graduate courses which give candidate or doctoral degrees.

Education in this country is free (6) at most schools. There are some private primary and secondary schools where pupils have to pay for their studies. Students of institutes and universities **get scholarships** (7). At many institutes and universities there are also departments where students have to pay for their education.

#### Notes:

- |                                 |  |
|---------------------------------|--|
| 1) an academic subject          | - общеобразовательный предмет                  |
| 2) a vocational school          | - училище, ПТУ                                 |
| 3) a technical school           | - техникум                                     |
| 4) to give a profound knowledge | - дать углубленные знания в какой-либо области |
| 5) an extramural department     | - заочное обучение                             |
| 6) free                         | - бесплатный                                   |
| 7) to get a scholarship         | - получать стипендию                           |

### American Universities and Colleges

Higher education in the USA includes educational programmes which usually **require for admission** (1) 12 years of elementary and secondary schooling.

The most common type of higher education is the college. It requires for admission graduation from a standard secondary school; its four-year **curriculum** (2) leads to the **bachelor's degree in arts and sciences** (3). The college may be the



**central unit** (4) around which the university is organized, or it may be a **separate corporate entity** (5), independent from the University.

The university in the United States is **an educational institution** (6) comprising a **college of liberal arts and sciences** (7), a professional school leading to a professional degree and a **graduate college** (school) (8). A graduate college **provides programmes for study and research** (9) <sup>including</sup> beyond the levels of the bachelor's and first professional degree.

In addition to colleges and universities there is a large number of professional schools, separate from universities. They provide preparation in one or more professional fields, such as law, music or theology. Such schools don't offer the full four-year curriculum leading to a degree.

**An institute of technology** (10) is a **degree-granting institute** (11) that specializes in science and technology; some of them have graduate study.

<sup>range</sup>The colleges in the USA differ greatly in size – they may include from 100 to 5000 students and more. Most of the largest institutions fall into the category of universities, the largest being University of California, State University of New York, New York University, Columbia University and others.

#### Notes:

- |   |   |
|---|---|
| 1) to require for admission                     | - требовать при поступлении                         |
| 2) a curriculum                                 | - программа   |
| 3) the bachelor's degree in arts and sciences   | - степень бакалавра гуманитарных и технических наук |
| 4) to be the central unit                       | - быть центральным звеном                           |
| 5) a separate corporate entity                  | - отдельная составная единица                       |
| 6) an educational institution                   | - образовательное учреждение                        |
| 7) a college of liberal arts and sciences       | - колледж свободных искусств и наук                 |
| 8) a graduate college (school)                  | - аспирантура                                       |
| 9) to provide programmes for study and research | - предоставлять программу обучения и исследований   |
| 10) an institute of technology                  | - технический институт                              |
| 11) a degree-granting institution               | - учебное заведение, присваивающее степень          |

#### Science

Science is important to most people living in the modern world for a number of reasons. In particular, science is **important to world peace and understanding** (1), to the understanding of technology, and to our understanding of the world.

Science is important to world peace in many ways. On the one hand, scientists have helped **to develop many of the modern tools of war** (2). On the other hand, they have also helped to keep the peace through research which has improved life for people. Scientists have helped us understand the problem of supplying the world with enough energy; they have also analyzed the world's resources. We can begin to learn

to share the resources (3) with the knowledge provided to us by science (4). Science studies the Universe and how to use its possibilities for benefit of men.

Science is also important to everyone who is affected by modern technology (5). Many of the things that make our life easier and better are the results of advances in technology, and if the present pattern continue, technology will affect us even more in the future than it does now. In some cases, such as technology for taking salt out of ocean water, technology may be essential for our lives on Earth (6).

The study of science also provides people with an understanding (7) of natural worlds. Scientists are learning to predict earthquakes, are continuing to study many other natural events such as storms. Scientists are also studying various aspects of human biology and the origin and developments of the human race (8). The study of the natural world may help improve life for many people all over the world.

A basic knowledge of science (9) is essential for everyone. It helps people find their way in the changing world (10).

