

Министерство образования и науки Челябинской области
Государственное бюджетное профессиональное образовательное учреждение
«Южно-Уральский государственный технический колледж»

Рабочая тетрадь
по учебной дисциплине
«Иностранный язык в профессиональной деятельности»
(английский)
для студентов 2 курса
специальности
15.02.16 Технология машиностроения
ФП «ПРОФЕССИОНАЛИТЕТ»

Челябинск, 2023

Составлено в соответствии с ОДОБРЕНА
рабочей программой Предметной (цикловой)
учебной дисциплины комиссией
«Иностранный язык в Протокол № 1
профессиональной «8» сентября 2023г.
деятельности» (английский
язык)



_____ А.А. Клушева

УТВЕРЖДАЮ
Заместитель
директора по УМР
ЮУрГТК
_____ Т.Ю. Крашакова
«__» _____ 2023г.

Составитель: Малева Н.В., преподаватель английского языка Южно-Уральского государственного колледжа.

АКТ СОГЛАСОВАНИЯ

на рабочую тетрадь по учебной дисциплине «Иностранный язык в профессиональной деятельности» (английский) для студентов 2 курса по специальности

15.02.16 Технология машиностроения,
разработанную преподавателем

Южно-Уральского государственного технического колледжа
Малевой Н.В.

Представленная на рецензию тетрадь предназначена для развития у обучающихся коммуникативной компетенции в рамках изученных тем и направленных на повышение мотивации к изучению английского языка.

Главная структурная особенность пособия заключается в том, что оно представляет собой практикум по основным формам и структурам грамматики английского языка и включает в себя разнообразные упражнения и задания аналитического и тренировочного характера, позволяющие закрепить полученные знания по грамматике современного английского языка.

Тексты для чтения, включенные в тетрадь, играют важную роль в процессе обучения речевому общению. Они представляют собой одно из важнейших средств получения информации, широко используются в познавательных и эстетических целях и играют одну из важнейших ролей в процессе обучения иностранному языку. В пособие также включены тексты профессиональной направленности, что способствует формированию профессиональных компетенций.

Рабочая тетрадь составлена в соответствии с требованиями Федеральных государственных образовательных стандартов к уровню подготовки выпускников и рабочей программой учебной дисциплины «Английский язык» для средних специальных учебных заведений. Данная тетрадь является перспективным дидактическим средством, которое значительно повышает эффективность учебного процесса.

Генеральный директор ООО «ЧЗДТ»

Гордеев Сергей Владимирович



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Тема 1. МНОЖЕСТВЕННОЕ ЧИСЛО СУЩЕСТВИТЕЛЬНЫХ

Rule

-S

после глухих согласных	после звонких согласных и гласных	после ge, ce, ze, se
[s]	[z]	[iz]
apricot <u>s</u> stamp <u>s</u> book <u>s</u> cat <u>s</u>	onion <u>s</u> boy <u>s</u> dog <u>s</u> day <u>s</u>	cabbage <u>s</u> place <u>s</u> prize <u>s</u> house <u>s</u>

-es

после: sh, ch, s, x -[iz]			
brush <u>es</u>	bench <u>es</u>	bus <u>es</u>	box <u>es</u>

Ho! potatoes, tomatoes, Negroes -[z]

Remember

A man	men
A woman	women
A child	children
A foot	feet
A tooth	teeth
A goose	geese
A mouse	mice
An ox	oxen
A louse	lice

Task 1. Give the plural of the following nouns.

Story, city, country, dictionary, key, party, tray

- The students in my class come from many _____ of our region.
- My money and my _____ are in my pocket.
- By the end of the term we'll have to read a few _____ by S. Maugham.
- I like going to _____ because I enjoy socializing with people.
- People carry their food on _____ at a cafeteria.
- We always look up words in _____ when we write essays.
- Sportsmen from different _____ of the world take part in the Olympic Games.

Task 2. Give the plural of the following nouns.

Knife, life, thief, roof, loaf, cliff, wolf

- Please put the forks, _____ and spoons on the table.
- Packs of _____ hunting nearby caused so much fear that nobody went to the forest mushrooming.
- We all have some problems in our _____.
- All the houses were covered with tiled _____.
- The _____ were caught and arrested.
- We could see the white _____ of Great Britain in the distance.
- The kitchen bread-bin contained three _____ of sliced white bread and two buns.

Task 3. Give the plural of the following nouns.

Dish, glass, match, potato, bush, tax, bus, tomato, photo

1. Bob drinks eight... of water every day.
2. Can you take a few ... of me and Rachel?
3. Please put the ... and the silverware on the table.
4. All citizens pay money to the government every year. They pay their ...
5. I can see trees and ... outside the window.
6. I want to light the candles. I need some ...
7. When I make salad, I use lettuce and ...
8. Sometimes Sue has a hamburger and French-fried ... for dinner.
9. Are there any ... from here to the town center?

Task 4. Give the plural of the following nouns.

a star_____

a mountain_____

a tree_____

a shilling_____

a king_____

the waiter_____

the queen_____

a man_____

the man_____

a woman_____

the woman_____

an eye_____

a shelf_____

a box_____

the city_____

a boy_____

a goose_____

the watch_____

a mouse_____

a dress_____

a toy_____

the sheep_____

a tooth_____

a child_____

the ox_____

a deer_____

the life_____

a tomato_____

Task 5. Give the plural of the following word combinations.

This tea-cup_____

this egg_____

that wall _____
that picture _____
this foot _____
that mountain _____
this lady _____
that window _____
this man _____
that match _____
this knife _____

Запомните:

this is — these are; that is — those are; there is — there are; it is — they are

Task 6. Give the plural of the following sentences

1. This room is very large. _____
2. There is a match in the box. _____
3. Has this lady a knife? _____
4. There is a man and a woman in the street. _____
5. This lady is that gentleman's wife. _____
6. This shoe is too large for my foot. _____
7. The child is sitting on a bench. _____
8. My tooth is white. _____
9. This key is made of steel. _____
10. A potato is a vegetable and a cherry is a fruit. _____

Task 7. Fill in the blanks with the correct plural form of the noun.

Example: Some (person) *people* like to live alone.

1. Most (family) _____ in the U.S. own a house.
2. The U.S. has over 300 million (person) _____.
3. Americans move many (time) _____.
4. Some (woman) _____ earn more money than their (husband) _____.
5. (Home) _____ are very expensive in some (city) _____.

6. Divorce is very high in some (country) _____.
7. How many square (foot) _____ does your house or apartment have?
8. Some apartments have a problem with (mouse) _____.
9. (pet) _____ are popular in the U.S.
10. (dog) _____ are more common than (cat) _____.
11. (fish) _____ are interesting to watch.

Task 8. Choose the right item:

1. I had two _____ for lunch today.
a) applees b) apple c) apples
2. I was scared because John brought 2 _____ to school.
a) knives b) knife c) knives
3. My favourite MacDo meal is a Big Mac with _____.
a) fryes c) frys c) fries
4. In my family there are more _____ than females.
a) mails b) males c) malls
5. New Zealand has a lot of _____.
a) ships b) sheeps c) sheep
6. There are many _____ here.
a) flysb) flies c) flyes
7. We always have _____ for dinner.
a) potatoes b) potatos c) potato
8. We caught a lot of _____ yesterday.
a) fishes b) fishs c) fish
9. My mother is afraid of _____.
a) mice b) mouses c) mouths
10. It is only for _____.
a) mans b) man c) men
11. In my class there are many _____.
a) children b) childs c) chills
12. Do you know where my _____ are?
14. I like _____. They are so funny to watch.
a) monkie b) monkeys c) monkeyes
15. You have lips like _____.
a) cherries b) cherries c) cheerys
16. It is normal to have 28 _____.
a) tooths b) teethes c) teeth
17. There are three _____.
a) dice b) die c) dices
18. How many _____ you take at the party?
a) photoes b) photos c) photo
19. We bought three _____ for dinner.
a) salmones b) salmon c) salmons
20. Do you know where the _____ were from?
a) thieves b) thiefs d) thiefes
21. Both my _____ are sore.
a) foots b) feet c) feeds
22. Out of seventeen students three became _____.
a) cheves b) chefs c) cook
23. In my class there are 9 girls and 10 _____.
a) boys b) boyes c) boies
24. I love _____. They are nice when it is hot.
a) tries b) trees c) threes
25. _____ are wiser than men.

- a) keyes b) keys c) keies a) womans b) wimen c) women
 13. There were 12 _____ in the tray. 26. A lot of the kids had _____.
 a) egges b) egg c) eggs a) lice b) lices c) lies

Тема 2. ПРИТЯЖАТЕЛЬНЫЙ ПАДЕЖ СУЩЕСТВИТЕЛЬНЫХ

The child's toys — The children's toys
The boy's books — The boys' books

Task 1. Perephrase the sentences using the Possessive Case.

1. The room of my friend. _____
2. The questions of my son. _____
3. The wife of my brother. _____
4. The table of our teacher. _____
5. The poems of Pushkin. _____
6. The voice of this girl. _____
7. The new club of the workers. _____
8. The letter of Pete. _____
9. The car of my parents. _____
10. The life of this woman. _____
11. The handbags of these women. _____
12. The flat of my sister is large. _____
13. The children of my brother are at home. _____
14. The room of the boys is large. _____
15. The name of this girl is Jane. _____
16. The work of these students is interesting. _____

Task 2.: Translate into English.

1. Это семья моего друга.

2. Отец моего друга — инженер.

3. Мать моего друга — учитель.

4. Она взяла книги своего брата.

5. Дайте мне тетради ваших учеников.

6. Вы видели книгу нашего учителя?

7. Вчера дети моего брата ходили в кино.

8. Он показал мне письмо своей сестры.

9. Чья это сумка? — Это сумка Петра.

10. Чьи это словари? — Это словари студентов.

11. Принесите игрушки детей.

Task 3. Choose the correct item.

1. We were exhausted by three hours' / three hour's drive.
2. Are you buying the medical products at the chemist's / the chemists' now?
3. Their party of girls / girls' party was ended by policemen.
4. This is my sister's-in-law / sister-in-law's parrot.
5. The price of win / win's price is always high.

Task 4. Choose the correct item.

1. ... was amazing! I am happy for them.
 - a) Paola's and Frank's wedding
 - b) Paola and Frank's wedding
 - c) Paola and Frank' wedding
2. ... is very comfortable and easy-to-operate.
 - a) Mary's car
 - b) Mary' car
 - c) car of the Mary
3. Linda is ... now. Do you want me to call her?
 - a) at Paul's
 - b) at Paul'
 - c) house of Paul
4. Mike is a He always helps me.
 - a) my's classmate

- b) mine classmate
 - c) classmate of mine
5. ... is very old. It was build in 1078.
- a) The tower of the London
 - b) The tower's London
 - c) The tower of London

Тема 3. СИСТЕМА ОБРАЗОВАНИЯ В РОССИИ

Task 1. Read and learn the following words and word combinations:

to show a great concern - придавать большое значение

for education - образованию

the right to education - право на образование

to be stated - отмечаться, констатироваться

to be ensured by smth. - обеспечиваться чем-либо

compulsory - обязательный

a vocational school - училище

a higher education establishment - вуз

an extramural course - заочное обучение

state scholarships and grants - государственные стипендии

inclusive - включительно

a stage - этап

primary education - начальное образование

secondary education - среднее образование

intermediate school - средние классы

senior school - старшие классы

to go on in higher education - продолжать образование в вузе

a core curriculum - основная программа

an academic subject - академический предмет

to give a profound knowledge- давать углубленные знания

a programme of training in smth. - программа подготовки по чему-либо

an applicant - абитуриент

Centralized Testing - ЕГЭ

an undergraduate - студент

a graduate course - аспирантура

a thesis - диссертация

a candidate degree - степень кандидата наук

a doctoral degree - степень доктора наук
to be in charge of - отвечать за что-либо
a specialized council - специализированный совет
to confer a degree - присваивать степень
to go through a transitional period находиться в переходном периоде
to be funded by the state - финансироваться государством
a private school - частная школа
a fee-paying school - платная школа

Task 2. Translate the following international words into Russian:

Constitution, lyceum, gymnasium, program, finishing, technical, profession, rector, prorector, institute, university, faculty, system, period, financial, mechanism, to decentralize, student.

Task 3. Read and translate the text:

EDUCATION IN THE RUSSIAN FEDERATION

Russians have always shown a great concern for education. The right to education is stated in the Constitution of the Russian Federation. It is ensured by compulsory secondary schools, vocational schools, and higher education establishments. It is also ensured by the development of extramural courses and the system of state scholarships and grants.

Education in Russia is compulsory up to the 9th form inclusive. The stages of compulsory schooling in Russia are: primary education for ages 6-7 to 9-10 inclusive; secondary education including intermediate school for ages 10-11 to 12-13 inclusive, and senior school for ages 13-14 to 14-15 inclusive. Primary and secondary together comprise 11 years of study. Every school has a «core curriculum» of academic subjects, such as Russian, Literature, Mathematics, History, a foreign language and others.

After finishing the 9th form one can go on to a vocational school which offers programmes of academic subjects and a programme of training in a technical field, or a profession.

After finishing the 11th form of a secondary school, a lyceum or a gymnasium one can go on in higher education. All applicants must take Centralized Testing. Higher education institutions, that is, institutes or universities, offer a 5-year programme of academic subjects for undergraduates in a variety of fields.

An institute or a university has a number of faculties, each specializing in a field of study. Faculties have specialized councils which confer candidate and doctoral degrees.

All secondary schools, institutes and universities until recently have been funded by the state. Now there is quite a number of private fee-paying primary and secondary schools; some universities have fee-paying departments.

Task 4. Give English equivalents for:

Право на образование, учебные предметы, среднее образование, и другие, после окончания, готовить специалистов, программа подготовки в технической области, в различных областях, курс занимает 5 лет, платный, частные школы, получать стипендию, переходный период.

Task 5. Find the proper ending to each sentence:

1. The right to education	a) he or she must stay at school for two more years.
2. Education in Russia is compulsory up	b) one can go on in higher education.
3. If a pupil of a secondary school wishes to go on in higher education,	c) he or she receives a candidate's degree or a doctoral degree.
4. After finishing the 11 th form of a secondary school,	d) some universities have fee-paying departments.
5. If one finishes a graduate course and writes a thesis,	e) is stated in the Constitution.
6. An institute or a university has a number of faculties,	f) to the 9 th form inclusive.
7. Now there is quite a number of private fee-paying primary and secondary schools;	g) each specializing in a field of study.

Task 8. Translate into English:

1. Право на образование, записанное в конституции, доказывает, что в России придается большое значение образованию.

2. Существует два этапа обязательного школьного образования в России: начальное образование и среднее образование.

3. Обязательное среднее образование в России состоит из двух этапов: средние классы и старшие классы.

4. Во всех школах есть основная программа; лицеи и гимназии предлагают академические программы и программы, дающие углубленные знания в одной из областей.

5. Поступающие в вуз должны закончить 11 классов средней школы и пройти через конкурсные вступительные экзамены.
6. Во время переходного периода меняется финансовый механизм образования: появляются частные школы и платные отделения в институтах.

Task 9. Answer the following questions:

1. What is the right to education in Russia ensured by?
2. What are the stages of compulsory schooling in Russia?
3. What programmes of study do different types of school in Russia offer?
4. What is a vocational school?
5. What is necessary for entering a higher education establishment?
6. What degrees can one get at a higher education establishment?
7. What is the structure of an institute or a university?

Тема 4. СИСТЕМА ОБРАЗОВАНИЯ ЗА РУБЕЖОМ

Task 1. Read and learn the following words and word combinations:

to require for admission - требовать при поступлении

to be carried on - осуществляться

graduation from a standard - окончание средней школы

secondary school - средняя общеобразовательная школа

a curriculum - программа

to lead to smth. - приводить к чему-либо

the bachelor's degree in arts and sciences - степень бакалавра гуманитарных и технических наук

to be the central unit - быть центральным звеном

a separate corporate entity - отдельная составная единица

an educational institution - образовательное учреждение

to comprise smth. / to include smth. - включать что-либо (в состав)

a college of liberal arts and sciences - колледж свободных искусств и наук

a professional school - профессиональный колледж

a professional degree - профессиональная степень

a graduate college (school) - аспирантура

to provide a programme for study and research - предоставлять программу обучения и исследований

beyond the level of smth. - выше уровня чего-либо

to offer instruction - давать образование

to be incorporated in a university - быть включенным в университет

to be separate from a university - быть независимым от университета

to provide preparation in a professional field - давать подготовку в профессиональной области
a junior college - первая ступень колледжа
a degree-granting institution - учебное заведение, присваивающее степень
a technical institution - технический колледж
to fall into the category of - попадать в определенную категорию

Task 2. Do you know the meaning of the following derivatives? Show it with the help of your own sentences.

Educate-education-educational _____
Require-required-requirement _____
Admit-admission-admissive _____
Separate-separation-separator _____
Depend-dependence-independence _____
Science-scientific-scientist _____
Grade-gradual-graduation _____
Prepare-preparation-prepared _____

Task 3. Fill in the gaps using the given words:

offer, leading, admission, fields, confusion, schooling.

1. Higher education in the United States requires for admission 12 years of elementary and secondary.....
2. The university in the United States is an educational institution comprising a college of liberal arts and sciences, a professional school to a professional degree and a graduate college.
3. The Universities provide preparation in one or more professional, such as law, music or theology.
4. Technical institutions programmes of technological study only at the junior college level.
5. Colleges require for graduation from a standard secondary school.
6. There is some in the use of the terms «college» and «university» in the USA.

Task 4. Read and translate the text:

AMERICAN UNIVERSITIES AND COLLEGES

Higher education in the United States includes educational programmes which usually require for admission 12 years of elementary and secondary schooling. It is carried on under a number of forms.

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

The American college is known by various titles such as the college of liberal arts, the college of arts and sciences, the college of literature, science and arts. The college may be the central unit around which the university is organized, or it may be a separate corporate entity, independent from the University.

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

The word «university», however, is also used in a broader sense, for almost any type of educational institution offering instruction beyond the level of the secondary school.

Thus in the United States there is some confusion in the use of the terms «college» and «university». Some institutions that are in fact colleges of liberal arts have been incorporated in the universities. Some institutions incorporated in colleges are in fact universities with graduate and professional schools.

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. Junior colleges or professional schools do not offer the full four-year curriculum leading to a degree.

Institute of technology is a degree-granting institution that specializes in science and technology; some of them have graduate study. All institution offering programmes of technological study only at the junior college level is known as a technical institution.

The colleges in the United States differ greatly in size – they may once tide from 100 to 5000 students and more. Most of the larger institution fall into the category of universities, the largest being University of California, State University of New York, New York University, Columbia university and others.

Task 5. Find in the text English equivalents for the expressions given below:

Образовательные программы обычно требуют, самый распространенный тип высшего образования, колледж может быть центральным звеном, колледж свободных искусств и наук, в США есть

некоторая путаница, большое количество профессиональных колледжей, они предоставляют подготовку, которое специализируется в науке и технологии, отличаются сильно по размеру, будучи самым крупным университетом в Калифорнии.

Task 6. Answer the questions:

1. What do higher education institutions in the USA require for admission?
2. What degree does a college lead to?
3. What sense is the word «college» used in?
4. What kind of educational institution is the University?
5. What sense is the word «university» used in?
6. What kind of preparation do professional schools provide?
7. What is an institute of technology?
8. What is the size of colleges and universities in America?

Task 7. Translate into English:

1. Для поступления в университет или колледж в Америке необходимо закончить среднюю школу.
2. В США существует несколько типов вузов: колледж, университет, профессиональный колледж и др.
3. Университет обычно состоит из колледжа гуманитарных и естественных наук, профессионального отделения и аспирантуры.
4. После 4 лет в университете студент получает степень бакалавра гуманитарных или естественных наук.
5. Аспирантура предлагает программы выше уровня степени бакалавра и первой профессиональной степени.
6. Университет может иметь колледж в своем составе; колледж может входить в университет или быть самостоятельной единицей.
7. Профессиональный колледж – это учебное заведение, существующее отдельно от университета.
8. Колледжи и университеты предлагают программы, после прохождения которых присваивается степень бакалавра.
9. Технические институты также присваивают степени и часто предлагают курс аспирантуры.

Task 8. Read the text (5 min.) and give a short summary of the contents in Russian. Look through the notes to the text.

SCHOOLING IN THE UNITED STATES

There are two major types of schools in the USA – public and private, or fee-paying. Four out of five private schools are run by churches, synagogues and other religious groups.

A general school is also open, but it offers a more limited program. Extensive program of prevocational or vocational courses and advanced courses in academic studies are usually excluded.

A vocational school is for students of the community who are interested in its specialized area of training and a program of general education.

A specialized school is for pupils with special capabilities who are qualified to concentrate in a particular area of study. It is for the academically, musically, artistically gifted.

High school students who wish to attend a college or university go through one of the two standard tests — SAT and ACT. They are given by non-profit, non-governmental organizations.

