МИНИСТЕРСТВО ОБРАЗОВАНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

Белорусский национальный технический университет

Кафедра английского языка № 2

А. В. Конышева

EHGLISH FOR BUILDERS

Английский для строителей

Пособие

Минск
БНТУ
2015

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АНГЛИЙСКИЙ ДЛЯ СТРОИТЕЛЕЙ

Пособие для студентов строительных специальностей
высших учебных заведений

*Рекомендовано учебно-методическим объединением
по образованию в области строительства и архитектуры*

Минск
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К64

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Пособие предназначено для студентов строительных специальностей, изучающих английский язык для специальных целей. Материалы пособия обучают чтению и пониманию англоязычных текстов, воспроизведению и обсуждению профессионально значимой информации. Предлагаемый комплекс упражнений расширяет профессионально направленный вокабуляр и запас лексики общего пользования , совершенствует грамматические навыки.

Пособие может использоваться широким кругом специалистов в области строительства, а также всеми, кто интересуется данной тематикой.

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UNIT I

Grammar focus

ALL TENSES COMPARED

Active Voice (действительный залог)				
	Indefinite	**Continuous**	**Perfect**	**Perfect Continuous**
	Констатация факта	Процесс	Завершённость	Процесс в течение некоторого периода времени
Present	**V, V-s** **I write** *Я пишу* (часто)	**am / is / are** } **V-ing** **I am writing** *Я пишу* (сейчас)	**have / has** } **V** < **ed / III** **I have written** *Я написал* (уже, только что)	**have / has** } **been V-ing** **I have been writing** *Я пишу* (уже час; с двух часов)
Past	**V** < **ed / II** **I wrote** *Я писал* (вчера; два дня тому назад)	**was / were** } **V-ing** **I was writing** *Я писал* (вчера в два часа; когда он вошёл)	**had V** < **ed / III** **I had written** *Я написал* (вчера к трём часам; до того, как он пришёл)	**had been V-ing** **I had been writing** *Я писал* (уже два часа, когда он пришёл)
Future	**will V** **I will write** *Я буду писать* (завтра)	**will be V-ing** **I will be writing** *Я буду писать* (завтра в три часа)	**will have V** < **ed / III** **I will have written** *Я напишу* (завтра к трём часам)	**will have been V-ing** **I will have been writing** *Я буду писать* (завтра в течение трех часов, когда он придёт)

Действительный залог показывает, что действие производит подлежащее.

Пример: She was reading the book the whole evening yesterday.
Она читала книгу весь вечер вчера.

Test 1

I. In every sentence given below define the predicate. Translate these sentences:

1. The contacts of our scientists with their colleges in other countries are steadily growing.

a) are; b) are growing; c) are steadily growing;

2. Our scientists has been investigating this important problem for five years now.

a) has been investigating; b) investigating; c) has been;

3. I didn't think to have many mistakes in the test was good for a first year student.

a) didn't; b) think; c) didn't think;

4. We have read much special literature about our speciality.

a) have; b) have read; c) read;

5. The dogs are used on the border.

a) are; b) used; c) are used;

6. Builders will have constructed the new building of ice palace by the end of next year.

a) will; b) have constructed; c) will have constructed;

7. This scientist's works and his ideas have become the basis of our theoretical investigation.

a) works; b) have; c) have become;

8. When heated to the boiling point water evaporates.

a) heated; b) boiling; c) evaporates;

9. Unless tested the machine must not be put into operation.

a) put; b) tested; c) must not be put;

10. Debt is the worst kind of poverty.

a) is; b) is the worst; c) is the kind;

11. Some of the questions put to the professor yesterday were very important.

a) put; b) were; c) were important;

12. His lectures are always followed by heated discussions.

a) are always followed; b) are followed; c) heated;

13. The results obtained disagreed with earlier data reported by an unknown scientist.

a) obtained; b) disagreed; c) reported;

14. The analysed results were compared with the data obtained earlier.

a) analysed; b) were compared; c) obtained;

15. Automatized information processing radically modified the method devised.

a) automatized; b) processing; c) modified.

II. Define the tense of the predicate:

1. He works with dogs on the border of our country.

a) Present Indefinite; b) Present Continuous; c) Present Perfect.

2. I didn't think that he was a worker.

a) Present Indefinite; b) Past Indefinite; c) Future Indefinite.

3. His mother wants him to be an engineer.

a) Present Indefinite; b) Past Indefinite; c) Past Perfect.

4. Simeon of Polotsk was a famous scientist of his time.

a) Past Indefinite; b) Past Continuous; c) Present Indefinite.

5. He will receive good knowledge in our educational establishment.

a) Future Indefinite; b) Future Continuous; c) Future Perfect.

6. At present he is looking for something unusual.

a) Past Continuous; b) Present Perfect; c) Present Continuous.

7. I knew the names of Belarusian famous scientists.

a) Present Indefinite; b) Past Indefinite; c) Past Perfect.

8. He discovered a new method in science.

a) Past Indefinite; b) Past Perfect; c) Past Continuous.