#### Notes:

- |   |   |
|---|---|
| 1) to be important to world peace and understanding | - иметь большое значение для достижения мира и понимания (между народами) |
| 2) to develop the modern tools of war               | - создать современное оружие  |
| 3) to share the resources                           | - сообща пользоваться ресурсами   |
| 4) knowledge provided to someone by science         | - знания, предоставляемые кому-либо наукой                                |
| 5) to be affected by modern technology              | - быть связанным современной техникой                                     |
| 6) to be essential for one's life                   | - иметь огромное значение для чьей-либо жизни                             |
| 7) to provide people with an understanding of       | - давать людям понимание ч-либо   |
| 8) the origin and development of human race         | - происхождение и развитие человеческого рода                             |
| 9) a basic knowledge of science                     | - элементарное знание науки   |
| 10) to find one's way in the changing world         | - ориентироваться в меняющемся мире                                       |

### Tsiolkovsky – Founder of Astronautics

The world knows the names of many great scientists: mathematicians, physicists, chemists, biologists, historians, etc. A lot of discoveries have been made by them in different fields of science and engineering. But the greatest event of the 20<sup>th</sup> was the flight of Man into space. Special merit here belongs to Russian scientists. Konstantin Eduardovich Tsiolkovsky is one of them.

Konstantin Eduardovich Tsiolkovsky, the founder of astronautics, was born in 1857 in a small Russian village near Ryazan. When he was 10 he had scarlet fever, and was left permanently deaf. This had a great influence on his life.

Only when Tsiolkovsky reached the age of 15 he began to study elementary mathematics. At about this time he first thought of **constructing a large balloon with a metallic envelope** (1). Realizing that his knowledge was not enough, he began to study higher mathematics. The result was that he became a mathematics and physics teacher and remained so for nearly forty years.

Tsiolkovsky **carried out experiments on** (2) **steam engines** (3) for a time, but then he returned to the theoretical study of the metallic dirigible. In 1887, his first published paper on the dirigible appeared. Mendeleyev was interested in this work and helped Tsiolkovsky. **The account of this** (4) **aeronautical work was submitted to the Academy of Sciences** (5) who regarded it favourably and made Tsiolkovsky a grant of 470 roubles.

He had not **given up his idea about space travel** (6). A popular report on this subject was first published in 1895. Tsiolkovsky's idea of a spaceship was based on the use of liquid fuels.

During the next 15 years Tsiolkovsky worked over other designs for spaceships. Some of them are now **standard practice in** (7) the **guided missile field** (8). He published several articles and books dealing with the mathematical theory of rocket flights and spacetravel. His calculations were used in modern theory of cosmonautics and practical space flights. They showed that it would be possible to travel out in space in rockets and even to **set up manned space stations** (9) around the Earth.

Tsiolkovsky's contribution to science is so great that he is considered to be "Father of Cosmonautics".

#### Notes:

- |  |   |
|--|---|
| 1) to construct a large balloon with a metallic envelope | - сконструировать большой воздушный шар с металлической оболочкой |
| 2) to carry out experiments on                           | - проводить эксперимент по ч-либо                                 |
| 3) a steam engine  | - паровой двигатель   |
| 4) an account of smth.                                   | - отчет о ч-либо  |
| 5) to submit to the Academy of Sciences                  | - представить на рассмотрение Академии наук                       |
| 6) to give up one's ideas about space travel             | - отказаться от идеи космических полетов                          |
| 7) to be standard practice in smth                       | - быть общепринятым в какой-либо области                          |
| 8) the guided missile field                              | - область управляемых ракетных полетов                            |
| 9) to set up manned space stations                       | - установить космические станции с человеком на борту             |

#### Environment Protection must be Global

That the problem of **pollution** (1) and ecology has become the most important one for mankind is **evident** (2) to all. The more civilization is developing, the greater

the ecological problems are becoming. Air and water pollution by industry is now reaching **tremendous** (3) proportions. In our era it is changing from a national to an international problem, especially in territories where rivers cross several countries. The seas and oceans are also becoming seriously polluted. A similar situation is developing in the atmosphere. It is known that many cities **throughout** (4) suffer from air pollution.

However, our scientific knowledge and technological **advancement** (5) make it possible to **eliminate** (6) it, if people use good will and make considerable **investments** (7) for that purpose. The development of natural resources on a global **scale** (8) is already possible from a scientific and technical **standpoint** (9). Large-scale experimental work in this area is successfully being carried out.

At present scientists in industrially developed countries are working on the theory of **interaction** (10) of all the atmospheric and oceanic global processes that determine the climate and weather of the world. Increasing growth of population, industrialization and the resources are slowly but surely changing the global climate and water balance.

The essential feature in the environment protection is that many problems can be solved only on the level of **world community** (11). **Therefore** (12) the planning of protection against pollution by human society **as a whole** (13) is **imperative** (14) today and in the nearest future. It is the **joint efforts** (15) of many scientists and special public organizations that can deal with the problem and **take necessary measures** (16) to protect the environment.