Vocabulary:

public (American) - государственный

prevocational and vocational education – предпрофессиональное и профессиональное образование

an advanced course in smth. - усложненный курс по чему-либо

academic studies - общеобразовательный курс

to be qualified to concentrate - получить квалификацию в

in a particular area of study - определенной области знаний

to go through a test - пройти тест

SAT (Scholastic Aptitude Test) - тест академических способностей

ACT (American College Testing) - тест американского колледжа

to be given by non-profit - проводиться некоммерческими,

non-governmental organizations - неправительственными организациями

Тема 5. МОЙ КОЛЛЕДЖ

Task 1. Read and translate the text

MY COLLEGE

I would like to tell you about my college.

It is a fine two-storied building in the centre of the city. It is not very new, but it is nice and comfortable. I study here for the first year.

On the first floor of the building there is a hall, a cloak-room, a canteen, a gym, and some classes. On the second floor there is a director's office, computer classes and laboratories, a big concert hall, a library and a reading-room. I like it.

When I come to college, I wipe my feet, take off my coat and go to the cloak-room. After that I go to the timetable which is also in the hall. It's good to come to the classroom before the bell rings.

After a few classes I go to the canteen and have breakfast. I don't like our canteen very much, that's why I take some food with myself too.

My favourite subjects at college are physics, IT and English. During the breaks I like to talk with my friends, read the college newspaper.

Our college is not only the place where we study, it's also the place where we stay after classes to take part in clubs. Our college is very green: there are flowers on every window-sill. And it is very clean too. When my friends, who study in other colleges, come to this place they are surprised when they see that everything is in great order. But I'll reveal the secret: this is the merit of not only the board of the college but also of the students — because it's our second home and we must take care of it.

College life is difficult but I know it's rewarding! That's why I know that tomorrow I'll come here again!

Vocabulary

bell - звонок

break - перемена

canteen - столовая

care - забота

take care - заботиться

clean - чистый

cloakroom - гардероб

coat - пальто

reward - вознаграждать

comfortable - удобный

favourite - любимый

few - мало

flower - цветок

gym - спортивный зал

hall - зал

ring - звонить

secret - секрет

stay - оставаться

subject - предмет

timetable - расписание

merit - заслуга

order - порядок

two-storeyed - двухэтажный

window-sill — подоконник

Task 2. Study the active vocabulary. Translate the following words and phrases from English into Russian.

Hall, canteen, cloak-room, two-storied, comfortable, gym, laboratory, reading-hall, time-table, bell, to ring, a favourite subject, a break, talk, newspaper, stay, club, flower, window-sill, clean, order.

Task 3. Guess the word by the explanation of its meaning.

1. a place where you can leave coats and bags while you are visiting a building
2. a list of the times when school lessons take place
3. a place equipped for gymnastics
4. a room equipped for scientific work
5. pleasant to use; free from worry
6. something that is studied
7. a group of people who meet together because they are interested in the same thing
8. a short rest from work

Task 4. Give English equivalents for the following words.

Двухэтажный, удобный, любимый, чистый, читальный зал, столовая, лаборатория, спортивный зал, перемена, предмет, расписание, подоконник, составлять, разговаривать.

Task 5. Insert the vocabulary of the text into the following sentences.

1. When the rings, the lesson is over and the begins.
2. In the morning I go to the to learn in what room we have physics.
3. English was my favourite at school.
4. I like They are so bright and beautiful.
5. I like sport and I go to the, and my brother likes literature, and he goes to the after classes.

Task 6.

- a) Draw a plan of your college. Write all the names of the rooms in English.
- b) Play a game. Imagine that you hid a ball in one of the rooms. Let your classmates guess where it is.

Task 7. Write your timetable for this week in English.

MONDAY	TUESDAY	WEDNDSDAY	THURSDAY	FRIDAY	SATURDAY

Task 8. Ask your classmates the following questions.

1. What is the easiest subject?
2. What is the most difficult subject in your opinion?
3. What is the most interesting subject?
4. What is the most boring subject for you?
5. Is there a day of the week when you have four classes?

Тема 6. СТЕПЕНИ СРАВНЕНИЯ ПРИЛАГАТЕЛЬНЫХ

Task 1. . Use the necessary form of the adjectives in brackets.

1. Which is _____(large): the United States or Canada?
2. What is the name of the _____(big) port in the United States?
3. Moscow is the _____(large) city in Russia.
4. The London underground is the _____(old) in the world.
5. St. Petersburg is one of the _____(beautiful) cities in the world.
6. The rivers in America are much _____(big) than those in England.
7. The island of Great Britain is _____(small) than Greenland.
8. What is the _____(high) mountain in Asia?
9. The English Channel is _____(wide) than the straits of Gibraltar.
10. Russia is a very _____(large) country.

Task 2. Fill in the gaps with the comparative or superlative form of the adjectives/adverbs in brackets.

A: Excuse me, is there a 1) ...*faster*... (fast) way to get to Clovelly?

B: If you take that road, which is 2) (narrow) than the others, it's only 15 minutes' walk. That's the 3) (quick) way.

A: Ah, thanks. We've been walking for 35 minutes and we thought we would get there 4) (soon). We can't even see Clovelly yet.

B: It's hidden by the trees, they're 5) (tall) than the houses. You will like Clovelly. It's one of the 6) (beautiful) villages in north Devon.

A: That's what we've heard. It has some of the 7) (pretty) houses, hasn't it?

B: Yes, and the 8) (tasty) fish you've ever eaten!

A: Thank you very much for your help. Bye.

Task 3. Put the adjectives in brackets into the comparative or superlative form adding any necessary words.

A: What do you think of this shirt, Tom?

B: It's lovely. It's 1) ... *the nicest* ... (nice) of all you've tried on yet.

A: Yes, but I prefer short shirts.

B: Well, it's true that this shirt is 2) long the blue one, but it's also 3) (elegant).

A: Yes, but it's 4) (expensive) shirt we've seen so far.

B: I know. The blue one is much 5) (cheap), but it doesn't look as good as the black one.

A: Oh! I can't decide. What time is it?

B: It's only 6 o'clock. We've got plenty of time.

A: Really! I thought it was 6) (late) that.

B: Why don't we go to another shop?

A: No, I've decided. I like the black shirt 7) (good). It's 8) (expensive), but it doesn't matter.

B: OK. Let's go and pay for it.

Task 4. Choose the correct item.

1 You haven't got much experience. You ought to drive ____.

- a) more careful b) more carefully c) the most careful

2 It would be ____ to get there by bus.

- a) more quicker b) the most quick c) quicker

3 Summer is ____ season of the year.

- a) more beautiful b) more beautifully c) the most beautiful

4 What is ____ way to the shopping center?

- a) the shortest b) more short c) the most short

5 The test was ____ than we expected.

- a) the most difficult b) more difficult c) difficulter

- 6 Mary is always ____ to get up.
a) the earliest b) more earlier c) the most earliest
- 7 Jill is feeling ____ now than she did last week.
a) badly b) more bad c) worse
- 8 I thought it would be ____ to learn the poem.
a) more easy b) easier c) the most easy
- 9 Today is ____ day of the month.
a) the most coldest b) the coldest c) colder
- 10 They lived ____ ten years ago.
a) happier b) more happier c) more happily
- 11 You should visit your grandparents ____.
a) more often b) oftener c) the most often
- 12 Health is ____ thing in our life.
a) more important b) the most important c) most important
- 13 Ann is much ____ than her brother.
a) lazier b) more lazy c) laziest
- 14 Dan is said to be ____ player in the team.
a) the best b) better c) a more good
- 15 It's ____ designed room I have ever seen.
a) the most beautiful b) more beautiful c) the most beautifully
- 16 How do you feel being ____ boy in the class?
a) the most tall b) the tallest c) tallest
- 17 Fred is ____ person I've ever met.
a) more serious b) the most serious c) more seriously
- 18 This is ____ evening dress I have ever bought.
a) the most expensive b) more expensive c) more expensively
- 19 Could you explain the point ____?
a) the clearest b) clearer c) more clearly
- 20 Have you heard ____ news?
a) later b) the latest c) the most late

Сравнительные конструкции

Remember:

as...as -- такой же...как not so...as — не такой...как

1	as ...as	Jane is as tall as her brother	Джейн такая же высокая как её брат
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2	not so ...as	This rule is not so simple as the first one	Это правило не такое простое как первое
3	... -er than	Jane is taller than her brother	Джейн выше ростом чем её брат
4	the ...the	The more we learn the more we know	Чем больше мы учим тем больше мы знаем
5	The ... -est ...	She is the prettiest girl in our group	Она самая хорошенькая девушка в нашей группе

Task 5. Use as...as, not so ... as or than.

1. Mike is ___tall___Pete. 2. Kate is not___nice___Ann. 3. My room is___light___this one. 4. This book is not___thin___that one. 5. Sergei is___old___Michael. 6. She is___young___Tom's brother. 7. This woman is___good___that one. 8. Nick's English is not___good___his friend's. 9. I am not___tall___Pete. 10. This woman is___young___that one. 12. I am___thin___you. 13. Kate is___lazy___her'brother. 14. This child is not___small___that one. 15. Our house is not___big___yours. 16. The new cinema in our district is much bigger___the old one. 17. We are___proud of our district___you are of yours. 18. The house I live in is___old___the one my sister lives in.

Task 6. Use as__as, so__as or than.

1. Our house is not___big___yours. 2. The new cinema in our district is much bigger___the old one. 3. We are___proud of our district___you are of yours. 4. The house I live in is___old___the one my sister lives in. 5. Exercise No.2 is easier___Exercise No.3. 6. Nevsky Prospect is more beautiful___our street. 7. My composition is not___long___yours.

Task 7. Use the necessary form of the adjectives.

1. The Volga is _____(short) than the Mississippi.
2. Which building is the _____(high) in Moscow?
3. The Alps are _____(high) than the Urals.
4. She speaks Italian _____(good) than English.
5. Is the word «newspaper» _____(long) than the word «book»?
6. The Thames is _____(short) than the Volga.
7. The Arctic Ocean is _____(cold) than the Indian Ocean.
8. Chinese is _____(difficult) than English.

9. She is not so _____(busy) as I am.
10. It is as _____(cold) today as it was yesterday.
11. She is not so _____(fond) of sports as my brother is.
12. This book is _____(interesting) of all I have read this year.
13. My sister speaks English _____(bad) than I do.
14. Which is the _____(beautiful) place in this part of the country?
15. This nice-looking girl is the _____(good) student in our group.

Тема 7. МОЯ СТРАНА

Task 1. Read and translate the text.

THE RUSSIAN FEDERATION

The Russian Federation is the largest country in the world. It **occupies** about 1/6 of the Earth **surface**. The country is situated in Eastern Europe, Northern and Central Asia. Its **total area** is over 17 million square km.

Our land is washed by 12 seas, most of which are the seas of three oceans: the Arctic, the Atlantic and the Pacific. In the south and in the west the country **borders on** fourteen countries. It also has a sea-border with the USA.

There is hardly a country in the world where such a great variety of flora and fauna can be found as in our land. Our country has **numerous** forests, plains and steppes, taiga and tundra, highlands and deserts. The highest mountains in our land are the Altai, the Urals and the Caucasus. There are over two thousand rivers in the Russian Federation. The longest of them are the Volga, the Ob, the Yenisei, the Lena and the Amur. Our land is also rich in various lakes with the deepest lake in the world, the Baikal, included.

On the Russian territory there are 11 time zones. The **climate conditions** are rather different: from arctic and **moderate** to continental and subtropical. Our country is one of the richest in natural resources countries in the world: oil, natural gas, coal, different ores, ferrous and non-ferrous metals and other minerals.

The Russian Federation is a multinational **state**. It **comprises** many national districts, several autonomous republics and regions. The population of the country is about 140 million people.

Moscow is the capital of our Homeland. It is the largest political, scientific, cultural and industrial center of the country and one of the most beautiful cities on the

globe. Russian is the official language of the state. The national symbols of the Russian Federation are a white-blue-red **banner** and a double-headed eagle.

The Russian Federation is a constitutional republic headed by the President. The country government consists of three branches: **legislative**, **executive** and **judicial**. The President controls only the executive branch — the government, but not the Supreme Court and Federal Assembly.

The legislative power belongs to the **Federal Assembly** comprising two chambers: **the Council of Federation** (upper Chamber) and the **State Duma** (lower Chamber). Each chamber is headed by the Speaker. The executive power belongs to the government (the Cabinet of Ministers) headed by the Prime Minister. The judicial power belongs to the system of Courts comprising the Constitutional Court, the **Supreme Court** and federal courts.

Our country has a multiparty system. The largest and most **influential** political parties are the «Unity», the Communist party, the «Fatherland-All Russia», «The Union of the Right Forces», «The Apple», Liberal-Democratic and some others.

The **foreign policy** of the Russian Federation is that of international cooperation, peace and friendship with all nations irrespective of their political and social systems.

Vocabulary

to occupy — занимать

surface — поверхность

total area — общая площадь

to border on — граничить с

numerous — многочисленные

steppes — степи

highlands — горные возвышенности

the Urals — Уральские горы

the Caucasus — Кавказ

climate conditions — климатические условия

moderate — умеренный

ore — руда

ferrous and non-ferrous metals — черные и цветные металлы

state — государство

to comprise — включать, охватывать

banner — знамя, флаг

legislative — законодательный

executive — исполнительная

judicial — судебная

Federal Assembly — Федеральное Собрание

the Council of Federation — Совет Федерации
State Duma — Государственная Дума
Supreme Court — Верховный суд
influential — влиятельный
foreign policy — международная политика
irrespective — независимо

Task 2. Answer the questions:

1. Is Russia the largest country in the world?
2. What oceans wash the borders of the Russian Federation?
3. How many countries have borders with Russia?
4. Are Russian flora and fauna various?
5. What are the highest mountains in Russia?
6. What is Baikal famous for?
7. What is the climate in Russia like?
8. What is the national symbol of Russia?
9. What does the Federal Assembly consist of?
10. Who is the head of each Chamber of the Federal Assembly?

Task 3. Translate into English:

1. Общая площадь Российской федерации составляет более 17 миллионов километров.
2. В мире вряд ли есть еще одна страна с такой разнообразной флорой и фауной.
3. Озеро Байкал — самое глубокое озеро на земном шаре и служит предметом гордости россиян.
4. На территории Российской федерации существует 11 часовых поясов.
5. Россия является конституционной республикой с президентской формой правления.
6. Законодательная власть принадлежит Федеральному Собранию, состоящему из двух палат.
7. В Российском парламенте представлены такие партии, как «Единство», КПРФ, «Отечество—Вся Россия», «Яблоко», СПС, ЛДПР.
8. Законодательная и судебная власти прямо не подчиняются Президенту.

Task 4. How well do you know your Homeland?

What is (are):

- the biggest Russian lake?
- the longest Russian river (in European and Asian parts of the Russian Federation)?
- a city with subtropical climate?
- cities with arctic climate?
- agricultural regions?
- old historical cities?
- places of recreation and tourism?

Тема 8 АНГЛОЯЗЫЧНЫЕ СТРАНЫ

Task1. Read and translate the text

THE UNITED KINGDOM

The United Kingdom, officially the United Kingdom of Great Britain and Northern Ireland, is **an island nation** and **constitutional monarchy** in north-western Europe, member of the European Union (EU).

Great Britain is the largest of the British Isles. It **comprises**, together with **numerous** smaller islands, England and Scotland, and the **principality** of Wales. Northern Ireland, also known as Ulster, occupies the north-eastern part of the island of Ireland.

The United Kingdom is bordered to the south by the **English Channel**, which separates it from continental Europe, to the east by the **North Sea**, and to the west by the Irish Sea and the Atlantic Ocean. The only land border is between Northern Ireland and the Republic of Ireland. The total area of the United Kingdom is 242 sq.km. The capital and largest city is London.

The names «United Kingdom», «Great Britain», and «England» are often used **interchangeably**. The use of «Great Britain», often shortened to «Britain», to describe the whole kingdom is common and widely **accepted**, although **strictly** it does not **include** Northern Ireland.

However, the use of «England» to mean the «United Kingdom» is not acceptable to members of the other **constituent** countries, especially the Scots and the Welsh.

England and Wales were united **administratively**, politically, and legally by 1543. The crowns of England and Scotland were united in 1603, but the two countries remained separate political entities until the 1707 Act of Union, which formed the Kingdom of Great Britain with a **single** legislature. From 1801, when Great Britain and Ireland were united, until the formal establishment of the Irish Free State in 1922, the kingdom was officially named the United Kingdom of Great Britain and Ireland.

Hong Kong, which has 200,000 population, was returned to China in 1997.

The mainland of the island of Great Britain is 974 km at its longest and 531 km at its widest; however, the highly **indented** nature of the island's coastline means that nowhere is more than about 120 km from the sea.

The climate of the United Kingdom is mild relative to its latitude, which is the same as that of Labrador in Canada. The mildness is an effect of the warm Gulf Stream. This current brings the prevailing south-west winds that moderate winter temperatures and bring the depressions which have the main day-to-day influence on the weather. The western side of the United Kingdom tends to be warmer than the eastern; the south is warmer than the north. The mean annual temperature is 6°C in the far north of Scotland; 11°C in the south-west of England. Winter temperatures seldom are below -10°C and summer temperatures rarely higher than 32°C. The sea winds also bring plenty of moisture; **average annual precipitation** is more than 1,000 mm.

Rain tends to fall **throughout** the year, frequently turning to snow in the winter, especially in Scotland, the mountains of Wales, and northern England. The western side of Britain is much wetter than the eastern: average rainfall varies from 5,000 mm in the western Highlands of Scotland, to less than 500 mm in parts of East Anglia in England.

The population of United Kingdom is more than 56 mln people, but it is one of the world's leading commercial and industrialized nations. **In terms of** gross national product (**GNP**) it ranks fifth in the world, with Italy, after the United States, Japan, Germany, and France.

Vocabulary:

island nation — островное государство

constitutional monarchy — конституционная монархия

European Union — Европейский союз

to comprise — включать

numerous — многочисленные

principality — княжество

North Sea — Северное море

interchangeably — взаимозаменяемо

to accept — принимать, допускать

strictly — строго, зд. строго говоря

include — включать

constituent — составляющий

administratively — административно

entities — зд. субъекты

single — зд. единая

indented — зд. изрезанная

latitude — широта геогр.

prevailing — преобладающий

moderate — умеренный

depressions — зд. циклоны

mean — средний

throughout — на всем протяжении

average annual precipitation — среднегодовое количество осадков

in terms of — говоря (о чем-либо)

GNP (Gross National Product) — валовой национальный продукт

Task2. Translate into English.

1. Официальное название Великобритании — Соединенное Королевство Великобритании и Северной Ирландии.
2. Соединенное королевство является членом Европейского союза и конституционной монархией.
3. Северная Ирландия занимает северо-восточную часть острова Ирландия.
4. Пролив Ла-Манш отделяет Соединенное Королевство от континентальной Европы.

Task 3. Use the following phrases and word combinations to retell the text:

1. As I understood from the text...
2. According to the text...
3. According to the author...
4. As it is described in the text...
5. As it is said in the text...
6. As the author puts it...
7. According to the figures (data, information, opinions) from the text...

Task 4. Use the information below to be able to make a report on the Economy of Great Britain

ECONOMY

Gross Domestic Product

US\$1,023,900,000,000 (1994)

Chief Economic Products

Agriculture

Wheat, barley, potatoes, sugar beets, oilseed rape, livestock, animal products.

Fishing

Mackerel, herring, cod, plaice

Mining

Coal, limestone, petroleum and natural gas.

Manufacturing

Machinery and transport equipment, food products, chemical products, minerals and metal products.

Employment Statistics

58% Trade and Services

23% Manufacturing and Industry

16% Business and Finance

2% Agriculture, Forestry, and Fishing

1 % Military and Defense

Major Exports

Industrial and electrical machinery, automatic data processing equipment, road vehicles, petroleum.

Major Imports

Road vehicles, industrial and electrical machinery, automatic data processing equipment, petroleum, paper and paperboard, textiles, food.

Major Trading Partners

Germany, the United States, France, the Netherlands, Italy, Japan

Task5. Read and translate the text

THE UNITED STATES OF AMERICA

The United States of America is the 4th largest country in the world after Russia, Canada and China. It occupies the central part of the North American continent.

The United States of America is a federal republic, consisting of 50 states including the states of Alaska and Hawaii. **Outlying areas** include Puerto Rico, American Samoa, Guam, and the US Virgin Islands.

The northern boundary is partly formed by the Great Lakes and the St Lawrence River; the southern boundary is partly formed by the Rio Grande. United States also has a sea-border with Russia.

The total area of the United States (including the District of Columbia) is about 9,809,000 sq km.