9. By the first of September, he will have been working at this University for 15 years.

a) Future Perfect; b) Future Continuous; c) Future Perfect Continuous.

10. The idea to do this has attracted attention of some our students.

a) Present Indefinite; b) Present Perfect; c) Past Perfect.

III. Choose the right translation of the predicate:

1. They studied many special subjects in their University.

a) изучают; b) изучали; c) будут изучать.

2. They are installing new equipment in our laboratory.

a) устанавливаем; b) устанавливали; c) устанавливается.

3. Students of our University have read much professional literature.

a) читаем сейчас; b) прочитали; c) будут читать.

4. For many centuries scientist of the world have been working to uncover secrets of nature.

a) работают; b) работали; c) будут работать.

5. When teacher entered the classroom, the students had already been looking through their books for 10 minutes.

a) просматривали; b) просматривают; c) будет просматривать.

6. By the first of December he will have been working as an engineer for fifteen years.

a) работает; b) проработал; c) будет работать.

7. A vigilant and skillful engineer discerns the quality of the work.

a) определяет; b) может определить; c) определил.

8. These problems didn't interest him.

a) не интересуют; b) не интересовали; c) интересовали.

9. The amount of investigations are rising very fast in the world.

a) увеличивалось; b) будет увеличиваться; c) увеличиваются.

10. What will you have done before I come?

a) сделал; b) будешь делать; c) сделаешь.

IV. Choose the right variant of the verb forms given in the brackets:

1. – Where is Nick? – He (to go) to the Institute. His classes usually begin at 8.

a) has gone; b) goes; c) went;

2. Kate says she (not to go) for a walk until she does her homework.

a) didn't go; b) will not go; c) hasn't gone;

3. When the parents (to come) from the theatre yesterday evening, the children were sleeping.

a) will come; b) come; c) came;

4. Don't make so much noise. Father just (to fall asleep).

a) has just fallen asleep; b) just falls asleep; c) had just fallen asleep;

5. I have met my former schoolmate lately. I (not to see) her since we finished school. She hasn't changed at all.

a) haven't seen; b) didn't see; c) don't see;

6. You (to go out) last night, Tom? – Yes, I went to the cinema, but I did not enjoy the film.

a) do you go out; b) did you go out; c) will you go out.

V. Choose the right article:

1. I bought... bottle of milk and half... loaf of... bread. I put ....milk into...fridge and... bread into ... bread-box. 2. My granny lives in ... village. She's got... cow and 2 pigs.... cow's name is Dasha. I help my granny to look after... animals. 3. Who's ... boy standing near... window? – This is Peter, … friend of mine. 4. Please, bring me … book which on … desk. 5. Lomonosov was … very famous scientist. 6. His father works at … plant near our house.

VI. Choose the right preposition:

1. Our studies begin____ autumn.

a) at, b) on, c) in;

2. My elder brother often comes home late _____ night.

a) in, b) at; c) of;

3. The students are listening _____ a new text now.
a) for, b) at, c) to;
4. Fetch today's newspaper and read it ____ me, please.
a) for, b) to; c) with;
5. Which _____ the houses is yours?
a) from, b) of; c) out of;
6. Take the book _____ the shelf and show it ____ me.
a) out of, b) from; c) at; a) for, b) to; c) of;
7. May I come _____ your lecture?
a) at, b) in, c) to.

VII. Choose the right pronoun:
1. I don't hear_____.
a) nothing, b) something, c) anything;
2. There was very _____ snow this winter.
a) few, b) a few, c) little;
3. Is _____ absent today?
a) somebody, b) anybody;
4. Bob is one of _____ best pupils.
a) our, b) us, c) ours;
5. I haven't got _____ money about me.
a) some, b) any, c) no.

VIII. Choose the right translation:
1. I asked them into the house.
a) Я пригласила их в дом.
b) Я пригласила их в гости.
c) Я попросила их побыть в доме.
2. The village was indeed beautiful.
a) Деревня была достаточно красивой.
b) Деревня была фактически красивой.
c) Деревня действительно была красивой.
3. He looked a bit shocked to see them.
a) Он был несколько шокирован, увидев их.
b) Они были удивлены, увидев его.
c) Он был слишком озабочен, чтобы видеть их.
4. It is the wrong house.
a) Это плохой дом. b) Это не тот дом. c) Это настоящий дом.

5. They were in fact expected at a house on the other side of the village.

a) Фактически они рассчитывали быть в доме на другом конце деревни.

b) На самом деле они ожидали в доме на другом конце деревни.

c) На самом деле их ждали в доме на другом конце деревни.

UNIT II

MY FUTURE SPECIALITY

Engineering is an activity other than purely manual and physical work which brings about the utilization of the materials and laws of nature for the good of humanity.
R.E. Hellmurd

1. Read these international words and try to guess their meaning:

Faculty, process, method, progressive, technology, production, structure, material, physics, mathematics, modernization, industry, machine, resource, speciality, special, geometry, theoretical, geodesy, academic, seminar, interesting, stand.