#### Notes:

- 1) pollution - загрязнение
- 2) to be evident - очевидный
- 3) tremendous - огромный, ужасающий
- 4) throughout - по всему миру
- 5) advancement - успех, прогресс
- 6) to eliminate - устранять
- 7) investment - вклад
- 8) scale - масштаб
- 9) standpoint - точка зрения
- 10) interaction - взаимодействие
- 11) world community - мировое сообщество
- 12) therefore - поэтому
- 13) as a whole - в целом
- 14) imperative - настоятельный
- 15) joint efforts - совместные усилия
- 16) take measures - принимать меры

#### Ancient Steel-Making Secret

When two metallurgists (1) at Stanford University were trying to produce a "superplastic" metal they became interested in the secret of Damascus steel (2), the

legendary (3) material used by numerous warriors (4) of the past, including Crusaders (5). Its formula had been lost for generations (6). Analyses of a new steel revealed (7) properties almost identical to those they found in Damascus steel, although their own plastic steel had been produced by present-day methods.

The remarkable (8) characteristics of Damascus steel became known to Europe when the Crusaders reached the Middle East in the 11-th century. They discovered that swords (9) of the metal could split (10) a feather (11) in air and at the same time retain (12) their edge sharp through many battles.

The secrets of Damascus steel were known in many parts of the ancient world, especially in Persia, where some of the finest specimens (13) were produced. For eight centuries the Arab sword makers kept the secret about their techniques and methods. And with the invention of firearms (14), the secret was lost and it was never fully rediscovered.

The two metallurgists carried out (15) a lot of researches. When they realized that they might be close to the discovery of a new material, a sword fancier (16) pointed out that Damascus steel, like their own product, was very rich in carbon (17). This led them to conduct a comparative analysis of their steel and those of the ancient weapons. As a result, it was found that a basic requirement was a high carbon content (18). The two metallurgists believed it had to be from 1 per cent to 2 per cent, compared to only a part of 1 per cent in ordinary steel. Their research showed how to make steel of even greater hardness than Damascus steel.

#### Notes:

- |                  |                          |
|------------------|--------------------------|
| 1) metallurgist  | - металлург              |
| 2) steel         | - сталь                  |
| 3) legendary     | - легендарный            |
| 4) warrior       | - воин                   |
| 5) Crusader      | - крестоносец            |
| 6) Generation    | - поколение              |
| 7) to reveal     | - показывать             |
| 8) remarkable    | - замечательный          |
| 9) sword         | - меч                    |
| 10) to split     | - раскалывать, рассекать |
| 11) feather      | - перо                   |
| 12) to retain    | - сохранять              |
| 13) specimen     | - образец                |
| 14) firearms     | - огнестрельное оружие   |
| 15) to carry out | - выполнять              |
| 16) fancier      | - знаток                 |
| 17) carbon       | - углерод                |
| 18) content      | - содержание             |

#### Peter the Great

**Peter I**, or Peter the Great was one of the most outstanding **rulers** (1) and reformers in Russian history. He was **Tsar of Russia** (2) and **became Emperor** (3) in 1721. First he ruled together with his brother, Ivan, and his sister Sofya. In 1696 he **became a sole ruler** (4).

He was a healthy, lively and clever child. He loved military games and **enjoyed carpentry, blacksmithing and printing** (5). At the age of 17 he was married.

Peter I is famous for **drawing Russia further to the East** (6). He also transferred the capital from Moscow to St. Petersburg. Peter travelled much in Western Europe and tried **to carry western customs and habits to Russia** (7). He introduced western technology. He completely changed the Russian government and military system: he increased the power of the monarch and reduced the power of the boyars and the church.

In foreign policy, Peter **I waged a war with** (8) Turkey (1695-1696) and the Great Northern War with Sweden (1700-1721), and a war with Persia (1722-1723). In these wars, he wanted **to get access to** (9) the Baltic, the Black Sea and the Caspian Sea. He managed to get the shores of the Baltic Sea and The Caspian Sea. Peter I played a great part in Russian history. After his death, Russia was **much more secure** (10) and progressive than it had been before his reign.

#### Notes:

- |   |   |
|---|---|
| 1) a ruler  | - правитель   |
| 2) Tsar of Russia                                 | - российский царь   |
| 3) to become Emperor                              | - стать императором   |
| 4) to become a sole ruler                         | - стать единоличным правителем                                      |
| 5) to enjoy carpentry, blacksmithing and printing | - с удовольствием заниматься плотницким, кузнечным и печатным делом |
| 6) to draw Russia further to the East             | - расширить границы России дальше на Восток                         |
| 7) to carry western customs and habits to Russia  | - принести в Россию западные обычаи и нравы                         |
| 8) to wage a war with                             | - вести войну против какой-либо страны                              |
| 9) to get access to                               | - получить доступ к (чему-либо)                                     |
| 10) to be much more secure                        | - быть значительно защищенным                                       |

### Martin Luther King

Martin Luther King was a clergyman and one of the most outstanding **members of the civil rights movement** (1) in the 20<sup>th</sup> century.