The country is washed by 3 oceans: the Arctic, the Atlantic and the Pacific. The country has many lakes, with the Great Lakes **included**. There are also many rivers on the US territory. The longest of them are the Mississippi, the Missouri, the Columbia, the Rio Grande and some others. On the US territory there are mountains and lowlands. The highest mountains are the Rocky Mountains, the Cordillera and the Sierra Nevada. The highest **peak**, Mount McKinley, is **located** in Alaska.

The climate conditions are rather different. The country is rich in natural and mineral resources: oil, gas, iron ore, coal and various metals.

The USA is a highly developed industrial and agricultural country. The main industrial branches are **aircraft**, rocket, automobile, electronics, radio-engineering and others.

Americans are **made up** from nearly all races and nations. The country population is over 250 mln. The national symbol of the USA is its national flag «Stars and **Stripes**», having 50 white stars and 13 white and red stripes on its field, **symbolising** the number of the original and present day states.

Officially the country comprises 50 states and one District of Columbia. The states differ in size, population and economic development. Each state has its own capital. The capital of the USA is Washington. It is situated in the District of Columbia on the banks of the Potomac river and is named after the 1st US President - George Washington. There are many large cities in the country: New York, Los Angeles, Chicago, Philadelphia, Detroit, San-Francisco, Cleveland and some others.

The United States of America is a federal state, headed by the President. According to the US Constitution the powers of the Government are divided into 3 branches: legislative, executive and judicial.

The **legislative power** belongs to the Congress consisting of the Senate and the House of Representatives. The Senate **represents** the states while the House of Representatives — the population. The executive power belongs to the President and his Administration (Vice-President and Cabinet of Ministers). The judicial power **belongs** to the Supreme Court and the system of Federal, state and district courts.

There are several political parties in the USA, the largest of them are the Republican (symbolised by a **donkey**) and the Democratic (symbolised by an elephant).

Vocabulary:

outlying areas — внешние территории

District of Columbia — округ Колумбия

to pass — проходить через
frontier — граница
to include — включать
lowlands — низины
peak — вершина, пик
to be located — располагаться
aircraft — воздушное судно
to be made up from — быть составленным, состоять из
stripe — полоса
to symbolize — символизировать
legislative power — законодательная власть
to represent — представлять
to belong — принадлежать
donkey — осел

ADD TO YOUR ACTIVE VOCABULARY:

Great Plains — Великие равнины
Appalachian mountains — Аппалачские горы
Rocky mountains — Скалистые горы **driveway** — проезд, выезд
sidewalk — тротуар
drive-thru shop — магазин, покупки в котором производятся через окно автомобиля
toll-road — платная дорога (магистраль)
toll-free road — бесплатная дорога
highway, parkway, thruway — автомагистрали
turnpike — главная магистраль
shopping-mall — торговый центр
shopping plaza — открытая торговая площадь, торговый ряд
free delivery — бесплатная доставка
telephone order — телефонный заказ
sale — распродажа
discount — скидка
seasons sale — сезонная распродажа
clearance sale — распродажа залежей товаров
discount coupon — купон на скидку
free gift — бесплатный подарок

Task 6. Translate into English:

1. США — четвертая по величине страна после России, Канады и Китая.
2. Внешние границы включают в себя Пуэрто Рико, Американское Самоа и Виргинские острова.
- 3.48 Штатов граничат на севере с Канадой, а на юге с Мексикой.
4. США имеет морскую границу с Российской Федерацией.
6. США омывается тремя океанами: Северным Ледовитым, Атлантическим и Тихим.
7. США — высокоразвитое промышленное государство со множеством отраслей.
8. Аэрокосмическая и электронные отрасли промышленности США занимают особое место в экономике США.
9. Каждый штат имеет свою столицу.

Task 7. Read and translate the text

BRITISH TRADITIONS AND CUSTOMS

British nation is considered to be the most conservative in Europe. It is not a secret that every nation and every country has its own **customs** and traditions. In Great Britain people **attach** greater importance to traditions and customs than in other European countries. Englishmen are **proud** of their traditions and **carefully keep** them **up**. The best examples are their queen, money system, their **weights** and **measures**.

There are many customs and some of them are very old. There is, for example, the Marble Championship, where the British Champion is **crowned**.

Another example is the Boat Race, which takes place on the river Thames, often on Easter Sunday. A boat with a team from Oxford University and one with a team from Cambridge University hold a race.

British people think that the Grand National horse race is the most exciting horse race in the world. It takes place near Liverpool every year. **Amateur** riders as well as professional jockeys can **participate**. It is a very famous event.

There are many celebrations in May, especially in the countryside.

Halloween is a day on which many children dress up in unusual costumes. The day was originally called All Halloween's Eve, because it happens on October 31, the **eve** of all Saints Day. The name was later shortened to Halloween.

In the end of the year, there is the most famous New Year celebration. In London, many people go to Trafalgar Square on New Year's Eve. There is singing and dancing at 12 o'clock on December 31st.

A popular Scottish event is the Edinburgh Festival of music and drama, which takes place every year. A **truly Welsh** event is the Eisteddfod, a national festival of traditional poetry and music, with a competition for the best new poem in Welsh.

If we look at English weights and measures, we can be **convinced** that the British are very conservative people. They do not use the internationally **accepted** measurements. They have conserved their old measures. There are nine essential measures. For general use, the smallest weight is one ounce.

The English always give people's weight in pounds and stones. Liquids they measure in pints, quarts and gallons. For length, they have inches, yards and miles.

The English monetary system could be found rather difficult for us. They have a pound sterling, which is divided into twenty shillings, half-crown is cost two shillings and sixpence, shilling is worth twelve pennies and one penny could be changed by two halfpennies.

Vocabulary:

custom - обычай, традиция

attach - придавать значение

to be proud of - гордиться

carefully - тщательно, внимательно

keep up - поддерживать

weight - вес; масса

measure - мера; единица измерения

crown - короновать

amateur - любитель

participate - участвовать,

eve- канун, преддверие

truly - действительно

Welsh - валлийцы

convinced - убеждённый, уверенный (в чём-л.)

accepted – общепринятый

Task8. Match the sentences:

1. British nation is considered to be

a) the British Champion is crowned.

2. There are many customs and

b) dress up in unusual costumes.

- | | |
|--|--|
| 3. For example, the Marble Championship, where | c) their old measures. |
| 4. There are many celebrations in | d) Inches, yards and miles. |
| 5. Halloween is a day on which many children | e) the most conservative in Europe. |
| 6. In London, many people go to Trafalgar | f) some of them are very old. |
| 7. The Eisteddfod is a national festival of | g) Square on New Year's Eve. |
| 8. The British have conserved | h) traditional poetry and music. |
| 9. For example, for length, they have | i) May, especially in the countryside. |

Тема 9 ПРЕДЛОГИ

Предлог	Значение	Примеры
at	1. Местоположение (на, при, у, в определенной точке) 2. Время (в часах)	She is at school. She is sitting at my table. Let us meet at 5 p.m.!
in	1. Местоположение (в отдельном пространстве) 2. Время (в месяцах, годах) 3. Работа написанная на каком-то языке	He is in the study. The book is in my table. Summer begins in June. It took place in 2002. This article is written in English.
on	1. Местоположение (на горизонтальной и по вертикальной поверхности) 2. Посвященный чему-либо, на тему (о, об) 3. Время (в днях)	The book is on my table. The picture is on the wall. This is an article on history. I was born on the 5th of November,
from	1. Направление (от, из) 2. Время (с, от)	The train is coming from Moscow. Take the pencil from the table. I'll be busy from 10 a.m.
to	1. Направление (в, на) 2. Время (до какого-то момента) 3. Соответствует дательному падежу	We came to Moscow. They went to the theatre. I'll be busy from 10 p.m. to 3 p.m. Give this book to me.

since	Время (от, с какого-то момента)	I'll have a rest since July till August.
till	Время (до, до какого-то момента)	Till Friday I'll be very busy.
into	Направление (внутри)	Put the book into the bag.
onto	Направление (на, на поверхность чего-либо)	Put the pen from the drawer onto the table.
before	Время (перед, до)	The accident took place before our era.
after	Время (после)	I went there after the stopped.
about	1. О (относительно) 2. Место (около, вокруг, приблизительно) 3. Время (около, приблизительно)	Please, tell me about him. Come about 2 p.m. It was about noon, when she came home.
for	1. Время (в течение конкретно указанного (в днях, годах) периода времени) 2. Цель (на) 3. Для 4. Направление (в) с глаголом to leave	I have lived there for 2 years. I went for a walk. That is a present for you. We left for St. Petersburg at 10 p.m.
during	Время (в течение периода времени, выраженного существительным)	I was in the countryside during my weekend.
of	1. Соответствует родительному падежу (чего?, кого?) 2. О (относительно)	All the students of this group passed the exams perfectly. You must never think of him badly.
with	1. Соответствует творительному падежу (чем?) 2. С, вместе 3. От (удивления, страха)	We write with pens. He went to the station with her. His face was pale with fear.
by	1. Соответствует творительному падежу (кем?) 2. Место (возле, рядом) 3. Время (к какому-то моменту)	This poem was written by Pushkin. He was standing by the window. He had already come by 3 p.m.
between	Местоположение (между 2-мя объектами)	The father divided the apples between his 2 sons.
among	Местоположение (между несколькими предметами или	The father divided the apples among all his children.

	объектами)	
except (for)	Кроме (за исключением тех, кто присутствует)	Everybody likes it except me.
besides	Кроме (помимо, по количеству больше присутствующих)	There were 5 boys in the room besides me.
over	1. Над, выше 2. Через 3. За, в, в течение (период времени)	A flight over the lake — полёт над озером. Over the last five years — за последние пять лет.
below	Ниже, под	Below zero — ниже нуля.
out	Снаружи, вне, за пределами	My crossbow is already out . — Я уже вытащил свой арбалет.
behind	За, сзади, позади	The sun is behind a cloud. — Солнце скрылось за тучей.

Task 1. Read the following dialogue and complete sentences using *at*, *in* or *on*.

Peter: The bus is supposed to come (1) _____ 8:20 am and it's already 8:30am.

Jane: I hope it comes soon. I don't want to be late. What time do you have to be (2) _____ class?

Peter: My first class is (3) _____ 9:00 am, but my professor is never (4) _____ time for class.

Jane: How lucky! My professor gives us penalty for being late. I usually arrive just (5) _____ time, just before my professor starts taking marks off students who are late.

Peter: I understand it is always very hard to wake up (6) _____ the morning, especially (7) _____ Mondays.

Jane: Yes, I know. I tend to study late (8) _____ night and find it very hard to get up the next day. It gets worse (9) _____ the winter.

Peter: Oh! The bus is finally here. Let's get (10) _____!

Task 2. Put in the correct prepositions: *in*, *at* or *on*.

1. Dinner is usually _____ 7 o'clock.

2. We have long holidays _____ summer.

3. There is a school party _____ 31st of January.

4. The game is _____ 9.45.

5. Where is he _____ the moment.

6. She wasn't there _____ the end of the concert.

7. Where are you usually _____ the evening? And _____ night?

8. He phoned me _____ Tuesday.
9. Do you get any presents _____ Christmas Day?
10. Our party is _____ June 8th _____ 8 o'clock _____ the evening

Task 3. Fill in the gaps using prepositions of time.

1. I'll see you early.....the evening.
2. Let me finish this chapter first. I'll be with you.....five minutes.
3. I'll talk to you.....two or three weeks then.
4. Let's meet.....Friday.
5. Shall we go and see the manager some time.....the afternoon?
6. I'm going away.....the end of January.
7. Most people work.....nine.....five.
8. The museum closes.....noon.
9. The official start of the theatre season is.....August.
10. The restaurant closes..... 11 o'clock.....night.

Task 4. Do the test.

- | | |
|---|---|
| 1. I'm going to a party New Year's Eve.
a) in b) at c) on | 9. Her office is the end of the corridor.
a) on b) in c) at |
| 2. I had a meal the train.
a) on b) in c) at | 10. Bess will be here ... 10 minutes.
a) in b) on c) at |
| 3. The English examination is July.
a) at b) on c) in | 11. Tom usually works better the morning.
a) in b) at c) on |
| 4. What have you got your bag.
a) in b) on c) at | 12. There were a lot of people the party.
a) at b) in c) on |
| 5. I visited the museum Monday.
a) in b) on c) at | 13. There's somebody waiting the bus stop.
a) at b) in c) on |
| 6. My office is the second floor.
a) on b) at c) in | 14. Can you put the report my desk, please?
a) at b) on c) in |
| 7. I always feel positive the start of the week.
a) at b) on c) in | 15. The leaves on the trees turn brown autumn.
a) in b) at c) on |
| 8. Bob went to bed ... midnight. | |

a) at b) in c) on

Task 5. Fill in the prepositions.

1. My mother is afraid ___ rats. 2. «What do you complain ___?» asked the doctor. 3. Don't enter ___ the room. 4. What are you laughing ___? 5. They did not want to listen ___ me. 6. Wait ___ me. I'll be back ___ a few minutes. 7. Yesterday the teacher spoke ___ us about the architecture ___ St. Petersburg. 8. My grandmother often complains ___ headache. 9. I am sorry, I cannot speak ___ you now, the professor is waiting ___ me. I must go ___ the institute and explain ___ him some details ___ our work. Come ___ the evening, I shall listen ___ you very attentively and answer ___ all your questions. 10. ___ nine o'clock the lecturer entered ___ the hall, walked up ___ the table, put his bag ___ it, looked. ___ everybody and began his lecture. The lecture, as all the lectures ___ this professor, was very interesting, and the students listened ___ him with great attention. 11. Turn ___ the corner ___ the house and look ___ the flowers grown ___ my mother: aren't they beautiful? 12. He was an excellent pupil, and the teachers never complained ___ him. 13. She complained ___ feeling bad and could not answer ___ the questions ___ the teacher. 14. We tried to speak ___ him, but he did not want to listen ___ us. He did not even look ___ us and did not answer ___ our questions. 15. Your brother complains ___ you. He says you always laugh ___ him, never speak ___ him and never answer ___ his questions. 16. When I entered ___ the room, everybody looked ___ me with surprise: they had not waited ___ me. 17. At the end ___ the street she turned ___ the corner, walked ___ the bus-stop and began waiting ___ the bus.

Task 6. Translate into English

Обратите внимание на способы перевода русского предлога «через»:

через час — in an hour

через дорогу - across the road

через поле — across the field

через лес — through the wood

через реку (вброд, вплавь, на лодке) -

across the river - через реку (по мосту, по воздуху) -- over

the river через забор— over the fence

Обратите внимание на способы перевода русского предлога «по»:

по улице — along (down) the street

по реке — down (up) the river

по морю — across the sea

по городу - - about the town

по комнате - - about the room
по коридору - - along the corridor
по стране-- about the country

1. Она ходила по комнате.

2. Они плавали по южным морям.

3. Иди по этой дорожке через поле и через лес, и через два-три часа ты
подойдешь к реке.

4. Том Сойер перепрыгнул через забор и побежал по улице. Через несколько
секунд он повернул за угол и исчез.

5. Пройдите по этому коридору и войдите в первую комнату.

6. Через пять минут все сидели за столом и слушали бабушку.

7. Он смотрел на лодки, плывущие по реке.

8. В прошлом году мы путешествовали по Европе.

9. Он шел по улице и смотрел на лица прохожих.

10. Собака подбежала к реке, прыгнула в воду, переплыла реку и вбежала в лес.

Тема 10 АНГЛИЙСКИЙ ЯЗЫК – ЯЗЫК МЕЖДУНАРОДНОГО ОБЩЕНИЯ

Task 1. Read and translate the text.

THE ROLE OF FOREIGN LANGUAGE IN MODERN WORLD.

English is the international language of communication, and is spoken about 800 million people all over the world. It is also the language of science, business and advertising.

It's the official language in 44 countries. English is the official language of the UK, Great Britain and Northern Ireland, of the USA, of Australia and New Zealand, the Republic of South Africa, the Irish Republic, India and Pakistan.

Many English words are in common use: cool, sorry, goodbye, basketball and so on.

Millions of books, magazines and newspapers are printed in English and read all over the world. 75% of the world`s mail and 60% of the world`s radio broadcasts are in English. Half of the world scientific literature is printed in English.

Nowadays English is the most fashionable language in the world. Millions of people study and use English as a foreign language. English today is absolutely necessary for every educated person, for every good specialist.

English is a widely spoken language all over the world. You can hear it everywhere: in a street, in shops and restaurants, in offices. You don't need to know Japanese when you go to Japan or French when you visit Paris. English will help you to understand each other.

A modern engineer or even a worker deals with instruments and machines from other countries and must be able to read the instructions, which are usually written in English. Computer programs and games, most of Internet pages are also written in English. Science magazines are mostly published in English and scientific and business conferences are held in English as well. Diplomats and militaries use English to solve their problems.

Besides, the knowledge of English helps to know more about the countries, read many books in the original and to make new friends.

That's why all pupils should master their English to become good specialist in any branch.

Vocabulary:

science - наука

advertising – рекламная деятельность

broadcast - телепередача

necessary - необходимый

widely - широко

deals - иметь дело с

besides – кроме того

master - овладевать, усваивать

Task 2. Answer the questions:

1. How many people all over the world speak English?
2. Of what countries English is the official language?
3. How many books, magazines and newspapers are printed in English?
4. Is English absolutely necessary for every educated person today or not?
5. Can you hear English everywhere? Give an example.
6. Why all pupils should master their English?

Тема 11. МОЯ БУДУЩАЯ ПРОФЕССИЯ

Task 1. Match English phrases with Russian equivalents.

1. improve the quality of life	a. научно-технологический прогресс
2. the significance of engineer	b. важность инженера
3. conduct research work	с. интенсификация национальной экономики
4. a large and wide-array of industries	d. последние достижения науки и технологии
5. practical training	e. компьютерное проектирование
6. crop and livestock production storage and processing	f. техническое обеспечение
7. the practical application of engineering principles	g. хранение и переработка растениеводческой и животноводческой продукции
8. laboratories equipped with modern installations	h. технологические процессы на сельскохозяйственных предприятиях;
9. scientific and technological progress	i. большой список отраслей промышленности
10. technical support	j. практическое применение инженерных принципов
11. computer-aided-design	k. лаборатории, оснащенные современными установками
12. technological processes at agricultural enterprises	l. выполнять научную работу
13. the latest achievements in science and technology	m. практическая подготовка
14. intensifying the national economy	n. улучшать качество жизни

Task 2. Match the columns

1. The significance of engineers ...	a) ... good knowledge of physics and mathematics, computers, computer-aided-design, foreign languages, etc.
2. A modern engineer must	b) ... design and development.

have...	
3. The students of our department are specializing in...	c) ... the practical application of engineering principles.
4. The engineering technologist is often responsible for ...	d) ... scientific work at the scientific centers and students', design bureaus.
5. Technologists are employed in a large and wide-array of industries, including ...	e) ... practical training at the advanced enterprises.
6. The work of engineering technologists focuses on ...	f) ...is increasing.
7. Theoretical training is combined with ...	g) ... improve the quality of life for all who live in our communities.
8. Theoretical study is also combined with ...	h) ... a variety of careers in both public and private sectors.
9. Engineering technologists work in...	i) ... manufacturing, construction, industrial, maintenance, and management.
10. Engineering technologists are well-respected and valued members of society who ...	j) ... technical support of crop and livestock production storage and processing, technological processes at agricultural enterprises.

Task 3. Read and translate the text.

MY FUTURE PROFESSION: AN ENGINEERING TECHNOLOGIST

In the conditions of the scientific and technological progress the significance of engineers is increasing. Engineers have an important part to play in intensifying the national economy. In their work engineers are guided by the latest achievements in science and technology. A modern engineer must have good knowledge of physics and mathematics, chemistry, computers, computer-aided design, management science, foreign languages, etc.

I study at the engineering and technological department. The students of our department are specializing in technical support of crop and livestock production storage and processing, technological processes at agricultural enterprises. My future profession is an engineering technologist.

Engineering is a complex consisting of inter-linked industries. Engineering technologists work closely with engineers in coordinating people, material, and machinery. The engineering technologist is often responsible for design and

development. Technologists are employed in a large and wide array of industries, including manufacturing, construction, industrial, maintenance, and management. Such positions as product design, testing, development, systems development, field engineering, technical operations, and quality control are all common positions for engineering technology graduates.

The students of our department are taught by a highly qualified staff of professors and teachers. Our practical training and laboratory work are done in the laboratories equipped with modern installations, apparatuses and devices. Theoretical training is combined with scientific work at the scientific centers and students' design bureaus. University teaching is also combined with practical training at the advanced enterprises. All these help to turn a student into a highly skilled engineer, ready for independent work.

Engineering technologists work in a variety of careers in both public and private sectors including design, marketing, estimating, research and development, production control, purchasing, operations and production, testing, quality management, maintenance, customer and field service, project management, instruction and teaching. They are well-respected and valued members of society who improve the quality of life for all who live in our communities.