2. Read out the following words and memorize them:

a table	таблица
an expansion	расширение
an introduction	введение
true	истинный
a staff	персонал
an appliance	приспособление
a device	прибор
a poster	плакат
a report	доклад
a defence	защита
an effort	усилие
vague	неясный
an item	вопрос
a site	площадка

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

to deal with – иметь дело с;
to be interested in – интересоваться;
to be busy with – быть занятым;
to be equipped with – быть оборудованным;
to go hand in hand with – идти в ногу с;
to be at one's disposal – быть в чьем-либо распоряжении;
to experiment on – проводить эксперименты по;
to take part in – принимать участие в;
to make a report about – сделать доклад о;
to read up for – готовиться к;
to get acquainted with – знакомиться с;
to get ready for – подготовиться к;
to provide with – обеспечить чем-либо;
to look for – искать;
to prepare for – готовиться к;
to carry out – выполнять;
to consult on – консультировать по;
to graduate from – закончить (вуз).

5. Match the English words and their Russian equivalents:

1. to gain	a. расширять
2. to master	b. использовать
3. to begin	c. выбирать
4. to become	d. знать
5. to choose	e. учиться
6. to make	f. становиться
7. to employ	g. приобретать
8. to learn	h. начинать
9. to broaden	i. делать
10. to know	j. овладевать

***6. Combine the words with the help of the preposition* of.**
Translate these word combinations:

1. process	a. graduation project
2. technology	b. us
3. production	c. the building materials industry
4. the introduction	d. the first course
5. progressive speedy methods	e. studying
6. many	f. new building machines
7. the reading halls	g. production
8. modernization	h. knowledge
9. strength	i. building structures
10. many students	j. our faculty
11. the defence	k. construction
12. a student	l. machinery
13. a science	m. instruments
14. a set	n. our library
15. testing	o. materials

7. Give the three forms of the following verbs:

To deal, to know, to teach, to send, to have, to begin, to go, to read, to get, to choose, to spend.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Study, process, train, master, finish, work, stand, test, part, research, defence, site, need, design, look.

9. Write the derivatives of the following words:

Construct, build, science, read, differ, know, graduate, present, institute, defend, develop, use, modernize, introduce, theory, technology.

10. Read the text and get ready to speak about your future speciality:

MY FUTURE SPECIALITY

I am a first-year student of Belarusian National Technical University. I study at the Civil Engineering Faculty. This faculty trains civil engineers. The whole process of studying deals with mastering new construction

methods and progressive technology of production of building structures and materials.

While at school I was interested in physics and mathematics and after finishing school I decided to become a civil engineer. Everybody knows that it is a very useful and interesting profession nowadays. Our builders and civil engineers are busy with the expansion and modernization of the building materials industry, the introduction of new building machines and progressive speedy methods of construction.

We begin to master our speciality from the first year of studying at the University. Besides physics and mathematics special engineering subjects such as strength of materials, descriptive geometry, theoretical mechanics, building materials, geodesy, architecture are taught at our faculty. A true engineer must also know a foreign language and use it in his future work.

Our University Academic Staff goes hand in hand with the latest development in science. Many brilliant lecturers deliver lectures to us. Much work is done by the students in the laboratories, which are equipped with modern apparatus, appliances, machines and devices. Different stands, diagrams, tables and posters are at our disposal. We do laboratory tests and experiments on building materials and building structures. In this way we take part in scientific research. Many of us carry out research work and make reports about our experimental work at students' scientific conferences. Much of our time is spent in the reading halls of our library where we prepare for our seminars, full term tests and examinations. In summer many students of our faculty have their labour term.

According to the academic plan the forth-year students of our faculty have their technological field training either in Minsk or in other towns. They are sent to work at different construction sites according to their speciality. This is of great use for them as they get acquainted with their future work and learn to employ in practice the knowledge they gained at the University.

During the 5th year of studying at the University we have two months' field training which is to broaden our engineering knowledge to get ready for the final and most important period in students' life that is the defence of graduation project in the presence of the State Examining Board. Prior to it one must choose a topic for it first. The work at the graduation project needs much time and effort. We are welcome to consult our professors on some vague items.

After graduating from the University we'll work at building material factories, on construction sites, in design and research institutions.

Besides, our University provides us with everything necessary to prepare for a scientific career through a post-graduate course. In a word we do not look for a job, the job looks for us.

11. Answer the following questions:

1. Where do you study? 2. What faculty do you study at? 3. Are you a second-year student? 4. What specialists does the Civil Engineering faculty train? 5. What were you interested at school? 6. What are our builders and civil engineers busy with? 7. What subjects are taught at your faculty? 8. Why is it necessary to know a foreign language for an engineer? 9. Who delivers lectures in this University? 10. What do you do in the laboratories? 11. What are the laboratories equipped with? 12. Where do you read up for your seminars? 13. When do students have their field training? 14. What does it look like? 15. What do students do at the end of their studies at the University? 16. How do students work at their graduation projects? 17. Where will you work after graduating from the University? 18. In what way can graduates continue their studies? 19. Is it necessary to look for a job after finishing the Belarusian National Technical University?