He was born on January 15, 1929. He became famous in the 1950 and 1960es through **opposition to racial segregation** (2) in the United States of America.

In 1963 he helped organize the March on Washington; the March **drew** hundreds of thousands of civil rights supporters to Washington **for a mass rally** (3).

At this March he delivered his most celebrated speech. He said: "I still have a dream. It is a **dream deeply rooted in the American dream** (4). I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to **sit down together at the table of brotherhood** (5). I have a dream that my four little children will one day live in a nation where they will not be **judged by the colour of their skin** (6) but by the content of their character".

After this March Martin Luther King was put into jail. In 1964 Martin Luther King received the Nobel Prize for peace. He was **assassinated** (7) by James Earl Ray in 1968. A national holiday each January 15 commemorates his life.

#### Notes:

- |   |  |
|---|--|
| 1) a member of the civil rights movement            | - участник движения за гражданские права |
| 2) opposition to racial segregation                 | - борьба с расовой сегрегацией           |
| 3) to draw smb. for a mass rally                    | - привлечь к-либо на массовый митинг     |
| 4) to be deeply rooted in the American dream        | - уходить корнями в "американскую мечту" |
| 5) to sit down together at the table of brotherhood | - сесть за братский стол переговоров     |
| 6) to be judged the colour of one's skin            | - быть оцененным по цвету кожи           |
| 7) to assassinate smb.                              | - убить к-либо (о политическом убийстве) |

### Ivan the Terrible

Probably one of the most famous figures in Russian history is Ivan IV, called the Terrible because of his cruelty.

He ruled in the period when boyars were fast losing their political power, their lands, and sometimes, due to Ivan IV, their lives. On the other hand, more and more power was given to dvoryane.

The three-year-old Ivan IV **became grand prince** (1) in 1533, after the death of his father, Vasily III. At first his mother, Gelene Glinsky, ruled instead of her son. After her death in 1538 the Shuiskys and Belskys struggled for the throne. In 1547 Ivan IV was crowned tsar of all Russia. In 1549 the first zemsky sobor was held.

Ivan IV decided that all landowners should begin military service when they were 15, and serve till the end of their lives. He **created also a standing army** (2), streltsy. This was necessary because Russia had enemies.

Ivan first **began a campaign against** (3) tatars of Kazan and defeated them in 1552. In 1554-1556 his armies took Astrakhan, thus getting for Russia the Volga Valley and the way to the Caspian Sea.

The tsar's **chief interest** (4) lay in trade (5) with the West through the Baltic. He began a war against Livonia which lasted 24 years and ended in nothing.

In 1553, Ivan fell seriously ill. Thinking he was close to death. He wanted boyars **to give an oath in their loyalty to** (6) his son Dmitry. Boyars didn't want to. Ivan **organized a new guard** (7), Oprichniki, who were famous for their cruelty. They numbered several thousands and killed many boyars and other people Ivan thought of as enemies. They also confiscated their property. Ivan's cruelty led to a number of risings. The Oprichnina was abolished in 1572.

Ivan IV died in 1584. Though known for his cruelty, he is also famous for **getting for Russia access to** (8) the Baltic sea and for beginning the struggle with boyars for the power of dvoryane. He is undoubtedly one of the most famous figures in Russian history.

#### Notes:

- |   |   |
|---|---|
| 1) to become grand prince                   | - стать великим князем                    |
| 2) to create a standing army                | - создать постоянную армию                |
| 3) to begin a campaign against              | - начать кампанию против (ч-либо)         |
| 4) one's chief interest                     | - главная цель                            |
| 5) to lie in smth                           | - заключаться в чем-либо                  |
| 6) to give an oath in one's loyalty to smb. | - дать клятву в верности кому-либо        |
| 7) to organize a guard                      | - организовать войско, гвардию            |
| 8) to get for Russia access to              | - открыть для России выход<br>(к Балтике) |



Степени сравнения прилагательных и наречий

Прилагательные	Положительная степень	Сравнительная степень - er	Превосходная степень -est
a) односложные	white big short	whiter bigger shorter	the whitest the biggest the shortest
b) двусложные на -er, -y, -ow, -le	early	earlier	the earliest
Многосложные	important	more } important less }	the most } important the least }
Исключения	much } many } little } good } well } bad } badly } far }	more  less better  worse  farther (further)	the most  the least the best best the worst worst (the) farthest (furthest)

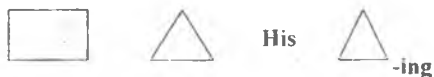
Сравнительная конструкция

a) as ... as - такой же ... как

not as ... as (not so ... as) - не такой как

b) the more ... the better - чем больше ... тем лучше

Сложный Герундиальный оборот



e.g. The teacher insisted on **his reading** that article. – Учитель настаивал на том, чтобы он прочел эту статью.