Vocabulary

condition(s) – условия, состояние

significance – значение, важность

increase – рост, увеличение

intensifying – усиление

guided by – руководствоваться

engineering and technological department – инженерно-технологический отдел

crop and livestock – растениеводство и животноводство

storage and processing – хранение и обработка

inter-linked industries – взаимосвязанные отрасли

responsible – ответственный

array of industries – множество

maintenance – техническое обслуживание

modern installations – современная установка

students' design bureaus – студенческие конструкторские бюро

to turn a student into – превратить в

estimating – оценивающий

research and development - научные исследования и разработки

customer service – сервисная служба

field service – эксплуатационное обслуживание

Task 4. Complete the sentence using a derivative from the word in brackets.

1. Engineers are guided by the latest (to achieve) in science and technology.
2. Engineering is a complex (to consist) of inter-linked industries.
3. The engineering technologist is responsible for design and (to develop).
4. Technologists are (to employ) in a large and wide-array of industries.
5. The work of engineering technologists focuses on the applied and practical (to apply) of engineering principles.
6. Students' practical training is done in the laboratories (to equip) with modern devices.
7. Students write their term papers and graduation theses on the problems (to connect) with their scientific work.
8. Engineering technologists work in public and private sectors (to include) design, marketing, research and development, production control and others.

Task 5. Fill in the gaps with the appropriate prepositions.

1. Engineers are guided ... the latest achievements in science and technology.
2. I study ... the engineering and technological department.
3. The students of our department are specializing ... technical support of crop and livestock production storage and processing.
4. Technologists are employed ... a large and wide-array of industries.
5. The work of engineering technologists focuses ... the practical application of engineering principles.
6. Our practical training is done in the laboratories equipped ... modern devices.
7. Theoretical training is combined ... practical training.
8. Engineering technologists work ... a variety of careers in both public and private sectors.

Task 6. Define whether the following statements are true or false. Correct the false ones.

1. A modern engineer must have good knowledge of physics and mathematics, chemistry, computers, computer-aided-design, management science, foreign languages, etc.
2. Engineering technologists work closely with engineers in coordinating people, material, and machinery.
3. The engineering technologist is often responsible for people and machinery.
4. The work of engineering technologists focuses on design and planning of engineering tasks.
5. University teaching is combined with work at the advanced enterprises.

6. Engineering technologists work in a variety of careers in both public and private sectors.

Task 7. Write down sentences of your own using new word combinations:

- to be guided by
- to have a good knowledge of
- to specialize in
- to be employed in a wide array of industries
- to be equipped with
- to be combined with
- to improve the quality of life.

Task 8. Work out answers to the following. Ask a friend the same questions.

1. What are modern engineers guided by?
2. What department do you study at?
3. What do the students of your department specialize in?
4. What is the engineering technologist responsible for?
5. Where are usually technologists employed?
6. What does the work of engineering technologists focus on?
7. What helps students turn into highly skilled engineers?
8. What variety of careers can engineering technologists choose?

Тема 12. РАЗРЯДЫ ЧИСЛИТЕЛЬНЫХ; УПОТРЕБЛЕНИЕ ЧИСЛИТЕЛЬНЫХ; ОБОЗНАЧЕНИЕ ВРЕМЕНИ, ОБОЗНАЧЕНИЕ ДАТ

Numerals		
1) 1 – 12 (нет правила)	2) 13 – 19 (- teen)	3) 20 – 100 (- ty)
1 one	six + teen = sixteen	six + ty = sixty
2 two		20 twenty
3 three	13 thirteen	30 thirty
4 four	14 fourteen	40 forty
5 five	15 fifteen	50 fifty
6 six	16 sixteen	60 sixty
7 seven	17 seventeen	70 seventy
8 eight	18 eighteen	80 eighty
9 nine	19 nineteen	90 ninety
10 ten		100 a hundred (one hundred)
11 eleven		
12 twelve		

Task 1. Match left column with the right.

- | | |
|---------|---------------------------------|
| 1) 31 | a) Seventy-two |
| 2) 11 | b) Thirteen |
| 3) 660 | c) Fifty-six |
| 4) 72 | d) Eighty |
| 5) 315 | e) Eighteen |
| 6) 100 | f) Twenty-three |
| 7) 13 | g) Eleven |
| 8) 49 | h) Ninety |
| 9) 925 | i) Twelve |
| 10) 18 | j) Twenty |
| 11) 80 | k) Nineteen |
| 12) 504 | l) Forty-nine |
| 13) 217 | m) One hundred |
| 14) 410 | n) Thirty-one |
| 15) 90 | o) Four hundred and ten |
| 16) 56 | p) Six hundred and sixty |
| 17) 23 | q) Five hundred and four |
| 18) 20 | r) Nine hundred and twenty-five |
| 19) 19 | s) Two hundred and seventeen |
| 20) 12 | t) Three hundred and fifteen |

Task 2. Open the brackets using ordinal or cardinal numbers.

1. We have known each other for (11) _____ years.
2. My friend lives on the (5) _____ floor.
3. They bought a new car (2) _____ days ago.
4. We pay (980) _____ dollars per month for this apartment.
5. I am doing this work for the (1) time.
6. Congratulations, you are our (1000) _____ customer!
7. We came to this country in (2009) _____ .
8. My grandfather has recently celebrated her (89) _____ birthday.
9. My sister is reading the (5) _____ page of the (9) _____ chapter.
10. You must learn (20) _____ new words.
11. A ticket to London costs about (150) _____ euro.
12. This is my (5) _____ trip abroad.

Remember:

В простых дробях числитель выражается количественным числительным, а знаменатель - порядковым числительным: 1/3- а (one) third,

1/5 - а (one) fifth,

1/8 - an (one)eighth.

Однако 1/2 читается: а (one) half,

1/4 - а (one) quarter

Когда числитель больше единицы, знаменатель принимает окончание -s:

2/3 - two thirds;

3/5 - three fifths,

5/6 - five sixths.

Существительное, к которому относится смешанное число, употребляется во множественном числе:

2 1/2 tons - читается: two and a half tons или two tons and a half);

4 1/3 tons - читается: four and a third tons или four tons and a third

Если целое число равно нулю, то оно часто не читается:

0.25-nought point two five (point two five)

0.1 - читается: nought (В Америке 0 читается zero) point one или point one;

0.01- читается: nought point nought one или point nought one;

0.2 - (zero) point two

Существительное, следующее за десятичной дробью, стоит в единственном числе, когда целое число в десятичной дроби равно нулю:

0.25 ton - читается: nought point two five of a ton.

Если целое число больше нуля

2.35 - читается: two point three five;

3.4 - three point four

3.215 - three point two one five

32.305 - читается: three two (или thirty-two) point three nought five

53.75 - fifty-three point seven five

Если целое число больше нуля, существительное, следующее за десятичной стоит во множественном числе:

1.25 tons - читается: one point two five tons;

23.76 tons - читается: two three point seven six tons или twenty-three point

seven six tons.

Task 3. Write down numerals.

- 1) $\frac{2}{3}$ _____
- 2) 6.51 _____
- 3) $1\frac{3}{4}$ _____
- 4) 0.2 _____
- 5) $2\frac{1}{5}$ _____
- 6) $\frac{1}{2}$ _____
- 7) $\frac{9}{10}$ _____
- 8) $\frac{5}{8}$ _____
- 9) 2.25 _____
- 10) $\frac{11}{12}$ _____
- 11) 6.785 _____
- 12) $\frac{1}{3}$ _____
- 13) $\frac{2}{5}$ _____
- 14) 8.71 _____
- 15) $\frac{4}{7}$ _____
- 16) 0.05 _____
- 17) $\frac{3}{4}$ _____

Task 4. Choose the correct item.

1. 1956 год. a) one thousand nine hundred and fifty six b) nineteen fifty six c) one nine five six	8. 1 декабря 1565 года. a) one December, fifteen sixty-five b) the first of December, one thousand five hundred and sixty-five c) the first of December, fifteen sixty-five
2. 1905 год. a) nineteen (and) five b) one thousand nine hundred and five c) nineteen hundred (and) five	9. 15 августа 2001 года. a) August the fifteenth, two thousand (and) one b) fifteen August, two thousand (and) one c) the fifteen of August, twenty and one
3. 2008 год. a) two thousand (and) eight b) twenty and eight c) two thousand (and) eight	10. 12 марта. a) the twelfth of March b) March the twelfth c) twelve March
4. XV век. a) fifteen century	11. 1709 a) seventy oh nine

b) ten five century c) the fifteenth century	b) seventeen oh nine c) seventeen hundred oh nine
5. 1980-е годы. a) one thousand nine hundred and eighties b) nineteen eighty years c) nineteen eighties	12. 70-е a) sixties b) the sixties c) the sixty
6. 29 июня. a) the twenty-ninth of June b) twenty-nine of June c) June the twenty-ninth	13. 2-е апреля 2001 года. a) the second of April, two thousand and one b) the second of April, twenty and one c) April two, two thousand and one
7. 5 мая 2013 года. a) five May, two thousand (and) thirteen b) the fifth of May, two thousand (and) thirteen c) two thousand (and) thirteen May five	

Тема 13. МЕТРИЧЕСКАЯ СИСТЕМА

Task 1. Read and translate the text.

THE METRIC SYSTEM

Physics measures such physical quantities as time, length, mass, density, velocity, area, volume, temperature and energy. Different units of length and mass exist. Nearly all of them are interrelated. Nowadays, three main systems of measurement are widely used: the British system of unity, the metric system of units and the International system of units (SI).

With a few exceptions, all the nations of the world use the metric system. It is so easy that anyone who knows arithmetic can learn it quickly. Before the introduction of the metric system (meter-kilogram-second), the British foot- pound-second system was widely used. But the latter system (which is still in use in Great Britain and the USA) was very complicated and caused serious difficulties in the international trade. For example, in the British system 1 mile is equal to 1760 yards, 1 yard - to feet and 1 foot- to 12 inches. This means that it's very difficult to convert units. But in the metric system each unit is a multiple of the following lower unit by ten. Therefore, the conversion to a higher quantity is done by moving the decimal point to the right to the required number of places, and vice versa.

The idea of decimal system was realized only at the end of the 18th century. In 1791, the French Academy of Science decided that the standard of length should be one ten-millionth part of the distance from the Equator to the North Pole. The two French scientists charged with the task took this distance on a line running through

Paris and divided it into 10 000 000 equal parts. They called one of the parts a meter ('measure'), which became the main unit. Meter was also used to measure area and volume. Thus a square meter and a cubic meter appeared.

The main advantage of the system is that for shorter measurements the meter is divided by ten, so a decimal system was used. Shorter units had Latin prefixes and longer ones - Greek prefixes. So, 'millimeter' is Latin for 'a thousandth part of a meter' and 'kilometer' is Greek for 'a thousand meters'.

As for the unit of mass, it was defined as the mass of a cubic centimeter of water at the temperature of 4°C (the temperature of its maximum density). As we know, the name of this unit is gramme.

The SI units is derived from the metric system and was internationally accepted in 1960. Besides meter (m), kilogram (kg) and second (s), its basic units are Kelvin (K), ampere (A), mole (mol), and candle (cd). This system was introduced in our country in the 1960s and every day we measure things by the units from this system.

Vocabulary

advantage -преимущества

area -площадь

basic - базовый

candle - 1. свеча 2. кандела

cause служить причиной

charge - поручать

complicated - сложный

conversion - пересчет, перевод

convert - переводить (единицы)

cubic - кубический

decimal - десятичный

define - определять

density - плотность

derive - выводить; происходить

distance - расстояние

equal - равный

equator - экватор

exception - исключение

inch - дюйм

interrelated - взаимосвязанный

length - длина

line - линия

mass - масса

measure - мера

measurement - измерение

metre - метр

metric - метрический

mile - миля

mole - моль (единица измерения)

multiply - умножать

nearly - почти

pound - фунт

quantity- количество

realize - зд. реализовать

require - требовать

science - наука

trade - торговля

square квадрат, квадратный

standard - стандарт,

introduce - зд. вводить

ten-millionth десятимиллионный

therefore - поэтому, следовательно

through - сквозь

thus - таким образом

unit - единица

unity - единство

vice versa лат.- наоборот
volume - объем

yard -ярд

Task 2. Answer the following questions to the text.

1. What quantities do physics measure? Are most of them interrelated?
2. How many systems of measurement are widely used nowadays?
3. All the nations of the world use the metric system, don't they?
4. What was used before the metric system?
5. When was the idea of decimal system realized?
6. What is the main unit of the metric system? How was it measured?
7. Were the units of area and volume defined as well?
8. Do shorter units have Greek or Latin prefixes?
9. What is a unit of mass?
10. Is there a difference between the metric system and the SI system?

Task 2. Study the Active Vocabulary. Insert the missing words.

1. Can you _____ cubic meter into cubic centimeters?
2. The _____ between Moscow and Samara is 1049.
3. 'Biology' is a _____ word, and 'science' is a _____ one.
4. The teacher _____ one of his pupils with a difficult task.
5. Newton was a great _____ who formulated laws of gravitation.
6. The _____ of ice is more than the _____ of water as a liquid. But the _____ of ice is less than the _____ of water at 4 °C.
7. Who was the first traveler who reached the South _____ ?
8. The _____ that studies stars is astronomy.
9. The _____ units of the _____ systems are a meter, a _____ and a _____

Task 3. Read and act the dialog.

Teacher: Let's talk about physics. What is physics connected with? Who can say?

Tom: I can. Physics is connected with the study of matter and natural forces, such as light, heat, movement, etc.

Teacher: That's right. And now let's talk about the word *physics*. It is derived from the Greek word meaning "nature". Some time ago physics was called natural philosophy. It is sometimes called the science of exact measurements. What do you think the work of physics?

Jane: I think, the work of physics is to discover, explain and arrange systematically facts and phenomena relating to non-living things.

Teacher: Very good, Jane. Physics is an exact science and words used in definition and descriptions must be precise.

Tom: Yes, I know it. For instance, the words *mass* and *weight*, *force*, *energy*, *speed* are used as special terms when applied to physics.

Teacher: Have you heard how physics is divided into sections for convenience of study?

Jane: The sections of physics are mechanics, heat, light, magnetism, electricity.

Teacher: Right. What are the units of all quantities based upon?

Tom: Probably they are based on the units of weight, length and time?

Teacher: You are absolutely right. Good of you.

Тема 14. МЕСТОИМЕННИЯ

ЛИЧНЫЕ МЕСТОИМЕННИЯ		ПРИТЯЖАТЕЛЬНЫЕ МЕСТОИМЕННИЯ		ВОЗВРАТНО-УСИЛИТЕЛЬНЫЕ МЕСТОИМЕННИЯ
Кто?	Кому? Кого?	Чей?	Употребляются как самостоятельные слова	Указывают, что действие совершено или свершится самим говорящим
I, я	me, мне, меня	my, мой	mine, мой	myself - я сам
you, ты	you, тебе, тебя	your, твой	yours, твой	yourself – ты сам
he, он	him, его, ему	him, его	his, его	himself – он сам
she, она	her, ее, ей	her, ее	hers, ее	herself – она сама
it, он, она, оно	it, его, ее, ему	its, его, ее	its, его, ее	itself – это само
we, мы	us, нам, нас	our, наш	ours, наш	ourselves – мы сами
you, вы	you, вам, вас	your, ваш	yours, ваш	yourselves – вы сами
they, они	them, их, им	their, их	theirs, их	themselves – они сами

Task 1. Fill in the gaps with appropriate personal pronoun.

1. Ben is a little boy. ... is six. 2. Jane is a house-wife. ... is lazy. 3. Lily is a young woman. ... is very beautiful. 4. Alice is late. ... is in a traffic jam. 5. Nick and Ann are far from Moscow. ... are on a farm. 6. This is Ben's room. ... is nice. 7. Nick and Max are students. ... are students of a Moscow university. 8. The rooms are small but ... are light and warm. 9. The new flat is comfortable but ... is far from the university. 10. Jack has many French books. ... likes to read French very much.

Task 2. Fill in the gaps with appropriate personal pronoun.

1. Is your house new? – Yes, ____ is.
2. Are the students at the English lesson now? - Yes, ____ are.
3. Is your university in Green Street? – Yes, ____ is.
4. Are Helen and Bess your sisters? – Yes, ____ are.
5. Is Ben's sister an engineer? – Yes, ____ is.
6. Are the pencils red? – No, ____ are not.
7. Is this room comfortable? - No, ____ isn't.
8. Are the textbooks on the shelf? - Yes, ____ are.
9. Does the girl often visit the museum? – No, ____ doesn't.
10. Does this pen write well? – Yes, ____ does.
11. Is Ben on holiday now? – No, ____ isn't.
12. Is Helen nice? - Yes, ____ is.
13. Are you an engineer? - Yes, ____ am.

Task 3. Use the necessary pronoun.

1. I like **Nick**. _____
2. We like **Bess**. _____
3. He likes **ice-cream**. _____
4. Can you show **the pictures** to **Ben**? _____
5. You can tell **Helen** my e-mail address. _____
6. Are you interested in **football**? _____
7. I want to buy **two bottles of milk** for **Bess**. _____
8. Do you want to play tennis with **Ben**? _____
9. We must speak to **Nick**. _____
10. You should invite **Helen and Bess** to your house for dinner. _____
11. Do you know **Mary**? _____
12. Tell **Nick** about **your plan**. _____
13. I see **my friends** every day. _____

Task 4. Use the necessary pronoun.

1. Where is Nick? I want to play tennis with _____
2. Bess is here. Do you want to speak to _____ ?
3. My sister speaks French. She learns ... _____ at school.
4. Look at that man. Do you know _____ ?
5. Do you want to read this newspaper? I can give _____ to _____ .
6. If you see Ben and Bess, please, don't tell _____ anything.
7. We want to phone Helen and invite _____ to the party.

Task 5. Use the necessary form of the pronoun.

1. *The vase* is on the table. _____
2. *Mother* often sends *Ben* to buy milk. _____
3. Are *Bess and Helen* ready to do *the work*? _____
4. *Nick and Ben* spend *their holidays* at the seaside. _____
5. *The man* is in the park. _____
6. *The managers* are not at work now. _____
7. *Helen and I* are good friends. _____
8. Is *Ben* at the lesson now? _____
9. Where is *the calculator*? _____
10. *The newspapers* are on the table. _____
11. *The child* is in the garden with *his mother*. _____
12. *Our parents* are always glad to see us. _____
13. *My brother and I* are good football players. _____
14. *Bess* knows *Ben*. _____
15. I see *the picture* very well. _____
16. *The students* have lectures every day. _____
17. *The boy* plays *football* every Sunday. _____
18. *The teacher* asks *the students*. _____
19. *The students* write *tests* every week. _____
20. Look at *the picture*! _____
21. I have *the book* at home. _____
22. *Max* wants to speak to *Helen*. _____

Task 6. Fill in the possessive pronouns.

1. This is *Ben's* room. _____
2. This is *Helen's* hat. _____
3. Here is *my parents'* house. _____
4. *Nick's* mother is an economist. _____
5. Where is *my brother's* bag? _____
6. I like *Helen's* car. _____
7. *Ann's* books are on the table. _____
- 8 *This student's* sister is my friend. _____
9. *My sister's* house is not far from *Ben's* house. _____
10. Where is *the children's* room? _____
11. *Ann's* brothers study at the university. _____
12. *These boys'* fathers don't work at the factory. _____
13. Here is *my sister's* flat. _____

Task 7. Fill in the possessive pronouns.

1. Is your bag new? - Yes, _____ bag is new .
2. I like _____ hat, Ann.
3. Don't plant this tree! _____ branch is broken.
4. Max, you have a new job. Do you like _____ new job?
5. _____ friends always tell me everything.
6. Our dog likes to run after _____ tail.

Task 8. Fill in the gaps with appropriate reflexive pronouns (myself, yourself, yourselves, ourselves, himself, herself, itself, themselves).

1. The dog enjoyed _____ with the children.
2. He cut _____ while shaving in the bathroom.
3. Did you hurt _____?
4. She introduced _____ as Alice Brown.
5. Kids, it wasn't your fault. Please don't blame _____ .
6. Your face is dirty. Look at _____ in the mirror.
7. I don't like people who usually talk about _____ .
8. I am the winner and I'm proud of _____ .

Task 9. Choose the appropriate reflexive pronouns

1. Give (my, me, mine) a glass of water.
2. Who is sitting behind ... (our, we, us)?
3. Would you like to dance with ... (he, him, his)?
4. Joanna is going to meet ... (them, they, their).
5. It took ... (he, him, his) 5 days to get to ... (you, your).
6. Please help ... (I, me, my) with ... (me, my) homework.
7. This is ... (me, my, I) cat. ... (His, Her, Its) name is Tom.
8. She promised to help ... (us, our, we) and she will keep ... (she, her, he) word.

Task 10. Complete the summary.

1. Did you enjoy ... (myself, yourself, your) at the party? – Well. Nick did. But ... (I, my, me) didn't have a good time. I didn't know ... (someone, nobody, anyone) there. There were a lot of people and there was ... (anywhere, nowhere, somewhere) to sit. Fortunately there was much food, so I helped ... (myself, himself, yourself).
2. ... (What, Which, Who) of the two T-shirts do you like? — ... (I, Me, My) like both of ... (they, them, their). – And do you like ... (this, these, that) jeans? – I think ... (they, them, their) are awful.