12. Agree or disagree with the following statements:

1. You are the second-year student. 2. While at school you wanted to be a teacher. 3. Our builders and civil engineers are busy with the designing of the new houses. 4. At the University you study a foreign and Russian languages, history, pedagogics, logics and law. 5. Many brilliant lecturers deliver lectures to you. 6. Much work is done by the students in the special laboratories, which are equipped with modern apparatus, appliances, machines and devices. 7. All the students must carry their research work and make reports about their experimental work at students' scientific conferences. 8. Much of the time is spent in the National Library where students prepare for their seminars, full term tests and examinations. 9. In summer all the students of the faculty have their labour term. 10. You practice your knowledge gained at the University at different construction sites. 11. You'll have three months' field training during the fifth year of studying at the University. 12. The work at your graduation project won't take much time. 13. You'll defend your graduation project in the presence

of the State Examining Board. 14. After graduating from the University you'll work according to your speciality. 15 It is rather difficult to find a job after finishing this University.

13. Complete the sentences according to the text:

1. The whole process of studying at Belarusian National Technical University deals with ... . 2. While at school I was interested in ... . 3. Our builders and civil engineers are busy with ... . 4. ... are taught at our faculty. 5. Our University Academic Staff ... the latest development in science. 6. Many of us carry out research work and ... . 7. According to the academic plan ... either in Minsk or in other towns. 8. ... as they get acquainted with their future work and learn to employ in practice the knowledge they gained at the University. 9. The work at the graduation project needs ... . 10. After graduating from the University ... . 11. Besides, our University provides us ... to prepare for a scientific career through a post-graduate course. 12. We do not look for a job, ...

14. Choose a word to put into each gap:

Speedy methods; construction sites; appliances; hand in hand; the expansion; research work; deals with; the laboratories; scientific career; building material; experimental work; development; civil engineers; labour term; technology; design.

1. The whole process of studying ... mastering new construction methods and progressive ... of production of building structures and materials. 2. Our builders and ... are busy with ... and modernization of the building materials industry. 3. They introduce the new building machines and progressive ... of construction. 4. Our University Academic Staff goes ... with the latest ... in science. 5. Much work is done by the students in ... , which are equipped with modern apparatus, ... , machines and devices. 6. Many of us carry out ... and make reports about our ... at students' scientific conferences. 7. In summer many students of our faculty have their ... . 8. They are sent to work at different ... according to their speciality. 9. After graduating from the University we'll work at ... factories, on construction sites, in ... and research institutions. 10. Our University provides us with everything necessary to prepare for a ... through a post-graduate course.

15. Find out from your partners.

– who delivers lectures for you;
– how you take part in scientific research;
– what you have in summer.

16. Prove that:

– the profession you have chosen is very important;
– your practice at different construction sites is of great use;
– you won't look for a job, the job will look for you.

17. Comment on:

– the process of study at your University;
– the work of our builders and civil engineers;
– the possibilities which are given to you at the University.

18. Imagine that:

– Two former classmates meet after leaving school. They haven't seen each other for a long time. Role-play a dialogue with your partner.

– Two students are talking at the library. They are talking about the necessary text-books. Role-play a dialogue with your partner.

– During an excursion to a construction site a group of students ask questions to a civil engineer. Role-play a dialogue.

19. Comprehensive check. Choose the best alternative according to the text:

1. The whole process of studying at the University deals with … .

a) theoretical study of the main subjects;
b) practical work at the building sites;
c) mastering new construction methods.

2. Our builders and civil engineers are busy with … .

a) the expansion and modernization of the building materials industry;
b) the production of the building materials;
c) the modernization of the agriculture.

3. Besides physics and mathematics ... are taught at our faculty.

a) special engineering subjects such as strength of materials, chemistry, descriptive geometry,
machine tools, building materials, geodesy, architecture;

b) special engineering subjects such as theoretical mechanics, building materials, topography,

water supply, geodesy, architecture;

c) special engineering subjects such as strength of materials, descriptive geometry, theoretical

mechanics, building materials, geodesy, architecture.

4. Our University Academic Staff goes hand in hand with … .

a) the modern technologies;

b) the latest development in science;

c) the latest development in many spheres.

5. Much work is done by the students in the laboratories, which are equipped with … .

a) all modern conveniences;

b) modern apparatus, appliances, machines and devices;

c) chemical apparatus, machine tools and devices.

6. We do ... and building structures.

a) laboratory tests and experiments on building materials;

b) laboratory tests on building materials;

c) only experiments on building materials;

7. Many of the students carry out … .

a) experimental work;

b) research work;

c) practical work.

8. Some students make reports about their experimental work at … .

a) International scientific conferences;

b) Republican scientific conferences;

c) students' scientific conferences.

9. During their practical work students are sent … .

a) to build new houses in all parts of our country;

b) abroad to be taught by the foreign specialists;

c) to work at different construction sites according to their speciality.

10. Practical work is of great use for students as … .

a) they get acquainted with their future work;

b) they get possibility to earn money;

c) they get possibility to have more knowledge.

11. During the 5th year of studying at the University students … .

a) work with their graduation project;

b) do experiments on building materials;

c) study progressive technology of production of building structures and materials.