Независимый причастный оборот



e.g. The weather **being** fine, we went to ski. – Так как погода была хорошая, мы пошли кататься на лыжах.



e.g. All metals are good conductors, copper **being** one of the best.

Таблица неправильных глаголов

Infinitive	Past Simple	Participle II	Перевод
to be	was/were	been	быть
to beat	beat	beaten	бить
to become	became	become	становиться
to begin	began	begun	начинать(ся)
to blow	blew	blown	дуть
to bet	bet	bet	держаться пари
to break	broke	broken	ломать
to bring	brought	brought	приносить
to broadcast	broadcast	broadcast	вести передачу
to build	built	built	строить
to burn	burnt	burnt	гореть, жечь
to buy	bought	bought	покупать
can	could		мочь, уметь
to catch	caught	caught	ловить, поймать
to chose	chose	chosen	выбирать
to come	came	come	приходить
to cost	cost	cost	стоять
to creep	crept	crept	ползти
to cut	cut	cut	резать
to dig	dug	dug	копать
to do	did	done	делать
to draw	drew	drawn	тащить, рисовать
to drink	drank	drunk	пить
to drive	drove	driven	везти
to eat	ate	eaten	есть, кушать
to fall	fell	fallen	падать
to feel	felt	felt	чувствовать (себя)
to fight	fought	fought	бороться
to find	found	found	находить
to fly	flew	flown	летать
to forbid	forbade	forbade	запрещать
to forget	forgot	forgotten	забывать
to forgive	forgave	forgiven	прощать
to freeze	froze	frozen	замерзать
to get	got	got	получать, становиться
to give	gave	given	давать
to go	went	gone	идти, ехать
to grow	grew	grown	расти, выращивать
to have	had	had	иметь

have to	had to		должен, вынужден
to hear	heard	heard	слышать
to hold	held	held	держать
to keep	kept	kept	держать, хранить
to kneel	kneelt	kneelt	становиться на колени
to know	knew	known	знать
to lead	led	led	вести
to learn	learnt learned	learnt learned	учиться, узнавать
to leave	left	left	покидать
to lend	lent	lent	давать займы
to let	let	let	позволять
to light	lit	lit	зажигать
to lose	lost	lost	терять
to make	made	made	делать, создавать
may	might		мочь, иметь возможность
to mean	meant	meant	значить, иметь в виду
to meet	met	met	встречать (ся)
to put	put	put	класть, ставить
to read	read	read	читать
to ring	rang	rung	звонить, звенеть
to run	run	run	бежать
to say	said	said	сказать, говорить
to see	saw	seen	видеть
to seek	sought	sought	искать, разыскивать
to sell	sold	sold	продавать
to send	sent	sent	посылать, отправлять
to set	set	set	помешать, класть
to sew	sewed	sewn/sewed	шить
to shake	shook	shaken	трясти
to shine	shone	shone	светить, сиять
to show	showed	shown	показывать
to shrink	shrank	shrunk	садиться, давать усадку
to shut	shut	shut	закрывать
to sing	sang	sung	петь
to sit	sat	sat	сидеть
to sleep	slept	slept	спать
to slide	slid	slid	скользить
to speak	spoke	spoken	говорить, разговаривать
to spend	spent	spent	тратить, проводить время

to spit	spat	spat	плевать, брызгать
to split	split	split	раскалывать, расщеплять
to spread	spread	spread	распространять
to spring	sprang	sprung	снабжать пружиной
to stand	stood	stood	стоять
to stick	stuck	stuck	втыкать, накалывать
to sting	stung	stung	жалить
to sweep	swept	swept	мести, подметать
to swim	swam	swum	плавать
to swing	swung	swung	качать, колебать
to take	took	taken	брать, взять
to teach	taught	taught	учить, обучать
to tear	tore	torn	рвать, разрывать
to tell	told	told	сказать, рассказывать
to think	thought	thought	думать
to throw	threw	thrown	бросать
to understand	understood	understood	понимать
to upset	upset	upset	опрокидывать,
to weep	wept	wept	плакать
to win	won	won	побеждать
to write	wrote	written	писать

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