3. I haven't got ... (some, any, no) sweets for the kids today. Have you got ... (some, any, no) sweets? – Don't worry. I've got ... (some, any, no).
4. This is ... (my, me, mine) garage. And the car is ... (my, me, mine). That is ... (our, ours, us) house. And the garden is ... (our, ours, us).
5. ... (This, These, That) two rings belong to ... (him, his, he) grandmother.

Task 11. Fill in the gaps with *this, that, these, those*.

- 1) people over there are waiting for the bus
- 2) The day I first came to London was wonderful. I will remember day for ever.
- 3) summer I'm pretty busy.
- 4) I'm working as a receptionist days.
- 5) were the days!
- 6) Do you remember winter when we all went to Egypt?
- 7) Hello! is Alan. Can I speak to Harry, please?
- 8) is a new cathedral and one over there was built 900 years ago.
- 9) Will you come over at five o'clock? I'll be at home at time.
- 10) The summer of 1999 I spent in the country. I remember we had a lot of rain year.
- 11) are my sisters. They have just arrived from London.
- 12) Who was girl I saw you with last night?
- 13) Do you want to sit on chair here or on one over there?
- 14) sweets you gave me last night were very nice.
- 15) Look at colourful air balloons in the sky!

REMEMBER

What что, какой?	whose Чей?	who Кто?	when Когда?
How Как?	How many Сколько(исчисл.)	How much Сколько(неисчисл.)	
where Где?	Why Почему?	Which который ?	whom Кому?

Task 12. Fill in the gaps with *who, what, whose, how, when, where, why*:

1. sits next to Frank? Clara.
2. does the boy come from? — From Newcastle.
3. old are her children? — Seven and ten.
4. is Peter's birthday? — In April, I think.
5. much is the shirt? — It's twenty pounds.
6. is best at playing tennis? — Bob.
7. are you going? — To my friends.
8. much is an orange juice? — It's fifty pence.
9. does the restaurant open? — At six o'clock.
10. can I get some ice cream? — At the snack bar.
11. are you going to order? — Fish and chips.
12. are you going to do on Saturday? — I don't know.
13. has got my pullover? — I have got it.
14. is your name? — Carol.
15. is Susan's party? — On Friday.
16. much are the potatoes? — One pound.
17. can I do for you? — I want two white T-shirts.
18. can I get a newspaper? — At Park Street.
19. is your best friend? — It's Paul.
20. does Nick live? — In Boston.

Task 13. Translate into Russian:

- 1) Help yourself.
- 2) Enjoy yourselves.
- 3) Dress yourself.
- 4) I have cut myself.
- 5) Don't blame yourself.
- 6) She likes to talk to herself.
- 7) Kids, behave yourselves!
- 8) Make yourselves comfortable.
- 9) He hurt himself.
- 10) Let me introduce myself.
- 11) We can't defend ourselves.
- 12) Fashion often repeats itself.
- 13) I taught myself to swim.
- 14) They carried all their luggage themselves.

REMEMBER:

Возвратные местоимения	
I	myself (себе, себя, сам, собой)
you	yourself (себя, себе, сам, сами)
he	himself (сам, себе, себя)
she	herself (сама, себе, себя)
it	itself (сама, само, сама, себе, себя)
we	ourselves (себя, себе, сами, собой)
your	yourselves (себя, себе)
they	themselves (себе, себя, сами)

15) We always design our clothes ourselves.

Task 14. Fill in the gaps with appropriate reflexive pronouns.

1. She should respect
2. I can't see in the mirror.
3. We have to do the homework
4. Why doesn't he wash the cup
5. Are they going to Moscow by
6. Peter, you are talking about all the time.
7. Harry thinks of as an extremely smart boy.
8. My dear friends, help to the sandwiches and fruits
9. My granny has knitted this scarf
10. Did they write the essays ?
11. I cut with the scissors.
12. The zebra can't defend
13. His old grandfather often talks to
14. Anna, where did you hurt?
15. Don't worry, we can pay for

Task 15. Do the test.

1. I don't know where ... workbook is! Have you seen it? a) mine b) me c) my	10. It's ... problem, not ours! a) you b) yours c) your
2. Jeremy was a good friend of ... a) my b) mine c) me	11. ... is on the sofa? - It is my book. a) what b) how much c) whom
3. She closed the door behind ... a) her b) – c) herself	12. Have you seen Michael? I need to talk to ... a) he b) him c) his
4. Are these ... pens? a) you b) your c) yours	13. ... pen is this? - This is Tom's pen. a) how b) whose c) when
5. ... color is that car? - It is green. a) when b) what c) why	14. Look at ... colourful air balloons in the sky! a) this b) these c) those
6. Jenny was exhausted after several hours in a gym. ... could hardly move a finger. a) She b) Her c) His	15. That girl gave ... the wrong address just to make fun of me. a) my b) I c) me

7. I gave her my telephone number and she gave ... hers. a) my b) mine c) me	16. I believe that today young people have a lot of wrong models. They should think for a) by themselves b) themselves c) ourselves
8. I am not allowed to play with a) them b) they c) theirs	17. I hate doing all the washing-ups a) by myself b) for myself c) ourselves
9. I haven't seen this man before. Do you know ... name? a) he b) his c) him	18. Hello! ... is Mary. Can I speak to Susy, please? a) that b) this c) these

Тема 15. УРАЛ – ЦЕНТР РОССИЙСКОЙ ПРОМЫШЛЕННОСТИ

Task 1. Read and translate the text.

THE URALS — THE CENTRE OF RUSSIAN METAL INDUSTRY

The Urals — a borderline between Europe and Asia — are a mountain chain which appeared many years ago as a result of tectonic activity. As time went on, the mountains were being destroyed by the action of water, sun and air. As a result, the highest mountains are only one thousand metres high. One more consequence is that the greatest deposits of ores came to the surface of the Earth. The fact that they were easily accessible stimulated the development of plants.

The Ural mining industries began during the time of Peter the First. In the 18th century the Urals, with their high quality ores and rich forests (a fuel for plants) played the greatest role in the world industry. Russia exported metal even to Great Britain.

The modernization of the Ural industry began with Magnitogorsk plant, built near the mountain Magnitnaya, rich in metallic ores. Later, many engineering plants were built in the region. The greatest plants are situated in Magnitogorsk, Nizhniy Tagil, Chelyabinsk and Novotroitsk.

At the beginning of the 20th century the Ural metal industry suffered a crisis because of the shortage of coal. But the delivery of coal from Kuzbass solved the problem.

It must be mentioned that about 70 metals and minerals were first discovered in the Ural mountains. Large deposits of iron, copper, lead, zinc, nickel, titanium, wolfram and many other metals characterize the region.

Nowadays some of the deposits are exhausted, and the plants work on the ores from the new layers (Kazakhstan, Siberia). But nevertheless, the Urals are the region

with great history, traditions and experience, and hopefully it will have new stages of development.

Vocabulary

accessible - доступный	layer - слой
action - действие	lead [led] - свинец
chain - цепь	mention - упоминать
characterize - характеризовать	mining - добывающий
coal - уголь	modernization - модернизация
consequence - следствие	nevertheless - тем не менее
copper - медь	ore - руда
crisis - кризис	plant - завод
delivery - поставка	shortage - недостаток
deposit - месторождение, залежи	Siberia - Сибирь
destroy - разрушать	(to be) situated - быть
development - развитие	расположенным
exhaust - истощать	stage - стадия
export - экспортировать	suffer - страдать
forest - лес	surface - поверхность
fuel - топливо	Ural - Урал, уральский
hopefully - надо надеяться	Urals - Уральские горы
iron ['aɪən] - железо	

Task 2. Study the Active vocabulary. Insert the missing words.

1. Fifty years ago there was a _____ here. Then all the trees were cut and many _____ and factories were built.
2. The _____ are _____ of mountains which divides our continent into _____ and _____.
3. The factory can't work. We have a _____ of copper. _____, we'll have a _____ of it soon.
4. _____ of gold in California were in the middle of the 19th century.
5. Gagarin was the first man who flew round the _____ in a spaceship.
6. The _____ of ores is very thick here. A plant can be built nearby.
7. The _____ of industry means that plants stop working. But all the problems can be _____.
8. The Elbrus is the highest _____ in Europe.
9. These mountains are the result of tectonic _____.
10. Irkutsk is _____ in Siberia.

Task 3. Continue the following statements.

1. The Urals are a mountain range which _____
2. Mountains were being destroyed, and now the highest mountains _____
3. In the 18th century the Urals _____
4. The modernization of the Ural industry began _____
5. The greatest plants are situated _____
6. At the beginning of the 20th century the Ural metal industry _____
7. About 70 metals and minerals _____
8. Nowadays some of the deposits are _____
9. Hopefully, the Urals will _____

Task 4. Make a plan of the text and retell it looking in your plan.**Task . Discuss the following topics..**

1. Traditions and innovations in the Ural metal industry.
2. The role of the Urals in the world industry — the 18th century and the 21st century.

Тема 16. МЕТАЛЛУРГИЯ**Task 1 Read and translate the text****SOME WORDS ABOUT METALLURGY**

Metallurgy is one of the oldest of arts but one of the youngest of sciences. Many of our metals were known in ancient times, but it is only within the last century or two that the knowledge of the properties of the metals has made it possible to apply them in any extended way for industrial purposes.

With the development of physics of metals, metallography, theory of heat treatment, and other phases of the science of metals, the field of metallurgy has broadened.

Metallurgy in this broader sense falls into three divisions: chemical or extractive, physical and mechanical. Chemical metallurgy includes the metallurgical processes involving chemical change and the methods of production and refining.

Physical metallurgy deals with the nature, structure, and physical properties of metals and alloys.

Mechanical metallurgy includes the processes of working and shaping metals — processes which do not involve chemical changes.

Vocabulary:

art - зд. ремесло

in ancient times – в ранние времена, в старину

within the last century – за последнее столетие

has made it possible – сделало возможным

in this broader sence falls into – в этом более широком значении делится на

deals with - рассматривает

Task 2. Find in the text the English equivalents of these Russian word combinations.

- 1) в промышленных целях
- 2) применять
- 3) метод производства
- 4) очищение от примесей, улучшение качества
- 5) свойства металлов
- 6) теория термической обработки
- 7) в широком смысле
- 8) химическое изменение
- 9) включать
- 10) сплавы
- 11) обработка
- 12) извлекать

Task 3. Answer the questions.

- 1) What phases of the science of metals do you know?
 - 2) What does physical metallurgy deal with?
- What does mechanical metallurgy include?

Task 4. Read and translate the text

METALLURGY

Metallurgy is a field of science and technology which includes the process of obtaining the metals from ores or other materials. It also includes the processes connected with changing the chemical composition, structure and properties of metal alloys. Nowadays, metallurgy is also a field of industry. It was decided to divide metals into ferrous (iron and its alloys) and non-ferrous metals. Thus, metallurgy is also divided into ferrous metallurgy and non-ferrous metallurgy.

The production and the consumption of metals is increasing around the world. Now metals are mostly produced and consumed in such countries as the United States of America, Japan, China. Russia. Germany, Ukraine, France. Italy, the United Kingdom and others. Due to their physical properties (hardness, high density, melting point, electrical conduction, sound conductivity, exterior, and others) metals are used in different areas.

The use of metals depends on their individual properties. For example, iron and steel are hard and solide. Due to these properties they are widely used in the field of construction. Aluminium is ductile and heat-conducting, it is always very solide under ultralow temperatures. It is used to produce pans and foil, in cryogenic engineering. Due to its low density aluminium is used in air-craft industry. Copper is ductile and electrically conductive. That's why it is widely used in electrical cables production.

Pure metals are not much used. The alloys of differnet metals are more important, as they possess special individual properties. The most common are the alloys of aluminium, chromium, copper, iron, magnesium, nickel, titanium and zinc. Stainless (or zinc-plated) steel is used when the resistance to the corrosion becomes very important. Aluminium alloys and magnesium alloys are used when the producers need the strength and the lightness. Copper-nickel alloys are used in areas where the corrosion is the most aggressive. They are also used to produce antimagnetic articles. Super alloys on the base of nickel (like inconel) are used under high temperatures.

Process metallurgy means the extraction of metals of value from the ore and the remelting of the raw material extracted into pure metal. In order to turn a metal oxide or a metal sulphide into the pure metal it's necessary to separate the ore. The methods can be physical, chemical or electrochemical.

Task 5. Find the English equivalents

1. The production and the consumption of metals is increasing around the world.	a. Было решено разделить все металлы на чёрные и цветные.
2. The use of metals depends on their individual properties.	b. Сплавы алюминия и магния используются когда требуется прочность и лёгкость.
3. Metallurgy is a field of science and technology which includes the process of obtaining the metals from ores or other materials	c. Медь пластичная и электропроводна.
4. Aluminium alloys and magnesium alloys are used when the producers need the	d. Производство и потребление металлов увеличивается во всём мире

<p>strength and the lightness.</p> <p>5. It was decided to divide metals into ferrous (iron and its alloys) and non-ferrous metals.</p> <p>6. Copper is ductile and electrically conductive.</p>	<p>е. Metallurgy - область науки и техники, которая включает процесс получения металлов из руд или других материалов</p> <p>ф. Использование металлов зависит от их свойств.</p>
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Тема 17. ВИДОВРЕМЕННЫЕ ФОРМЫ ГЛАГОЛА.

The Active Voice (Действительный залог)

Aspect Вид Tense Время	Simple Простое (факты, повторяющиеся действия)	Continuous Продолженно е (действие, происходящее в данный момент)	Perfect Совершенное (предшествова ние данному моменту, законченность)	Perfect Continuous Совершенное Продолженное (действие, начавшееся в какой- либо момент и продолжающееся до другого данного момента, часто включая его)
Present Настоящее	Write(s) пишу (обычно)	am/is/are/writin g пишу (сейчас)	have/has written написал (уже)	have/has been writing пишу (уже час с утра)
Past Прошедшее	wrote написал (вчера)	was/were writing писал (в 5 часов, когда он вошел)	Had written написал (к 5 часам, до его прихода)	Had been writing писал (уже час, когда он пришел)
Future Будущее	shall/will write буду писать (завтра)	shall/will be writing буду писать (завтра в 5 часов, когда он придет)	shall/will have written напишу (завтрак 5 часам)	shall/will have been writing буду писать (уже час, когда он придет)

Группа времён Simple.

Task 1. Complete the sentences. Use these verbs:

boil close cost cost like like meet open ~~speak~~ teach wash

1. Margaret *speaks* four languages.
2. In Britain the banks usually at 9.30 in the morning.
3. The City Museum at 5 o'clock in the evening.
4. Tina **is** a teacher. She mathematics to young children.
5. My job is very interesting, I a lot of people.
6. Peter his hair twice a week.
7. Food is expensive. It..... a lot of money.
8. Shoes are expensive. They a lot of money.
9. Water at 100 degrees Celsius.
10. Julia and I are good friends. I her and she me.

Task 2. Write sentences from these words. Put the verb in the right form.

1. (always/early/Sue/arrive) **Sue always arrives early.**
2. (basketball /I play/often) I
3. (work/Margaret/hard/usually)
4. (Jenny / always / nice clothes /wear)
5. (dinner/we/have/always / at 7.30)
6. (television/Tim/watch/never)
7. (like/chocolate/children/usually)
8. (Julia/parties/enjoy/always)

Task 3. Open the brackets using the Present Simple.

1. A: (you/ know)that man over there?
B: Actually, I do. He's Sara's husband.
2. A: I (see) you are feeling
B: Yes, I am, thank you.
3. A: Graham (have) a new computer
B: I know. I've already seen it.
4. A: You (look) very pretty today.
B: Thank you. I've just had my hair cut.
5. A: Would you like some cherries?
B: Yes, please. I (love) cherries. They are my favourite fruit.
6. A: This cake (taste) awful.
B: I think I forgot to put the sugar in it.

Task 4. Choose the correct item.

1. My parents ____ in a detached house.
a) are lived b) live c) lives
2. The sun ____ in the East.
a) rises b) rise c) rising
3. A red traffic lights ____ "Stop".
a) is mean b) mean c) means
4. He ____ to any parties.
a) don't belong b) isn't belong c) doesn't belong
5. Do you ____ where the post office is?
a) knowing b) know c) knows
6. My mother ____ lots of money on clothes.
a) spend b) spends c) don't spend
7. Martin never ____ me text messages.
a) doesn't send b) sends c) send
8. ____ lunch at work?
a) Do you usually have b) Are you usually have c) Does you usually have
9. I ____ too much coffee.
a) drinks b) drinking c) drink
10. The bank always ____ on time.
a) open b) is open c) opens
11. Where ____ your books?
a) you keep b) does you keep c) do you keep
12. They ____ volleyball on weekends.
a) don't play b) aren't play c) doesn't play
13. ____ her dog every morning?
a) Is Mary walk b) Does Mary walk c) Do Mary walk
14. Ted often ____ in a restaurant.
a) is dines b) dine c) dines
15. All sport competitions ____ at our stadium.
a) takes place b) take place c) are take
16. ____ many houses?
a) Does he owns b) Does he own c) Do he owns

Группа времён Progressive.

Task 1. Use Present Continuous, Past Continuous или Future Continuous.

1. to shine

The sun _____ yesterday morning.

The sun _____ brightly now.

Tomorrow the sun _____ all day long.

2. to write

I _____ a postcard at the moment.

I _____ a postcard when you phoned.

I _____ a lot of Christmas cards tomorrow evening.

3. to sit

We _____ in the garden at 3 o'clock yesterday afternoon.

This time tomorrow we _____ in the garden.

We _____ in the garden now.

Task 2. Use Present Continuous, Past Continuous или Future Continuous.

1. I _____ (study) Japanese online from 5 till 6 tomorrow evening.
2. Listen! Why the dogs _____ (bark)?
3. She _____ (wear) a yellow coat when I saw her.
4. They _____ (take) their driving tests next Monday.
5. I dropped my wallet when I _____ (get) on the bus.
6. What you _____ (do) in my office yesterday?
7. Bob _____ (feel) much better today.
8. The kids _____ (watch) cartoons in their room now.
9. I'm afraid she _____ (sleep) in ten minutes.
10. We _____ (have) tea soon?

Task 3. Ask the questions

1. We are enjoying the party. _____
2. He'll be playing chess in an hour. _____
3. They were planting flowers in the garden last May. _____
4. I am looking for a job. _____
5. The phone was working yesterday. _____
6. Margaret will be working as a waiter in summer. _____
7. The secretary is typing a contract. _____

Task 7. Put the verbs in brackets into the Past Simple or the Past Continuous.

Dear Rick,

I'm writing to you from my hotel in Switzerland. I'm having a lovely time here but you can't imagine what 1) ...*happened*... (happen) to me yesterday. I 2) (be) on mountain with my friends and we 3) (have) a lovely time because the snow 4) (be) perfect for skiing. Unfortunately the sun 5) (shine) on the snow, so it 6) (be) difficult to see. Suddenly, I 7) (hit) the rock and I 8) (fall) over. Luckily I 9) (not / be) seriously hurt – I just 10) (get) a few bruises. Now I'm trying to be more careful!

I'll see you when I get back.

Best wishes,

Kevin

Task 8. Put the verbs in brackets into the Present Continuous, Present Simple or Past Continuous.

1. I ...*was cleaning*... (clean) the windows when the telephone(ring).
2. "What is that noise?" "James (repair) his bike at the moment."
3. He (read) a book when his mother (call) him.
4. "..... (be) you busy?" "No, what (you / want) me to do?"
5. They (sing) while we (play) some music.
6. Susan is a nurse. She usually (work) at night).

Task 9. Choose the correct item.

1. The earth ...*B*... round the sun.
a) moved b) moves c) is moving
2. Sarah a new car yesterday.
a) is buying b) buy c) bought
3. I when suddenly the dog began to bark.
a) study b) studied c) was studying
4. They hard at the moment
a) are working b) were working c) worked
5. I home from work when it began to snow.
a) am walking b) walk c) was walking
6. Jane the receiver and dialed the number.
a) lifts b) was lifting c) lifted
7. Walt Disney Mickey Mouse.
a) was creating b) creates c) created
8. Helen to the gym every day , but now she doesn't.
a) used to go b) didn't use to go c) was going
9. We for a new house at the moment.
a) are looking b) look c) looked
10. Ted his father in the garden every Sunday.
a) was helping b) helps c) is helping
11. The ferry to Calais at 3 o'clock every day.
a) leave b) leaves c) was leaving
12. You your music too loud! I can't stand it!
a) were always playing b) always play c) are always playing

Task 10. Use Present Simple, Past Simple, Present Continuous, Past Continuous.