12. After graduating from the University students can work … .

a) at any enterprise they want;

b) at building material factories, on construction sites, in design and research institutions;

c) only at building material factories and on construction sites.

13. Our University provides students with … .

a) profound theoretical knowledge;

b) everything necessary to prepare for an engineering career;

c) everything necessary to prepare for a scientific career through a post-graduate course.

20. Group work:

Express your opinion on the contents of the utterance by R.E. Hellmurd given above. Discuss all your pros and cons with your group mates.

UNIT III

FROM THE HISTORY OF HUMAN DWELLINGS

Many people lived in tents until
they could afford to build a house.
Ralth Elison

1. Read these international words and try to guess their meaning:

Modern, construction, industrial, activities, origin, primitive, decoration, model, historic, finish, typical, column, centre.

2. Read out the following words and memorize them:

a dwelling	жилище
a cave	пещера
to shelter	укрываться
a hut	хижина, лачуга
a branch	ветка (дерева)
a pole	столб, шест, жердь
a courtyard	внутренний двор
a covered walk	аллея
a pillar	колонна, столб

a quarter	помещение
to plaster	штукатурить
a clay	глина
a hearth	очаг
a mud	глинистая масса
a castle	замок
huge	огромный
a dugout	землянка

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

a primitive man – первобытный человек;
the branches of trees – кроны деревьев;
the Ice Age – ледниковый период;
the Old Stone Age – каменный век;
to feel a need – чувствовать потребность;
at first – в начале, сначала;
much later – намного позже;
therefore – поэтому;
inside and outside – внутри и снаружи;
a wicker basket work – плетение из прутьев;
on the other hand – с другой стороны;
at least – по крайней мере.

5. Match the English words with their Russian equivalents:

1. a castle	a. очаг
2. a covered walk	b. колонная, столб
3. to plaster	c. помещение
4. a hearth	e. хижина
5. huge	f. внутренний двор
6. a pillar	g. аллея
7. a cave	h. ветка
8. a quarter	i. огромный
9. a hut	j. столб

10. to shelter	k. замок
11. a courtyard	l. укрывать
12. a pole	m. пещера
13. a branch	n. штукатурить

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. the walls	a. trees
2. cultural activities	b. the caves
3. the purpose	c. human dwellings
4. the efforts	d. war
5. the branches	e. some building
6. skins	f. wood
7. walls	g. primitive men
8. huts built	h. animals
9. the earliest types	i. houses
10. structures	j. the people
11. in time	k. family life
12. the days	l. modern buildings
13. different kinds	m. branches
14. the centre	n. early civilization
15. to build	o. later historic times

7. Give the three forms of the following verbs:

To spend, to build, to construct, to look, to find, to begin, to take, to lose, to learn, to grow, to do, to dry, to choose, to know, to run, to sell.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Branch, pole, plaster, cover, shelter, attack, paint, need, finish, walk.

9. Write the derivatives of the following words:

Science, origin, protect, decoration, historic, differ, build, side, wide, culture, storm.

10. Read the text and get ready to speak about the history of human dwellings:

FROM THE HISTORY OF HUMAN DWELLINGS

Most of the time of a modern man is spent within the walls of some buildings. Houses are built for dwelling. Large buildings are constructed for industrial purposes. Theatres, museums, public and scientific institutions are built for cultural activities of the people. The purpose of modern buildings differs widely but all of them originate from the efforts of primitive men to protect themselves from stormy weather, wild animals and human enemies.

Protection was looked for everywhere. In prehistoric times men looked for protection under the branches of trees. Some covered themselves with skins of animals to protect themselves from cold and rain but others settled in caves.

When the Ice Age had passed, Europe remained very cold, at least in winter, and so the people of the Old Stone Age had to find some warm and dry place to shelter from bad weather. They chose caves, dwelling places that storm and cold could not destroy. On the walls of their caves ancient people painted pictures. Such decorated caves are found in Europe, Asia and Africa.

When man began to build a home for himself, caves were imitated in stone structures. Trees were taken as a model for huts built of branches. Skins were raised on poles and formed tents.

Primitive stone structures, huts and tents are the earliest types of human dwellings. They were lost in the prehistoric past but serve as prototypes for structures of later historic times.

In the country ordinary people lived in simple one-storey cottages which did not differ much from the mud and stone huts of an earlier age. The rich people in the country, on the other hand, built huge castles with thick walls and narrow windows. These castles were built not only as dwellings, but also to stand up to enemy attack and to be strong bases in time of war.

In the days of early civilization, when men had learnt how to build simple houses for their families, they began to feel a need to have a number of different kinds of houses in one place. At first, the difference was mainly in size: the chief or leader had a larger hut or tent than the rest of the people. Much later, when men began to build towns, there grew up a difference between town houses and country houses. The streets in towns were very narrow and there was not much place for building within the town walls, and therefore houses had to be built

higher than they were in the country. A typical town house consisted of a shop opening on the street where the man did his work or sold his goods, with a kitchen behind and a bedroom above.