1. Nina _____ (to celebrate) her birthday yesterday. Her room looked beautiful, there _____ (to be) many flowers in it. When I

_____ (to come) in, somebody _____ (to play) the piano, two or three pairs (to dance).

2. Listen! Somebody _____ (to play) the piano.

3. I _____ (to like) music very much.

4. When I _____ (to look) out of the window, it _____ (to rain) heavily and people (to hurry) along the streets.

5. What _____ you _____ (to do) at seven o'clock yesterday? — I _____ (to have) supper.

6. When I _____ (to come) home yesterday, I _____ (to see) that all my family _____ (to sit) round the table. Father _____ (to read) a letter from my uncle who _____ (to live) in Moscow

7. Where _____ you (to be) yesterday? — I _____ (to be) at home the whole day. — How strange. I _____ (to ring) you up at two o'clock, but nobody _____ (to answer). — Oh, I _____ (to be) in the garden. I _____ (to read) your book and _____ (not to hear) the telephone.

8. What _____ you _____ (to do) at five o'clock yesterday? — I _____ (to work) in the library. — I _____ (to be) there, too, but I _____ (not to see) you.

9. Yesterday I _____ (to work) at my English from five till seven.

10. It _____ (to rain) the whole day yesterday.

Группа времён Perfect

Tak 1. PresentPerfect или PastSimple.

1. We _____ (to travel) around Europe last year.

2. My father knows so much because he _____ (to travel) a lot.

3. I _____ (to see) Pete today.

4. She _____ (to see) this film last Sunday.

5. Alex _____ (to meet) his friend two hours ago.

- 6.1 _____ just (to meet) our teacher.
7. The children _____ already (to decide) what to do with the books.
8. Yesterday they _____ (to decide) to help their grandmother.
9. Helen speaks French so well because she _____ (to live) in France.
10. She _____ (to live) there last year.
11. The rain _____ (to stop) and the sun is shining in the sky again.
12. The rain _____ (to stop) half an hour ago.
13. Mary _____ (to buy) a new hat.
- 14.1 _____ (to buy) a pair of gloves yesterday.
15. The wind _____ (to blow) off the man's hat, and he cannot catch it.
16. The weather _____ (to change), and we can go for a walk.

Task 2. Use Present Continuous, Present Perfect, Present Perfect Continuous, Past Simple.

1. Aren't you about to finish with the dishes? You _____ (wash) the dishes for thirty minutes or more. How long can it take you to wash the dishes?
2. We _____ (go) to the Steak House restaurant many times. The food is excellent.
3. A: What is that sound? B: A car alarm _____ (ring) somewhere down the street. It _____ (drive) me crazy —I wish it would stop! It _____ (ring) for more than twenty minutes.
4. Can you translate this note from Stockholm? I understood Swedish when I _____ (be) a child, but I _____ (forget) it all.
5. What's that dent in the side of the car? _____ you _____ (have) an accident?
6. I'm sorry, John's not here; he _____ (go) to the dentist. He _____ (have) trouble with a tooth for some time.
7. This cassette recorder is broken. _____ you _____ (play) about with it?
8. Your Italian is very good. _____ you _____ (study) it long?
9. Do you mind if I clear the table? _____ you _____ (have) enough to eat?
10. Ann never _____ (go) camping. She _____ (not sleep) in a tent.
11. Frank, where have you been? We _____ (wait) for you since 1 p.m.
12. I'm not surprised he _____ (fail) that exam. He _____ (not / work) hard recently.

Task 3. Use Present Perfect, Present Continuous, Present Simple или Past Simple.

1. Please give me a pencil, I _____ (to lose) mine.
2. I _____ (not to meet) Peter since Monday.
3. Nina _____ just (to finish) work.
4. Where _____ Sergei (to be)? — He _____ (to go) home. He _____ (to leave) the room a minute ago.
5. What you _____ (to read) now? — I _____ (to read) «Jane Eyre» by Charlotte Bronte.
6. My watch _____ (to stop). There _____ (to be) something wrong with it.
7. _____ you _____ (to see) Jack today? — Yes, I _____ (to see) him at the institute.
8. _____ you _____ (to hear) the new symphony by M.? — Yes, I _____. When you _____ (to hear) it? — I _____ (to hear) it last Sunday.
9. You _____ (to change) so much. Anything _____ (to happen)?
10. What _____ you _____ (to do) here at such a late hour? _____ You (to write) your composition? — No, I _____ (to write) it already. I _____ (to work) at my report. — And when _____ you _____ (to write) your composition? — I _____ (to finish) it two days ago.
12. I say, Tom, let's have dinner. — No, thank you, I _____ already _____ (to have) dinner.

Тема 18. Компьютеры и их функции

Task 1. Read and translate the text.

What is a computer?

A computer is a machine that performs tasks, such as calculations or electronic communication, under the control of a set of instructions called a program. Programs usually reside within a computer and are retrieved and processed by the computer's electronics. The program results are stored and routed to output devices, such as video display monitors or printers. A wide variety of activities is performed by computers reliably, accurately, and quickly.

Computers are extremely versatile. In fact, they are *universal* information processing machines. According to the Church-Turing thesis, computer with a certain minimum threshold capability is in principal capable of performing the tasks of any other computer. Therefore, computers with capabilities ranging from those of a personal digital assistant to a supercomputer may all perform the same tasks, as long as the time and memory capacity are not considerations. Therefore, the same computer designs may be adapted for tasks ranging from processing company payrolls to controlling unmanned spaceflights. Due to technological advancement, modern electronic computers are exponentially more capable than those of preceding generations (a phenomenon partially described by Moore's Law).

Uses of computers

Computers are used by people in many ways. In business, computers track inventories with bar codes and scanners, check the credit status of customers, and transfer funds electronically. In homes, tiny computers embedded in the electronic circuitry of most appliances control the indoor temperature, operate home security systems, tell the time, and turn videocassette recorders (VCRs) on and off. Computer programs, or applications, exist to aid every level of education, from programs that teach simple addition or sentence construction to programs that teach advanced calculus. Computers are used extensively in scientific research to solve mathematical problems, investigate complicated data, or model systems that are too costly or impractical to build, such as testing the air flow around the next generation of aircraft. Computers are employed by military in sophisticated communications to encode and unscramble messages, and to keep track of personnel and supplies.

How computers work

The physical computer and its components are known as hardware. Computer hardware includes the memory that stores data and program instructions; the central processing unit (CPU) that carries out program instructions; the input devices, such as a keyboard or a mouse, that allow the user to communicate with the computer; the output devices, such as printers and video display monitors, that enable the computer to present information to the user; and *buses* (hardware lines or wires) that connect these and other computer components. The programs that run on the computer are called software. Software is generally designed to perform a particular type of task – for example, to write a letter, to display and modify a photograph, or to direct the general operation of the computer.

Task 2. Find English equivalents from the text.

1. предназначен для
2. отслеживать (работу, персонал)

- | | |
|-----------------------------------|----------------------------|
| 3. научное исследование | 12. отыскивать (извлекать) |
| 4. сохранять информацию | 13. платежные ведомости |
| 5. сложные средства коммуникации, | 14. встроенный |
| 6. минимальный порог | 15. надежно |
| возможностей | 16. электронные схемы |
| 7. выполнять задачи | 17. применять |
| 8. объем памяти | 18. осуществлять денежные |
| 9. беспилотные полеты в космос | переводы |
| 10. устройства вывода | 19. шина |
| 11. давать возможность | |

Task 3. Provide synonyms for the following.

- | | | |
|-----------------|--------------|----------------|
| 1. to carry out | 4. apply | 7. complicated |
| 2. information | 5. display | 8. small |
| 3. expensive | 6. to direct | |

Task 4. Find the equivalents.

- | | |
|----------------|--------------|
| 1. therefore | a) такой как |
| 2. due to | b) поэтому |
| 3. as long as | c) например |
| 4. such as | d) благодаря |
| 5. for example | e) пока |

Task 5. Translate the sentences into English.

1. Компьютер - это электронное устройство, которое предназначено для хранения и обработки информации. 2. Все физические компоненты компьютерной системы называются аппаратным обеспечением. 3. Когда программа запущена, компьютер выполняет набор инструкций и обрабатывает данные. 4. Результаты программы передаются в устройства вывода (мониторы, принтеры). 5. В научных исследованиях компьютеры используются для решения математических задач, изучения сложных данных. 6. Устройства ввода дают возможность пользователям взаимодействовать с компьютером. 7. В настоящее время компьютеры встроены практически во все бытовые и электронные приборы. 8. Благодаря развитию технологий, современные компьютеры способны выполнять самые сложные задачи.

Task 6. What do you know about a computer? Read the statements given below and say if they are right or wrong. If the statements are not true, make the necessary corrections.

- 1) The physical parts you can see and touch are called software.
- 2) A desktop computer combines its parts into a single, notebook-sized package.
- 3) Random access memory unit acts as the "brain" of a computer.
- 4) CD drives use hard disks to retrieve data from a CD.
- 5) When you want to select an item, you point to the item and then click the secondary mouse button.
- 6) The arrow keys allow you to enter numbers.
- 7) Cathode ray tube monitors have the advantage of being thinner and lighter.
- 8) Inkjet printers are the most commonly used type of printer,
- 9) Speakers are not built into the system unit.
- 10) A modem can be used to connect a computer to the Internet.

Task 7. Read text "Parts of a Computer" and say if you are right or wrong. Discuss your answers with your classmates.

Parts of a Computer

A computer is a system of many parts working together. The physical parts, which you can see and touch, are collectively called hardware. Software, on the other hand, refers to the instructions, or programs, that tell the hardware what to do. The following illustration (Fig. 1) shows the most common hardware in a desktop computer system. A laptop computer has similar parts but combines them into a single, notebook-sized package.

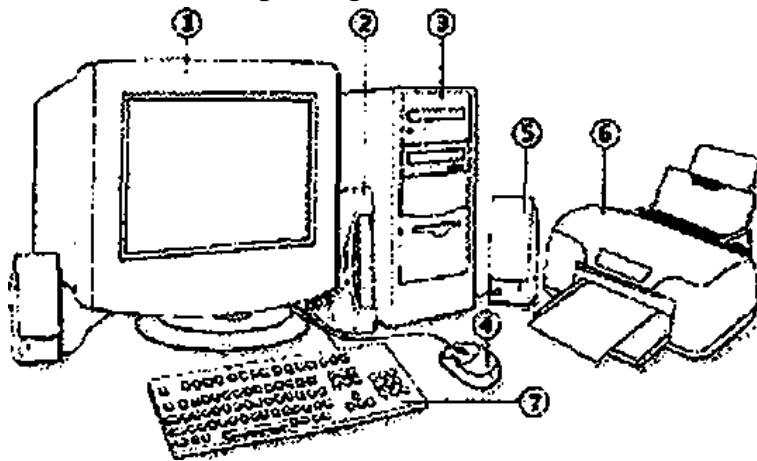


Fig. 1. Desktop computer system

The system unit is the core of a computer system. It is a rectangular box placed on or underneath your desk. Inside this box there are many electronic components that process information. The most important of these components is the central processing unit (CPU), or microprocessor, which acts as the "brain" of your computer. Another component is random access memory (RAM), which temporarily

stores information that the CPU uses while the computer is on. Almost every part of your computer is connected to the system unit by cables. The cables plug into specific ports (openings) on the back of the system unit. Hardware that is not part of the system unit is sometimes called a peripheral device or device.

A computer has one or more disk drives — devices that store information on a metal or plastic disk. A computer hard disk drive stores information on a hard disk. It is located inside the system unit. Computers come equipped with a CD or DVD drive, usually located on the front of the system unit. CD drives use lasers to read (retrieve) data from a CD; many CD drives can also write (record) data onto CDs. Many DVD drives can record data onto blank DVDs. Floppy disk drives store information on floppy disks called floppies or diskettes.

A mouse is a small device used to point to and select items on your computer screen. It is connected to the system unit by a long wire. Some newer mice are wireless. A mouse usually has two buttons: a primary button (usually the left button) and a secondary button.

Many mice also have a wheel between the two buttons, which allows you to scroll smoothly through screens of information. When you move the mouse with your hand, a pointer on your screen moves in the same direction. When you want to select an item, you point to the item and then click (press and release) the primary button.

A keyboard is used mainly for typing a text into your computer. Like the keyboard on a typewriter, it has keys for letters and numbers, but it also has special keys. The function keys, found on the top row, perform different functions depending on where they are used. The numeric keypad, located on the right side of most keyboards, allows you to enter numbers quickly. The navigation keys, such as the arrow keys, allow you to move your position within a document or webpage.

A monitor displays information in visual form, using text and graphics. A computer screen can show still or moving pictures. There are two basic types of monitors: CRT (cathode ray tube) monitors and the newer LCD (liquid crystal display) monitors. Both types produce sharp images, but LCD monitors have the advantage of being much thinner and lighter.

A printer transfers data from a computer onto paper. The two main types of printers are inkjet printers and laser printers. Inkjet printers are the most popular printers for the home. They can print in black and white or in full colour. Laser printers are faster and generally better able to handle heavy use.

Speakers are used to play sound. They can be built into the system unit or connected with cables. Speakers allow you to listen to music and hear sound effects from your computer.

To connect your computer to the Internet, you need a modem. A modem is a device that sends and receives computer information over a telephone line or high-

speed cable. Modems are sometimes built into the system unit, but higher-speed modems are separate components.

Task 8. Ask your classmates:

1. what a computer is;
2. what the difference between a desktop computer and a laptop computer is;
3. what hardware and software are;
4. what the system unit is;
5. what disk drives are used for;
6. why floppy disk drives are less popular than hard disk drives;
7. what the mouse functions are;
8. what types of keys a keyboard has and what their applications are;
9. what the main types of printers are;
10. what computer speakers are used for;
11. what is required to connect a computer to the Internet.

Task 8. Find in text the paragraph about system unit and translate it into Russian.

Task 9. Read aloud paragraphs 3—4.

Task 10. Put the main ideas (a—k) in the same order as they are in text.

- a) Types of computers.
- b) A mouse.
- c) A modem.
- d) Computer parts.
- e) A keyboard.
- f) Computer speakers.
- g) Hardware and software.
- h) A monitor.
- i) Disk drives.
- j) A system unit.
- k) A printer.

Task 11. Read and translate the text.

The Importance of Computer Education

Technology has become more advanced and played a major role in our daily lives. Today, the invention such as the computer appears in almost every home and has become an essential tool in the college system. Computer education enhances technological progress, which is a major determinant of the future of the national economy, and can be an asset in improving students' overall learning ability.

Computer education improves students' research skills by encouraging them to look for information on the Internet. The knowledge received in class may not be enough for assignments and term papers. The Internet enables students to research various topics by seeking relevant boob that could be digitally available online. Rather than spending hours reading through aisles of books in the library, students can save a great deal of time simply by using a computer and search engines such as Google, which can direct them to relevant information in seconds.

A computer is also widely used to type assignments and submitting them. In college, most teachers require students to hand in typed papers. Typing will not only make students' essays look neat and organized but also help them avoid low grades due to bad handwriting. Computers also have useful software, which reminds students to correct punctuation, spelling and grammar mistakes.

The computer knowledge acquired in colleges may increase their interest in computer-related fields during their further education. Furthermore, computer education provides students with a grounding in computer-related software and activities, such as using programming languages and creating data sheets. Students can apply these skills to a range of occupations later in life.

Computer classes allow students to put their creativity to use. For example, classes can involve assembling and disassembling computer parts, which require students to think about and understand how parts function. Students can transfer their enhanced creativity to other activities in their lives, including memorizing scientific facts, historical information or mathematical formulas. Computer education also reduces the time needed to efficiently learn new material.

Computer education may influence student performance by enabling them to become more involved with their college work. Computers can potentially enhance students' mathematical thinking, and improve scores in problem solving and critical thinking tasks.

Computer education also plays a major factor in students' ability to score highly on their standardized assessment tests .

Task 12. Identify the topic of each paragraph of Text 16B.

Task 13. Answer the following questions.

1. What is the role of computer education?
2. What are the advantages of finding required information from the Internet?
3. How can a computer help students to do their homework?
4. How can students apply their computer knowledge acquired in colleges in their future professional life?
5. What do computer classes allow students to do?
6. How can computer education influence student performance at college?

Task 14. Role play dialogues:

A New Computer

Bill: I bought a new computer yesterday.

Robert: You bought a new computer?

Bill: Yes, a new notebook computer.

Robert: Why didn't you buy a desktop computer?

Bill: The notebook is light, and has a battery, so I can use it anywhere. I can use it on the train or the bus.

Robert: Isn't the keyboard too small to use?

Bill: It's compact, but I'll get used to it.

Robert: I think large keyboards are easier to use than small ones. Also, desktop computers are more powerful than notebooks.

Bill: That's true, but my notebook computer is powerful enough for me.

Robert: Aren't notebooks more expensive than desktop computers?

Bill: Yes, desktop computers are usually less expensive, but notebook computers are portable. I can use my notebook in any room, and when I'm done, I can put it away. You can't put away a desktop computer.

Robert: That's true, but my desktop computer doesn't take too much space. It's an iMac.

Bill: That's a cool computer. I bet my Windows notebook was cheaper than your iMac.

Robert: You get what you pay for.

Bill: Funny.

Using the Internet

Elena: Hey, Ivan, how often do you use the Internet?

Ivan: Oh, I use it everyday! I check my email, read the news, chat with friends all around the world. I love the Internet!

Elena: Me too. Yeah, it's great, isn't it? Sometimes I stay online for hours. I also download pictures and music.

Ivan: Using the Internet, I can do a lot of things. Just today I've read about what's happening in my country, then I've *searched* for some information about how to play tennis better, and finally I've used some software called *Pal Talk* to chat with friends in England and the USA.

Elena: That's cool! You chat with them by typing text messages, right?

Ivan: Not only text, I do "voice chat" too. I have a microphone and speakers. It's like using a telephone.

Elena: Hey, I'd like to try that too. Shall I just go to www.paltalk.com?

Ivan: Yes, that's right. Once you download their software, you can begin to chat right away. You can speak to people all over the world and all you need is a mic!

Elena: That sounds like a good way to practise English. But sometimes I need more English practice. Do you know any good sites specially made for students learning English?

Ivan: Well, you could try <http://www.teacherjoe.us> for various kinds of materials. You might be able to meet some fellow students there who can help you more.

Elena: Thanks, Ivan, I think I'll try it out. Oh, I have to be going. Do you happen to know which bus I should take to get to the bookshop selling foreign literature?

Ivan: I think you can go to bjbus.com to find information on all the bus routes in town.

Elena: Too bad, I don't have the Internet wired directly to my brain! Thanks, Ivan.
Bye! Ivan: Bye, Elena!

Task 15. Read and translate the text.

The Internet

The Internet, a global computer network which embraces millions of users all over the world, began in the United States in 1969 as a military experiment.

Millions of people around the world use the Internet to search for and retrieve information on various topics and in a wide variety of areas including government, politics, business, arts, news, and recreation. People communicate through electronic mail (e-mail), discussion groups, chat channels and other means of information exchange.

The World Wide Web (WWW) is a part of the Internet. By using a computer terminal and a Web browser people connected to the Internet and World Wide Web through the local providers have access to a variety of information. You can move

from site to site on the Web by clicking with a mouse on a portion of text, icon or region of a map. These items are called hyperlinks or links. Each link may represent a document, an image, a video clip or an audio file.

The most important problem is information security. There is possibility to get into any of computers. You can visit cities all over the world, museums, meet new friends, do shopping and, of course, play computer games with partners from other countries and continents.

Not long ago computers were considered an amazing invention. Today they form part of our everyday life. The latest thing today is Virtual Reality. A Virtual Reality system can transport the user to exotic locations such as a beach in Hawaii or the inside of the human body. The Virtual Reality system is still in the early stages of its development. At the moment it is necessary to put a large helmet on your head to see the simulated world and you have to wear a special glove on your hand in order to manipulate the objects you see there. Lenses and two miniature display screens inside the helmet create the illusion that the screen surrounds you on every side.

You can «look behind» computer— generated objects, pick them up and examine them, walk around and see things from a different angle. Already today Virtual Reality is used in medicine. In hospitals, surgeons could plan operations by first «travelling» through the brain, heart or lungs without damaging the body. It is also used in police training schools. In schools pupils could explore the Great Pyramid or study molecules from the inside. Developers of Virtual Reality say its potential is powerful.

Answer the questions:

1. When did Internet appear for the first time ?
2. How can people connect to the Internet?
3. What is a hyperlink?
4. How can people communicate using the Internet?
5. What is a Virtual Reality used for?

Тема 19. РОЛЬ НАУЧНО-ТЕХНИЧЕСКОГО ПРОГРЕССА В НАУКЕ И ТЕХНИКЕ

Task 1. Read and translate the text.

THE ROLE OF TECHNICAL PROGRESS

The scientific and technical revolution has changed our life very much. The computers, the mobile phones and other digital devices have entered our everyday life.

The atomic, space and energy age was followed by the age of computers. The tasks which had seemed eternal before have been solved one by one by computers. During

the last decade many fundamental changes occurred because of electronic devices. It is even difficult to imagine the social and economic consequences of the microelectronic revolution.

The large use of computers has influenced our life in such a way that it was difficult to imagine 15 or 20 years ago. On the one hand, computers have simplified our life greatly. If you typed a text on the typewriter and made a mistake you had to type the whole page again. Making several copies of the same document used to be a difficult job too. But now it's quite different. Correcting mistakes is easy. Computer also helps us to buy goods, find information, book tickets, make presentations and annual reports, and make difficult calculations. Time is saved for leisure.

Leisure time is also influenced by computer and other periphery devices. You no longer go to the music shops — many things are available on the internet. You needn't write letters to your relatives or friends — you can send an e-mail. And your photo albums are on computer too.

Computer games are probably also a part of your free time. They became more and more realistic and complicated, and for many people it becomes impossible to tear themselves away. This means that electronic devices, such as computer and TV set are used mostly for entertainment and consume most of the time that could be spent on work, going for a walk and sleeping. Man becomes a slave of the devices which were designed to make him stronger.

Is there a way out? In fact, there is, but many people don't know it and are still slaves. The best decision is not to give these equipments place in your heart. They should do their work. And when you have a rest, prefer real communication to virtual one and living an active life to watching films about crime. Then electronics will be not our lord or enemy but our friend!

Vocabulary

age - век
annual - ежегодный
atomic - атомный
available - доступный
consequence - следствие
copy - копия
correct - исправлять
crime - преступление
decade - десятилетие
document - документ
e-mail - электронная почта
enemy - враг

enter - вводить, входить
good - добро
impossible - невозможный
influence - влияние и влиять
lord - господин
occur - возникать
periphery - периферия
photo album - фотоальбом
progress - прогресс
realistic - реалистичный
relative - родственник
report - отчет

simplify - облегчать

slave - раб

social - социальный

tear (oneself) away - оторвать(ся)

type - печатать

typewriter - печатная машинка

virtual - виртуальный

Task 2. Answer the following questions to the text.

1. The technical revolution has changed our life very much, hasn't it?
2. What were the predecessors of computer age?
3. Do computers make our life easier and simpler? In what way?
4. Computers influence our free time too, don't they?
5. Can you get music and video on the internet? What other information can you get there?
6. What devices became compatible with computer during the last years?
7. Can you communicate with your friends on the Internet? Do you like such communication or you prefer real one?
8. In what way do computer games influence the people?
9. Do electronic devices take all our free time?
10. Is man a slave of the devices which were designed to make him stronger?
11. Does the author suggest a way out?
12. What is the way out in your opinion?

Task 3. Study the Active vocabulary. Insert the missing words.

1. _____ helps you to send letters quickly.
2. If there is an interesting program on TV, it's difficult for a person to _____
3. During the last two _____ scientific progress and digitization took place.
4. For some people a computer is an equivalent of a _____: a device for printing and editing documents.
5. Do you have many _____? — Yes, I have parents, grandparents, two sisters and three brothers.
6. I don't buy _____ any more, all my photos are on my computer.
7. Computer is a multifunctional device. So the _____ is that it can be used both for work and for leisure.
8. _____ age was followed by a microelectronic one.

Task 4. Continue the following statements.

1. The atomic, space and energy age was followed by ...
2. It's difficult to imagine the social and economic consequences ...
3. Computers have simplified ...
4. Computer helps us to buy goods, find information ...
5. Leisure time is also influenced ...

6. You no longer go to the music shops ...
7. You needn't write letters to your relatives ...
8. Computer and TV set are used mostly for entertainment...
9. The best decision is not to give these equipments ...
10. When you have a rest, prefer real communication ...

Task 5. Make a plan of the text and retell the text looking in your plan.

Task 6. Discuss the following topics.

1. The fundamental changes caused by technical revolution.
2. The use of computer for work.
3. Electronic devices which are used mostly for entertainment.

Тема 20. ДЕЙСТВИТЕЛЬНЫЙ И СТРАДАТЕЛЬНЫЙ ЗАЛОГ

В **действительном залоге** подлежащее обозначает исполнителя действия, лицо или предмет, выполняющие описываемое действие, а тот, на кого направлено действие, т.н. "получатель действия" в предложении является дополнением

В **страдательном залоге** подлежащим является лицо или предмет, подвергающиеся воздействию со стороны другого лица или предмета. Другими словами, исполнитель и получатель действия меняются местами, хотя исполнитель действия может и не указываться.

	Действительный залог	Страдательный залог
Present Simple	Once a week, Tom cleans the house.	Once a week, the house is cleaned by Tom.
Present Continuous	Right now, Sarah is writing the letter.	Right now, the letter is being written by Sarah.
Past Simple	Sam repaired the car.	The car was repaired by Sam.
Past Continuous	The salesman was helping the customer when the thief came into the store.	The customer was being helped by the salesman when the thief came into the store.
Present Perfect	Many tourists have visited that castle.	That castle has been visited by many tourists.
Present Perfect Continuous	Recently, John has been doing the work.	
Past Perfect	George had repaired many cars before he received his mechanic's license.	Many cars had been repaired by George before he received his mechanic's license.
Past Perfect	Chef Jones had been preparing the	

Continuous	restaurant's fantastic dinners for two years before he moved to Paris.	
Future Simple <i>will</i>	Someone will finish the work by 5:00 PM.	The work will be finished by 5:00 PM.
Future Simple <i>be going to</i>	Sally is going to make a beautiful dinner tonight.	A beautiful dinner is going to be made by Sally tonight.
Future Continuous	At 8:00 PM tonight, John will be washing the dishes.	
Future Perfect	They will have completed the project before the deadline.	The project will have been completed before the deadline.
Future Perfect Continuous	The famous artist will have been painting the mural for over six months by the time it is finished.	
Used To	Jerry used to pay the bills.	The bills used to be paid by Jerry.
Would Always	My mother would always make the pies.	The pies would always be made by my mother.
Future in the Past	I knew John would finish the work by 5:00 PM.	I knew the work would be finished by 5:00 PM.

Task 1. Translate the sentences

1. Breakfast was cooked by our mother.
2. The new rule was explained to us at the English lesson.
3. The story was written by Chekhov.
4. This sports centre was visited by lots of people.
5. This sports game is often played at P.E. lessons.
6. The ball was thrown over the fence.
7. The boxer was knocked down.
8. I was born in Moscow.
9. They will be trained by a famous coach.
10. I will be sent to the competition.

Task 2. Chose the right variant

1. The news program (*is watched / watched*) by millions of people every day.
2. The Mona Liza (*painted / was painted*) by Leonardo da Vinci.
3. The new cinema (*be built / will be built*) next year.
4. New pop groups (*are much spoken / is much spoken*) about among teenagers.
5. Alexander Pushkin's first poem (*was written / written*) when he was fourteen.
6. The letters (*be sent / will be sent*) by post tomorrow.
7. The translation (*was finished / were finished*) two hours ago.

8. London(*visited / is visited*)by hundreds of tourists every year.
9. The dinner (*be / will be*)ready in an hour.

Task 3. Define the Voice of the sentences A (=active) or P (= passive).

1. I'm paid twice a month.
2. She opened the door.
3. Renault cars are made in France.
4. Are any classes taught at weekends?
5. Do you study at weekends?
6. The policeman helped us.
7. We were helped by the policeman.
8. The President was photographed by the journalists.
9. The journalists photographed the President.
10. The Discovery Civilization channel is watched by millions of people.
11. Russian people also watch it.

Task 4. Use sentences in Active or Passive Voice.

1. Nobody (to see) him yesterday.

2. The telegram (to receive) tomorrow.

3. He (to give) me this book next week.

4. The answer to this question can (to find) in the encyclopedia.

5. We (to show) the historical monuments of the capital to the delegation.

6. You can (to find) interesting information about the life in the USA in this book.

7. Budapest (to divide) by the Danube into two parts: Buda and Pest.

8. Yuri Dolgoruki (to found) Moscow in 1147.

9. Moscow University (to found) by Lomonosov.

10. We (to call) Zhukovski the father of Russian aviation.

Task 5. Chose the right variant of the verb.

1. At the station they will (meet, be met) by a man from the travel bureau.

2. She will (meet, be met) them in the hall upstairs.
3. The porter will (bring, be brought) your luggage to your room.
4. Your luggage will (bring, be brought) up in the lift.
5. You may (leave, be left) your hat and coat in the cloakroom downstairs.
6. They can (leave, be left) the key with the clerk downstairs.
7. From the station they will (take, be taken) straight to the hotel.
8. Tomorrow he will (take, be taken) them to the Russian Museum.

Task 6. Use Passive Voice.

1. They are now building new hospitals in the provinces.

2. Will they publish her new novel next year?

3. They will have completed the new petrol station by winter.

4. The police have just arrested Jimmy on suspicion of murder.

5. They cut the gas off because Mr. and Mrs. Green hadn't paid their bill.

6. They will open a new hotel next week.

7. Our managers discuss important matters every Tuesday.

8. The government closed the plant last year.

Task 7. Fill in gaps *with* or *by*, translate the sentences.

1. In his childhood Tom used to be beaten ____ a stick.
2. My parents were married ____ a priest.
3. Molly's bedroom wall was covered ____ posters.
4. The house was surrounded ____ flowerbeds.
5. His shorts were covered ____ mud.
6. Tom had been stabbed ____ a penknife.
7. The deer was shot ____ a hunter ____ rifle.
8. Soup is eaten ____ a spoon.
9. The new swimming pool has been just opened ____ the mayor.
10. During the robbery, the manager was hit ____ a baseball bat.
11. Extra training was provided ____ the company.
12. This story was written ____ Agatha Christie.

13. The bear was shot ____ a gun.
14. Trained dogs are used ____ the police.
15. The hall was decorated _____ pink and purple balloons.
16. University laboratories are equipped _____ up-to-date devices.
17. Rare books, issued ____ British publishers, are being shown at the exhibition.

Task 8. Do the test.

1. The porter (bring) your luggage to your room.

- a. will bring
- b. will be bring
- c. will be brought

2. The milk (sell) in this shop

- a. sell
- b. is sold
- c. sells

3. The paper (examine) attentively

- a. examined
- b. was examine
- c. was examined

4. I (buy) potatoes yesterday

- a. was bought
- b. was buyed
- c. bought

5. At the station they (meet) by a man

- a. will meet
- b. will met
- c. will be met

6. She (meet) them in the hall upstairs.

- a. will been met
- b. will be met
- c. will meet

7. They (play) tennis yesterday

- a. played
- b. were played
- c. are played

8. All the text (translate)

- a. is translated
- b. translated
- c. was translate

9. The doctor (send) for

- a. sent
- b. was sent
- c. were sent

10. He (steal) a lot of money from the shop.

- a. stole
- b. was stolen
- c. was stole

Тема 21. МЕТАЛЛЫ

Task 1 Read and translate the text

METALS

Metals are materials most widely used in industry because of their properties. The study of the production and **properties** of metals is known as **metallurgy**.

The **separation** between the atoms in metals is small, so most metals are **dense**. The atoms are **arranged regularly** and can **slide** over each other. That is why metals are **malleable** (can be deformed and **bent** without **fracture**) and **ductile** (can be **drawn** into **wire**). Metals vary greatly in their properties. For example, **lead** is soft and can be bent by hand, while **iron** can only be worked by hammering at red heat.

The regular arrangement of atoms in metals gives them a crystalline structure. Irregular crystals are called **grains**. The properties of the metals **depend** on the **size**, **shape**, orientation, and **composition** of these grains. In general, a metal with small grains will be harder and stronger than one with **coarse** grains.

Heat **treatment** such as **quenching**, **tempering**, or **annealing** controls the nature of the grains and their size in the metal. Small amounts of other metals (less than 1 per cent) are often added to a pure metal. This is called alloying (легирование) and it changes the grain structure and properties of metals.

All metals can be formed by drawing, **rolling**, **hammering** and **extrusion**, but some require hot-working. Metals are subject to metal **fatigue** and to **creep** (the slow increase in length under **stress**) causing deformation and **failure**. Both effects are taken into account by engineers when designing, for example, airplanes, gas-turbines, and pressure vessels for high-temperature chemical processes. Metals can be worked using machine-tools such as **lathe**, **milling machine**, **shaper** and **grinder**.

The ways of working a metal depend on its properties. Many metals can be **melted** and **cast in moulds**, but special conditions are required for metals that react with air.

Vocabulary:

property — свойство
metallurgy — металлургия
separation — разделение, отстаивание
dense — плотный
arrangement — расположение
regularly — регулярно, правильно
to slide — скользить
malleable — ковкий, податливый, способный деформироваться
bent *pp of bend* — гнуть
to fracture — ломать
ductile — эластичный, ковкий
to draw — волочить, тянуть
wire — проволока
lead — свинец
iron — железо, чугун
grain — зерно
to depend — зависеть
size — размер, величина
shape — форма, формировать
composition — состав
coarse — грубый, крупный
treatment — обработка
quenching — закалка
tempering — отпуск после закалки, нормализация
annealing — отжиг, отпуск
rolling — прокатка
to hammer — ковать (напр. молотом)
extrusion — экструзия
metal fatigue — усталость металла
creep — ползучесть
stress — давление,
failure — повреждение, разрушение
vessel — сосуд, котел, судно
lathe — токарный станок
milling machine — фрезерный станок
shaper — строгальный станок
grinder — шлифовальный станок
to melt — плавить, плавиться расплавить
to cast — отливать, отлить

mould — форма (для отливки)

Task 2. Answer the questions:

1. What are metals and what do we call metallurgy?
2. Why are most metals dense?
3. Why are metals malleable?
4. What is malleability?
5. What are grains?
6. What is alloying?
7. What is crystalline structure?
8. What do the properties of metals depend on?
9. What changes the size of grains in metals?
10. What are the main processes of metal forming?
11. How are metals worked?
12. What is creeping?

Task 3 Find the following words and word combinations in the text:

1. Свойства металлов
2. расстояние между атомами
3. правильное расположение
4. сильно отличаются по своим свойствам
5. кристаллическая структура
6. размер зерен
7. форма зерен
8. закалка
9. отжиг
10. волочение
11. прокатка
12. ковка
13. экструзия
14. структура и свойства зерна
15. горячая обработка
16. усталость металла
17. ползучесть металла
18. плавка и отливка в формы
19. способы обработки металлов

Task 4. Complete the following sentences:

1. Metals are...
2. Metallurgy is...
3. Most metals are...
4. The regular arrangement of atoms in metals...
5. Irregular crystals...
6. The properties of the metals depend...
7. Metals with small grains will be...
8. ...controls the nature of the grains in the metal.
9. Alloying is...
10. All metals can be formed by...
11. Creep is...
12. Metals can be worked using...

Task 5. Translate into English:

1. Металлы — плотные материалы потому, что между атомами в металлах малое расстояние.
2. Металлы имеют кристаллическую структуру из-за правильного расположения атомов.
3. Чем меньше зерна, тем тверже металл.
4. Закалка и отжиг изменяют форму и размер зерен в металлах.
5. Легирование изменяет структуру зерен и свойства металлов.
6. Металл деформируется и разрушается из-за усталости и ползучести.

Тема 22 PHYSICAL PROPERTIES OF METALS

What is a metal? Technically, it is an element which has the following properties:

It is solid at room temperatures (mercury is an exception).

It is opaque (that is, you can't see through it).

It conducts heat and electricity. It reflects light when polished.

It usually has a crystalline structure.

Some metals – gold, silver, copper and zinc, for example, are often used in almost pure form. However, most metals used for industrial purposes are actually alloys, not pure metals. An alloy is a metal to which another metal (or metals) or a non-metallic element such as carbon or silicon has been added to modify the physical or mechanical properties of the pure metal. Iron, aluminium, titanium and magnesium are used mainly in an alloy form. Pure iron, in fact, is sometimes, of a laboratory curiosity. Steel and cast iron are properly considered alloys of iron. Even though a

low-carbon steel may contain more than 99% iron, and not more than 0.3% carbon, that little amount of carbon makes a lot of difference.

The physical properties of a material are properties not related to the ability of the material to withstand external mechanical forces such as pushing, pulling, twisting, bending... These properties include density, melting point, specific heat, thermal conductivity, thermal expansion, electrical conductivity. **Density.** The measure of a unit mass; or the weight of a unit volume. Density is expressed as grams per cubic centimetre (g/cm^3), kilograms per cubic metre (kg/m^3), pounds per cubic foot (lb/ft^3).

Density is often expressed as specific gravity, the ratio of the density of the material to the density of water. The specific gravity of aluminium is 2.70 – in other words, it is nearly three times as heavy as water. The specific gravity of iron is 7.86; for gold, the value is 19.3.

Melting Point. Every pure metal has a specific melting point. If you apply heat to a solid specimen, its temperature will rise until it reaches that melting point. It will then start to melt, and it will remain at the melting point temperature, even though the heating is continued, until the specimen is completely melted. Then, and only then, will the temperature of the liquid metal start to rise once more.

Specific Heat. The amount of heat required to raise a unit mass of a solid metal one degree in temperature is termed specific heat. The lighter the metal, the greater the specific heat. In other words, it takes more heat to raise the temperature of one kilogram of aluminium one degree than it takes to raise the temperature of one kilogram of iron one degree.

Thermal Conductivity is measured as the heat-conducting ability of a unit length or thickness of a substance per unit of a cross-sectional area. The relative heat conductivities of some metals and alloys are based on the conductivity of silver as 100%.

Thermal Expansion. The increase in dimensions of a solid body due to an increase in temperature is termed thermal expansion. This property is of much significance in welding operations, since the metal close to the weld zone is heated to a higher temperature and therefore expands more than the metal at a greater distance from the weld zone.

Electrical Conductivity. As stated earlier, a metal must be a conductor of electricity. Some are much better than others; generally, the metals which are the best conductors of heat, such as copper, silver and aluminium are also the best conductors of electricity.

Vocabulary

exception исключение

opaque непрозрачный, светонепроницаемый
 that is (i.e.) то есть
 curiosity редкость
 relate относиться, иметь отношение
 external внешний
 push толкать
 pull тянуть
 specific heat n удельная теплоёмкость
 expand расширять(ся)
 expansion расширение
 unit 1. единица; 2. Установка
 term называть
 pound фунт
 inch дюйм
 foot feet фут (футы)
 specific gravity удельный вес
 ratio отношение
 twist перекручивать
 density плотность
 melt плавить(ся)
 melting point n точка плавления
 specimen образец
 cross-sectional area площадь поперечного сечения
 raise повышать, увеличивать (температуру); поднимать
 value величина, значение

Task 7 Образуйте существительные от следующих глаголов при помощи суффиксов –tion -(sion), -ty, -ment. Переведите их.

except, conduct, reflect, modify, consider, relate, expand, express, apply, require, measure, compare, determine.

Task 8. Translate the word combinations:

- a. the following metal properties
 the following metal properties modifications
 the following metal properties modifications requirements
- b. to consider the properties of a specimen properly
 to measure the degree of thermal expansion properly
 to compare the specific heat of specimens properly
- c. to measure the length of a member

- to measure the thickness of a member
- to measure the melting point of an alloy
- d. d. the dimensions of a solid body
 - the dimensions of a welded structure
 - the dimensions of a considered structure
- e. e. unit mass
 - unit volume
 - unit length
 - unit thickness
 - unit width

Task 9. Translate the sentences

1. Металлы, имеющие различные коэффициенты расширения, трудно сваривать.
2. Потребуется много времени, чтобы изучить и сравнить свойства полученных сплавов.
3. Физические свойства металлов, изучаемые инженерами-технологами, включают плотность, тепло- и электропроводность, точку плавления и др.
4. В металлургии применяют оборудование, работающее при высоких температурах.
5. Удельный вес титана – 47,9, т.е. он в 47,9 раз больше удельного веса воды.
6. Увеличение размеров твердого тела, полученное вследствие повышения температуры, называется тепловым расширением.
7. В различных технологических процессах часто применяется нагревание металлов, оказывающее влияние на изменение их как физических, так и механических свойств.
8. Другими словами, металлы, на которые оказывает действие повышение или понижение температуры при их обработке, изменяют свои первоначальные свойства.
9. Внешние нагрузки, приложенные к конструкции, могут разрушить её, поэтому нужно изучать свойства конструкционных материалов.
10. Сейчас требуется меньше полезных ископаемых для производства металлов, т.к. много стали и цветных металлов получают из вторичных ресурсов (secondary resources).

Task 10. Answer the questions:

1. What is a metal?
2. What metals are often used in a pure form?
3. What is an alloy?

4. What properties of materials are called physical properties?
5. Give the definitions of density, melting point, specific heat, thermal conductivity, thermal expansion, electrical conductivity.

Тема 23 MECHANICAL PROPERTIES OF METALS

As is known metals play an important role in the life of the mankind. Knowledge of their principal mechanical properties is of vital importance for selection and the proper application of metallic materials. Engineers in all branches of industry must know the mechanical properties of metals used by them and what processes can change these properties in the desired directions. This knowledge can prevent failures of structures.