The earliest houses of which something is known are those of ancient Egypt. They were built of bricks dried in the sun. Some of them were built around a courtyard or garden with rooms opening into it.

Greek houses, too, had a courtyard in the middle and round their courtyard ran a covered walk, its ceiling supported by pillars. There were special women's quarters, usually upstairs on the second storey.

In Rome bricks were used for building and houses were often finished with plaster over bricks on both inside and outside walls. The centre of family life was a garden-courtyard, surrounded by columns and with rooms opening out into it.

The earliest houses in Britain were round, built of wood or wicker basket work plastered over with clay. In the centre of the house there was the hearth and light came in through the hole in the roof above it and through the door because there were no windows.

11. Answer the following questions:

1. Where does a man spend most of the time? 2. What is the aim of building houses? 3. What buildings are built for cultural activities of the people? 4. Why did primitive men build their houses? 5. Where did primitive men look for protection? 6. What was the weather like after the Ice Age? 7. Why were caves chosen? 8. Where did the ancient people paint their pictures? 9. Where can you find such decorated caves? 10. Where were caves imitated? 11. What was taken as a model for huts built of branches? 12. Where were skins raised? 13. What is the earliest type of human dwellings? 14. What was lost in the prehistoric past? 15. Where did people live in the country? 16. What did rich people build in the country? 17. What did these castles serve? 18. When did a man feel a need to have a number of different kinds of houses in one place? 19. What was a dwelling of the chief like? 20. Why was it necessary to build higher houses in towns than in countries? 21. What was a typical town house like? 22. What material did ancient people use in Egypt for building? 23. What were the houses like in Greece? 24. What materials were used in Rome? 25. Where was the centre of family life concentrated? 26. Were the earliest houses in Britain small? 27. What was in the centre of their houses? 28. How did the light come into early English houses?

12. Agree or disagree with the following statements:

1. Most of the time of a modern man is spent abroad. 2. Large buildings are constructed for rich people. 3. All primitive people try to protect themselves from other tribes. 4. In prehistoric times men looked for protection in the open air. 5. Some covered themselves with clothes. 6. When the Ice Age had passed, Europe remained rains. 7. The people of the Old Stone Age had to invent umbrellas. 8. They chose caves, dwelling places that storm and cold could not destroy. 9. On the walls of their caves ancient people raised skins of wild animals to be warm. 10. Such decorated caves are found even in Belarus. 11. Primitive brick structures, caves and tents are the earliest types of human dwellings. 12. In the country ordinary people lived in simple small houses from timber. 13. The rich people in the country built one-storey cottages with thin walls and narrow windows. 14. These castles were built for cultural activities of the people. 15. In the days of early civilization people began to feel a need to have a number of different kinds of houses in one place. 16. When men began to build towns, the chief or leader built larger hut or tent than the rest of the people. 17. People built houses higher in the towns than in the villages because they were richer. 18. A typical house was very simple with many rooms. 19. There were two bedrooms and a kitchen on the second floor. 20. In ancient Egypt the houses were built from stone. 21. Greek houses had a courtyard in the middle and round their courtyard ran a covered walk. 22. In their houses they had special women's rooms, usually on the first floor. 23. In Rome timber were used for building. 24. The centre of family life was a garden-courtyard. 25. This garden-courtyard was surrounded by fruit trees. 26. The earliest houses in Britain were round, built of stone. 27. Light came in through the small windows.

13. Complete the sentences according to the text:

1. Most of the time of a modern man … . 2. … are built for cultural activities of the people. 3. In prehistoric times men looked for … . 3. Some covered themselves with … but others settled in caves. 4. The people of the Old Stone Age had to … from bad weather. 5. … caves were imitated in stone structures. 6. They were lost in the prehistoric past but … . 7. In the country ordinary people lived in … which did not differ much … of an earlier age. 8. … was mainly in size. 9. Much later, … , there grew up a difference … . 10. … of a shop opening on the street. 11. The earliest houses … are those of ancient Egypt. 12. … in the middle

and round their courtyard ran a covered walk. 13. The houses were often finished with … and outside walls. 14. The earliest houses in Britain were round, built … . 15. In the centre of the house was the hearth and … above it.

14. Choose a word to put into each gap:

The Old Stone Age, hut or tent, ancient, dwelling, tents, to shelter, huts, one-storey cottages, the branches, a kitchen, destroy, mud and stone, narrow, building, a courtyard or garden, caves, wood, poles, huge castles, enemy attack, stormy, wicker basket work plastered, wild, the hearth, a bedroom, stone structures, towns, quarters, plaster over bricks,

1. Houses are built for … . 2. Primitive men tried to protect themselves from … weather, … animals and human enemies. 3. In prehistoric times men looked for protection under … of trees. 4. Some people settled in … . 5. The people of … had to find some warm and dry place … from bad weather. 6. They chose caves, dwelling places that storm and cold could not … . 7. On the walls of their caves … people painted pictures. 8. Trees were taken as a model for … built of branches. 9. Skins were raised on … and formed tents. 10. Primitive … , huts and … are the earliest types of human dwellings. 11. Simple … did not differ much from the … huts of an earlier age. 12. The rich people in the country built … with thick walls and … windows. 13. These castles were built to stand up to … and to be strong bases in time of war. 14. The chief or leader had a larger … than the rest of the people. 15. The streets in … were very narrow and there was not much place for … within the town walls. 16. There was … behind and … above in a typical town house. 17. Some of Egyptian houses were built around … with rooms opening into it. 18. In Greek houses there were special women's … , usually upstairs on. 19. In Rome houses were often finished with … on both inside and outside walls. 20. The earliest houses in Britain were round, built of … or … over with clay. 21. In the centre of the house was … .

15. Find out from your partner:

– if he knows about the life of the people of the Old Stone Age;
– why ancient people painted pictures in their caves;
– what unusual was in the houses of English people.

16. Prove that:

– houses are built for dwelling;
– primitive people looked for protection all the time;
– ordinary and rich people lived in different houses.

17. Comment on:

– the building in the days of early civilization;
– the houses of Egypt and Greek people;
– the houses which were typical for Italy and England.

18. Imagine that:

– You meet your school friend. He studies at Historical Faculty in Belarusian State University. He was ill for a long time and he wants you to tell him about building in different historic periods. Role-play a dialogue with your partner.

– Your small brother has to prepare précis about all sorts of houses in the ancient world. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. Most of the time of a modern man is spent … .
a) at his work;
b) within the walls of some educational establishments;
c) within the walls of some buildings.
2. Primitive men protected themselves from … .
a) earthquakes and their enemies;
b) cold weather, wild animals and all sorts of invasions;
c) stormy weather, wild animals and human enemies.
3. In prehistoric times men … .
a) hunted on wild animals;
b) looked for protection under the branches of trees;
c) fought with neighbouring tribes all the time.
4. … to protect themselves from cold and rain but others settled in caves.
a) Some built small and simple huts;
b) Some covered themselves with handmade blankets;
c) Some covered themselves with skins of animals.
5. When the Ice Age had passed,… .
a) Europe remained very cold, at least in winter;

b) Europe remained very cold, at least in summer;
c) Europe remained very warm, at least in winter.
6. At that time primitive people chose caves … .
a) which served them as dwelling places;
b) where it was very warm;
c) where it was comfortable to live.
7. Caves were chosen by people because … .
a) there was a lot of place to live for every family;
b) storm and cold could not destroy them;
c) wild animals could not get into them.
8. … ancient people painted pictures.
a) On the floor of their caves;
b) On the skins of animals;
c) On the walls of their caves.
9. When man began to build a home for himself, … .
a) caves were of no need for him;
b) caves were imitated in stone structures;
c) caves were used for storage skins of animals.
10. … and formed tents.
a) Branches of the trees were raised on poles;
b) Skins were raised on poles;
c) Old clothes were raised on poles.
11. …. are the earliest types of human dwellings.
a) Primitive stone structures, huts and tents;
b) Caves and deep pits coved with skins;
c) Small houses made from branches of the trees.
12. The mud and stone huts of an earlier age didn't differ much from … .
a) simple small houses where primitive people lived;
b) simple one-storey cottages where ordinary people lived;
c) simple dugouts where ordinary people lived in the country.
13. The rich people in the country built … .
a) huge castles with thick walls and decorative windows;
b) huge cottages with painted walls and wide windows;
c) huge castles with thick walls and narrow windows.
14. These castles were built … .
a) to gather all relatives in them;
b) to live in comfort;
c) to stand up to enemy attack.

15. When men had learnt how to build simple houses, they began to feel a need … .

a) to build many-storied houses in one place;

b) to have a number of different kinds of houses in one place.

c) to design a new model of houses.

16. When men began to build towns, … .

a) there grew up a difference between town houses and country houses;

b) there appeared a need to involve highly qualified workers;

c) there grew up a problem to design new houses.

17. … and there was not much place for building within the town walls.

a) The streets in towns were very narrow;

b) The streets in towns were very crowded;

c) The streets in towns were full od transport.

18. A typical town house consisted of a shop opening on the street … .

a) where it was convenient for people to buy goods;

b) where the man did his work or sold his goods;

c) where there were a lot of goods made by the owner of the house.

19. In ancient Egypt the houses were … .

a) small but very beautiful;

b) built of bricks dried in the sun;

c) built of timber and granite.

20. Greek houses had a courtyard in the middle and … .

a) round their courtyard ran a covered walk;

b) small kitchen-garden behind them;

c) big fence round them.

21. …, usually upstairs on the second storey.

a) There were ordinary workshops;

b) There were two bedrooms and a room for children;

c) There were special women's quarters.

22. The centre of Rome's family life was a garden-courtyard, … .

a) surrounded by exotic trees and flowers;

b) surrounded by small statues of famous architects;

c) surrounded by columns and with rooms opening out into it.

23. The earliest houses in Britain were round, … .

a) built of stone or granite;

b) built of wood or wicker basket work plastered over with clay;

c) built of concrete or wicker basket work plastered over with clay.