The mechanical properties of a material are those related to the ability of a material to withstand external mechanical forces such as pulling, pushing, twisting, bending and a sudden impact.

Strength is the property of resistance of a material to external loads or stresses without structural damage.

Stress is a force per unit area.

The tensile or ultimate strength is the limit of the strength of a material capable to withstand the maximum load of a structural member without breaking. Elasticity is the property of a material due to which it tends to recover its original size and shape after deformation.

Ductility is the ability of a material to deform plastically in tension without breaking. Copper and aluminium are extremely ductile, generally speaking. Most low carbon steels are quite ductile. Some cast irons have almost no ductility. To put it in simple terms, they break before bend. So cast iron is brittle.

Malleability is the property of metals which permits plastic deformation in compression without breaking.

Hardness is usually defined as the ability of a metal to resist penetration by another material.

Impact strength is the ability of a material to withstand shock or large forces suddenly applied.

There are some other very important mechanical properties such as toughness, yield strength, wear resistance and others.

Vocabulary

impact удар

stress и напряжение, деформирующая сила

impact strength ударная вязкость

tension растяжение; натяжение
yield strength предел текучести
to put it in simple terms проще говоря

Task 12. Answer the questions:

1. Why is the knowledge of the mechanical properties of vital importance?
2. What properties are related to the mechanical properties?
3. What is strength?
4. What is the difference between ductility and malleability?
5. What property is defined as the ability of a metal to resist penetration by another material?

Тема 24 STEEL

The most important metal in industry is iron and its **alloy** — steel. Steel is an alloy of iron and carbon. It is strong and **stiff**, but **corrodes** easily through **rusting**, although **stainless** and other special steels **resist** corrosion. The amount of carbon in a steel influences its properties **considerably**. Steels of low carbon **content** (mild steels) are quite ductile and are used in the manufacture of sheet iron, wire, and pipes. Medium-carbon steels containing from 0.2 to 0.4 per cent carbon are **tougher** and stronger and are used as structural steels. Both mild and medium-carbon steels are suitable for forging and **welding**. High-carbon steels contain from 0.4 to 1.5 per cent carbon, are hard and **brittle** and are used in **cutting tools**, **surgical instruments**, razor **blades** and **springs**. Tool steel, also called silver steel, contains about 1 per cent carbon and is strengthened and toughened by quenching and tempering.

The **inclusion** of other elements **affects** the properties of the steel. **Manganese** gives extra strength and toughness. Steel containing 4 per cent **silicon** is used for transformer **cores** or electromagnets because it has large grains acting like small magnets. The addition of chromium gives extra strength and corrosion resistance, so we can get **rust-proof** steels. Heating in the presence of carbon **or nitrogen-rich** materials is used to form a hard surface on steel (case-hardening). High-speed steels, which are extremely important in machine-tools, contain chromium and **tungsten** plus smaller amounts of vanadium, molybdenum and other metals.

Vocabulary:

alloy — сплав

carbon — углерод

stiff — жесткий

to corrode — разъедать, ржаветь

rusty — ржавый

stainless — нержавеющей

to resist — сопротивляться

considerably — значительно, гораздо

tough — крепкий, жесткий, прочный, выносливый

forging — ковка

welding — сварка

brittle — хрупкий, ломкий

cutting tools — режущие инструменты

surgical instruments — хирургические инструменты

blade — лезвие

spring — пружина

inclusion — включение

to affect — влиять

manganese — марганец

silicon — кремний

rust-proof — нержавеющий

nitrogen — азот

tungsten — вольфрам

Task 1. Answer the questions

1. What is steel?
2. What are the main properties of steel?
3. What are the drawbacks of steel?
4. What kinds of steel do you know? Where are they used?
5. What gives the addition of manganese, silicon and chromium to steel?
6. What can be made of mild steels (medium-carbon steels, high-carbon steels)?
7. What kind of steels can be forged and welded?
8. How can we get rust-proof (stainless) steel?
9. What is used to form a hard surface on steel?
10. What are high-speed steels alloyed with?

Task 2 Find the following words and word combinations in the text:

1. сплав железа и углерода
2. прочный и жесткий
3. легко корродирует
4. нержавеющая сталь
5. низкое содержание углерода
6. ковкость
7. листовое железо, проволока, трубы
8. конструкционные стали
9. пригодны для ковки и сварки
10. твердый и хрупкий
11. режущие инструменты
12. хирургические инструменты
13. инструментальная сталь
14. упрочнять
15. добавление марганца (кремния, хрома, вольфрама, молибдена, ванадия)

Тема 25. METHODS OF STEEL HEAT TREATMENT

Quenching is a heat treatment when metal at a high temperature is rapidly cooled by **immersion** in water or oil. Quenching makes steel harder and more brittle, with small grains structure.

Tempering is a heat treatment **applied** to steel and certain alloys. Hardened steel after quenching from a high temperature is too hard and brittle for many applications and is also brittle. Tempering, that is re-heating to an **intermediate** temperature and cooling slowly, reduces this hardness and brittleness. Tempering temperatures depend on the composition of the steel but are frequently between 100 and 650 °C. Higher temperatures usually give

Annealing is a heat treatment in which a material at high temperature is cooled slowly. After cooling the metal again becomes malleable and ductile (capable of being bent many times without **cracking**).

All these methods of steel heat treatment are used to obtain steels with certain mechanical properties for certain needs.

Vocabulary:

to immerse — погружать

to apply — применять

intermediate — промежуточный

oxide film — оксидная пленка

annealing — отжиг, отпуск

cracking — растрескивание

Task1. Answer the questions :

1. What can be done to obtain harder steel?
2. What makes steel more soft and tough?
3. What makes steel more malleable and ductile?
4. What can serve as the indicator of metal temperature while heating it?
5. What temperature range is used for tempering?
6. What are the methods of steel heat treatment used for?

Task2. Translate into English the following words and word combinations:

1. температура нормализации
2. мелкозернистая структура
3. быстрое охлаждение
4. закаленная сталь
5. состав стали
6. окисная пленка
7. индикатор температуры
8. медленное охлаждение

Tema 26: METALWORKING PROCESSES

Metals are important in industry because they can be easily deformed into **useful shapes**. A lot of metalworking processes have been developed for certain applications. They can be divided into five broad groups:

1. **rolling,**
2. **extrusion,**
3. **drawing,**
4. **forging,**
5. **sheet-metal forming.**

During the first four processes metal is **subjected** to large **amounts** of strain (deformation). But if deformation goes at a high temperature, the metal will recrystallize — that is, new strain-free grains will grow instead of deformed grains. For this reason metals are usually rolled, extruded, drawn, or forged above their recrystallization temperature. This is called hot working. Under these **conditions** there is no limit to the compressive plastic strain to which the metal can be subjected.

Other processes are **performed** below the recrystallization temperature. These are called cold working. Cold working **hardens** metal and makes the part stronger. However, there is a limit to the strain before a cold part cracks.

Rolling

Rolling is the most common metalworking process. More than 90 percent of the aluminum, steel and copper produced is rolled **at least** once in the course of production. The most **common** rolled product is **sheet**. Rolling can be done either hot or cold. If the rolling is finished cold, the surface will be smoother and the product stronger.

Extrusion

Extrusion is pushing the billet to flow through the orifice of a die. Products may have either a simple or a complex cross section. Aluminum window frames are the examples of complex extrusions.

Tubes or other **hollow** parts can also be extruded. The **initial** piece is a **thick-walled** tube, and the extruded part is shaped between a die on the outside of the tube and a **mandrel** held on the inside.

In impact extrusion (also called back-extrusion) (штамповка выдавливанием), the workpiece is placed in the bottom of a hole and a **loosely fitting ram** is pushed against it. The ram **forces** the metal to flow back around it, with the **gap** between

the ram and the die **determining** the wall thickness. The example of this process is the manufacturing of aluminum beer cans.

Vocabulary:

useful — полезный
shape — форма, формировать
rolling — прокатка
extrusion — экструзия, выдавливание
drawing — волочение
forging — ковка
sheet — лист
to subject — подвергать
amount — количество
condition — состояние, условие
perform — выполнять, проводить
to harden — делаться твердым, упрочняться
at least — по крайней мере
common — общий
billet — заготовка, болванка
orifice — отверстие
die — штамп, пуансон, матрица, фильера, волочильная доска
cross section — поперечное сечение
window frame — рама окна
tube — труба
hollow — полый
initial — первоначальный, начальный
thick-walled — толстостенный
mandrel — оправка, сердечник
impact — удар
loosely — свободно, с зазором
fitting — зд. посадка
ram — пуансон, плунжер
force — сила
gap — промежуток, зазор
to determine — устанавливать, определять

Task 1. Answer the questions 1. Why are metals so important in industry?

2. What are the main metalworking processes?
3. Why are metals worked mostly hot?
4. What properties does cold working give to metals?
5. What is rolling? Where is it used?
6. What is extrusion? What shapes can be obtained after extrusion?
7. What are the types of extrusion?

Task 2. Find the following in the text:

1. могут легко деформироваться
2. нужные формы
3. подвергать большим деформациям
4. зерна свободные от деформации
5. температура перекристаллизации
6. пластическая деформация сжатия
7. самый обычный процесс обработки металла
8. самое обычное изделие проката
9. отверстие фильеры
10. первоначальный
11. сложное сечение
12. пустотелые детали
13. свободно входящий плунжер
14. зазор между плунжером (пуансоном) и штампом
15. толщина стенки

Task 3. Translate into English:

1. Способность металла перекристаллизовываться при высокой температуре используется при горячей обработке.
2. Перекристаллизация — это рост новых, свободных от деформации зерен.
3. Во время горячей обработки металл может подвергаться очень большой пластической деформации сжатия.
4. Холодная обработка делает металл тверже и прочнее, но некоторые металлы имеют предел деформации.
5. Листовой прокат может производиться горячим или холодным.
6. Поверхность холоднокатаного листа более гладкая и он прочнее.
7. Поперечное сечение фильеры для экструзии может быть простым или сложным.

8. Алюминиевые и медные сплавы являются наилучшими для экструзии из-за их пластичности при деформации.

9. Алюминиевые банки, тьюбики для зубной пасты являются примерами использования штамповки выдавливанием.

10. Толщина стенки алюминиевой банки определяется зазором между пунсоном и штампом.

Text DRAWING

Drawing consists of **pulling** metal through a die. One type is wire drawing. The diameter **reduction** that can be **achieved** in one die is limited, but several dies **in series** can be used to get the desired reduction.

Sheet metal forming

Sheet metal forming (штамповка листового металла) is widely used when parts of certain shape and size are needed. It includes forging, bending and shearing. One characteristic of sheet metal forming is that the thickness of the sheet changes little in processing. The metal is stretched just **beyond** its **yield point** (2 to 4 percent strain) in order to **retain** the new shape. **Bending** can be done by pressing between two dies. **Shearing** is a cutting operation similar to that used for cloth.

Each of these processes may be used alone, but often all three are used on one part. For example, to make the roof of an automobile from a flat sheet, the **edges** are **gripped** and the piece pulled in tension over a **lower die**. Next an **upper die** is pressed over the top, finishing the **forming operation** (штамповку), and finally the edges are sheared off to give the final **dimensions**.

Forging

Forging is the shaping of a piece of metal by pushing with open or closed dies. It is usually done hot in order to reduce the **required** force and **increase** the metal's plasticity.

Open-die forging is usually done by **hammering** a part between two flat faces. It is used to make parts that are too big to be formed in a closed die or in cases where only a few parts are to be made. The earliest forging machines lifted a large hammer that was then dropped on the workpiece, but now air or steam hammers are used, since they allow greater control over the force and the rate of forming. The part is shaped by moving or turning it between blows.

Closed-die forging is the shaping of hot metal **within** the walls of two dies that come together to **enclose** the workpiece on all sides. The process starts with a **rod or bar** cut to the length needed to fill the die. Since large, complex shapes and large strains are **involved**, several dies may be used to go from the initial bar to the final shape. With closed dies, parts can be made to close **tolerances** so that little finish machining is required.

Two closed-die forging operations are given special names. They are **upsetting** and **coining**. Coining takes its name from the final stage of forming metal coins, where the desired **imprint** is formed on a metal disk that is pressed in a closed die. Coining involves small strains and is done cold. Upsetting involves a flow of the metal back upon itself. An example of this process is the pushing of a short length of a rod through a hole, **clamping** the rod, and then **hitting** the exposed length with a die to form the head of a **nail or bolt**.

Vocabulary:

to pull — тянуть

reduction — сокращение

to achieve — достигать

in series — серия, последовательно

beyond — выше, свыше

yield point — точка текучести металла

to retain — сохранять, удерживать

to bend — гнуть

shearing — обрезка, отрезание

edge — край

to grip — схватывать

lower die — нижний штамп

upper die — верхний штамп

forming operation — операция штампования

dimension — измерение, размеры

required — необходимый

increase — увеличение

open-die forging — ковка в открытом штампе (подкладном)

hammering — ковка, колотить

within — внутри, в пределах

to enclose — заключать

rod — прут, стержень

bar — прут, брусок

involved — включенный

tolerance — допуск

upsetting — высадка, выдавливание

blow — удар

coining — чеканка

imprint — отпечаток

clamp — зажим

to hit — ударять

Task 1. Answer the questions:

1. How can the reduction of diameter in wire drawing be achieved?
2. What is sheet metal forming and where it can be used?
3. What is close-die forging?
4. What is forging?
5. What are the types of forging?
6. What types of hammers are used now?
7. Where are coining and upsetting used?
8. What process is used in wire production?
9. Describe the process of making the roof of a car.

Task 2 Find the following word combinations in the text:

1. протягивание металла через фильеру
2. волочение проволоки
3. уменьшение диаметра
4. толщина листа
5. растягивать выше точки текучести
6. сохранить новую форму
7. края отрезаются
8. конечные размеры
9. уменьшить необходимое усилие
10. увеличить пластичность металла
11. воздушные или паровые молоты
12. сила и скорость штампования
13. внутри стенок двух штампов
14. отделочная обработка
15. малые допуски

Task 3. Translate into English:

1. При волочении проволоки диаметр отверстия волочильной доски каждый раз уменьшается.
2. Штамповка листового металла включает в себя ковку, изгиб и обрезку.
3. Небольшая деформация листа при растяжении помогает сохранить новую форму детали.
4. Изменение формы при штамповке производится путем сжатия между двумя штампами.
5. Края листа при штамповке отрезаются для получения конечных размеров.
6. При проковке деталь должна быть горячей для уменьшения необходимых усилий и увеличения пластичности металла.

7. Послековки в закрытых штампах детали не требуют большой механической обработки.
8. При чеканке деформация металла невелика и отпечаток формируется на поверхности металла.
9. Высадка используется для изготовления головок гвоздей и болтов.

Тема 27. METALWORKING AND METAL PROPERTIES

An important **feature** of hot working is that it **provides** the **improvement** of mechanical **properties of** metals. Hot-working (hot-rolling or hot-forging) **eliminates porosity, directionality, and segregation** that are usually present in metals. Hot-worked products have better ductility and toughness than the unworked **casting**. During the forging of a bar, the grains of the metal become greatly **elongated** in the direction of flow. As a result, the toughness of the metal is greatly improved in this direction and **weakened** in directions **transverse** to the flow. Good forging makes the flow lines in the **finished** part oriented so as to lie in the direction of maximum stress when the part is placed in service.

The ability of a metal to resist thinning and fracture during cold-working operations plays an important role in alloy selection. In operations that involve stretching, the best alloys are those which grow stronger with strain (are strain hardening) — for example, the copper-zinc alloy, brass, used for cartridges and the aluminum-magnesium alloys in beverage cans, which exhibit greater strain hardening.

Fracture of the workpiece during forming can result from **inner flaws** in the metal. These flaws often consist of nonmetallic **inclusions** such as oxides or sulfides that are **trapped** in the metal during **refining**. Such inclusions can be **avoided** by proper manufacturing procedures.

The ability of different metals to **undergo** strain varies. The change of the shape after one forming operation is often limited by the **tensile ductility** of the metal. Metals such as copper and aluminum are more ductile in such operations than other metals.

Vocabulary:

brass — латунь

feature — черта, особенность

to provide — обеспечивать

improvement — улучшение

property — свойство

eliminate — ликвидировать, исключать

porosity — пористость

directional — направленный

to segregate — разделять
casting — отливка
elongated — удлиненный
to weaken — ослабевать, ослаблять
transverse — поперечный
flow — течение, поток
finished — отделанный
thinning — утончение
fracture — разрушение
inclusion — включение
trapped — зд. заключенный
inner — внутренний
strain hardening — деформационное упрочнение
to avoid — избегать
beverage — напиток
can — консервная банка
to exhibit — проявлять
flaws — недостатки, дефекты кристаллической решетки
refining — очищать, очистка
to undergo — подвергаться
tensile ductility — пластичность при растяжении

Task 1. Find the following words in the text

1. важная особенность горячей обработки
2. улучшение механических свойств металла
3. необработанная отливка
4. направление максимального напряжения
5. способность сопротивляться утончению и разрушению
6. проявлять большее деформационное упрочнение
7. разрушение детали при штамповке
8. внутренние дефекты в металле
9. неметаллические включения
10. способность металлов подвергаться деформации
11. ограничивается пластичностью металла при растяжении

Task 2. Translate into English:

1. Горячая обработка металла улучшает его механические свойства и устраняет пористость и внутренние дефекты.

2. Удлинение зерен в направлении текучести при ковке значительно улучшает прочность металла в этом направлении и уменьшает его прочность в поперечном.
3. Хорошая проковка ориентирует линии текучести в направлении максимального напряжения.
4. Деформационное упрочнение металла при холодной обработке очень важно для получения металлов с улучшенными свойствами.
5. Внутренние дефекты металла — это неметаллические включения типа окислов или сульфидов.
6. Изменение формы при штамповании металлических деталей ограничивается пластичностью металла при растяжении.

Таблица неправильных глаголов

1 форма	2 форма	3 форма	4 форма	Перевод
to be	was/were	been	being	быть, находиться
to bear	bore	born	bearing	нести
to beat	beat	beaten	beating	бить
to begin	began	begun	beginning	начинать(ся)
to bend	bent	bent	bending	гнуть
to bind	bound	bound	binding	переплестать
to bite	bit	bitten/bit	biting	кусать
to blow	blew	blown	blowing	дуть
to break	broke	broken	breaking	ломать
to bring	brought	brought	bringing	приносить
to build	built	built	building	строить
to burst	burst	burst	bursting	гореть, жечь
to buy	bought	bought	buying	покупать
to catch	caught	caught	catching	ловить
to choose	chose	chosen	choosing	выбирать
to cut	cut	cut	cutting	резать, рубить
to dive	dived/dove	dived	diving	нырять
to do	did	done	doing	делать
to draw	drew	drawn	drawing	рисовать, тащить
to drink	drank	drunk	drinking	пить
to drive	drove	driven	driving	вести
to eat	ate	eaten	eating	есть, кушать
to fall	fell	fallen	falling	падать
to feel	felt	felt	feeling	чувствовать
to feed	fed	fed	feeding	кормить
to fight	fought	fought	fighting	бороться, драться
to fly	flew	flown	flying	летать
to forbid	forbade	forbidden	forbidding	запрещать
to forget	forgot	forgotten	forgetting	забывать
to forgive	forgave	forgiven	forgiving	прощать
to freeze	froze	frozen	freezing	замораживать

to get	got	got	getting	получать, становиться
to give	gave	given	giving	давать
to go	went	gone	going	идти, ехать
to grow	grew	grown	growing	расти, выращивать
to hang	hung	hung	hanging	висеть, вешать
to have	had	had	having	иметь
to hear	heard	heard	hearing	слышать
to hit	hit	hit	hitting	ударять
to hold	held	held	holding	держат
to hurt	hurt	hurt	hurting	повредить
to know	knew	known	knowing	знать
to lay	laid	laid	laying	накрывать
to lead	lead	lead	leading	вести
to leap	leapt/leaped	leapt/leaped	leaping	прыгать, скакать
to leave	left	left	leaving	покидать, оставлять
to lend	lent	lent	lending	давать взаймы
to let	let	let	letting	позволять
to lie	lay	lain	lying	лежать
to light	lit	lit	lighting	зажигать
to lose	lost	lost	losing	терять
to make	made	made	making	делать
to meet	met	met	meeting	встречать (ся)
to pay	paid	paid	paying	платить
to put	put	put	putting	класть, ставить
to read	read	read	reading	читать
to ride	rode	ridden	riding	ехать (верхом)
to ring	rang	rung	ringing	звонить, звенеть
to rise	rose	risen	rising	поднимать
to run	ran	run	running	бежать
to say	said	said	saying	говорить, сказать
to see	saw	seen	seeing	видеть
to sell	sold	sold	selling	продавать
to send	sent	sent	sending	посещать, отправлять
to shake	shook	shaken	shaking	трясти

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