24. … and light came in through the hole in the roof above it.
a) In the centre of the house there was the hearth;
b) Near the wall of the house there was the hearth;
c) In the centre of the house was the fire-place.
25. The earliest houses in Britain were round, … .
a) their shape was very original;
b) there was a lot of light in them;
c) there were no windows in them.

20. Group work:
Express your opinion on the contents of the utterance by Ralth Elison given above. Discuss all your pros and cons with your group-mates.

UNIT IV

CONSTRUCTION

Real rest is in one's house.
Maltese proverb

1. Read these international words and try to guess their meaning:
Climate, material, region, standard, construction, monument, sphinxes, column, pyramid, tourists, method, industrial, traditional, crane, bulldozer, excavator.

2. Read out the following words and memorize them:

convenient	удобный
to remain	оставаться
to exist	существовать
flat	плоский
slanting	покатый
instead of	вместо
improved	улучшенный
to flourish	расцветать
thick	толстый
an invasion	нашествие
to manufacture	производить
advanced	прогрессивный
to assemble	собирать

a site	площадка
residential	жилой, жилищный
unskilled	неквалифицированный
former	бывший
to place	класть
to hoist	поднимать
a gantry-crane	портальный кран
a plumber	сантехник

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

to have smth at hand – иметь что-то под рукой;
to be engaged – быть занятым (вовлеченным);
since then – с тех пор;
although – хотя;
to depend on – зависеть от;
to arouse one's wonder – приводить в восхищение;
to serve as – служить в качестве чего-то;
a reinforced concrete – армированный бетон;
a precast concrete – железобетон;
to be in great use – широко использоваться;
to pay much attention – уделять много внимания;
the prefabricated units – сборные конструкции.

5. Match the English words with their Russian equivalents:

1. slanting	a. жилой
2. an arch	b. расцветать
3. to manufacture	c. плоский
4. flat	e. площадка
5. to flourish	f. неквалифицированный
6. a site	g. улучшенный
7. residential	h. арка
8. a reinforced concrete	i. покатый
9. improved	j. армированный бетон
10. unskilled	k. производить

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. the kind	a. time
2. were made	b. Belarusian people
3. the greater part	c. prefabricated flats
4. a few	d. wood
5. the Egyptian art	e. precast concrete
6. the art	f. house
7. the churches	g. our country
8. Cathedral	h. the earth
9. the use	i. making columns
10. the National Economy	j. them
11. thousands	k. living
12. the general level	l. St. Sophia
13. blocks	m. building

7. Give the three forms of the following verbs:

To build, to depend, to cover, to dry, to put, to arise, to give, to remain, to come, to destroy, to hold, to get, to have, to pay.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Part, cover, dry, place, change, manufacture, rain, paint, affect, flourish, hoist.

9. Write the derivatives of the following words:

Great, construct, Egypt, resident, build, large, skill, educate, machine, wonderful, govern, live, architect.

10. Read the text and get ready to speak about construction:

CONSTRUCTION

Man has always been a builder. The kind of house he built in the beginning depended on the climate, on his enemies and on the building material at hand. The first houses in many parts of the world were made of wood, for in those days the greater part of the earth was covered with forests. In other regions the most convenient building material was stone. Although houses were built without cement, the remains of a few of them still exist.

The ancient Egyptians built very simple houses by present standards. Having dried the bricks in the sun they put up four walls and above these they placed a flat roof. The roof was flat because there was very little rain in Egypt. Although their buildings were simple in construction, the Egyptian art of building was very beautiful. Their pyramids and monuments, sphinxes and palaces arouse our wonder to this day.

The first lessons in the art of making columns were given to the world in ancient Egypt.

In our country architecture flourished for the first time in Kiev Russ. Unfortunately, only a few of the church buildings of that period have remained. The churches of the time were strong buildings with thick walls and small windows. They often had to serve as fortresses during enemy invasions. Tourists from all over the world come to see the famous Cathedral of St. Sophia in Polotsk the cornerstone of which was laid in 1037 to commemorate the victory over the Pechenegs.

Since then the architecture and structural materials have been greatly changed. A very advanced construction technique today is the use of precast concrete. According to this method the reinforced concrete units are manufactured at a factory and are then simply assembled at the construction site. This method helped our country to restore its economy after the Second World War, when many residential as well as industrial buildings were destroyed.

The first blocks made of prefabricated units appeared in the villages in the Volgograd and Moscow regions.

At present, the building industry is the largest in Belarus and it holds an important place in the National Economy of our country. Many highly-educated civil engineers, who are trained at Belarusian universities, skilled and unskilled workers are engaged in construction. Builders use many new materials such as reinforced concrete, precast concrete, light weight concrete, gas concrete, many decorative materials, oil paints, wall paper. Synthetics are among them. Such traditional materials as stone, brick, wood are in great use as well. Various elements and components are assembled on the site.

Now everywhere in Belarus vibro-rolled panels are being widely used in construction. The assembly method is developing into the main method of apartment and industrial construction.

All the working processes are mechanized. Modern construction can't be imagined without building machinery. Lorries, cranes, bulldozers,

excavators are available at all construction sites of Belarus. Prefabricated structures are transported by lorries and immediately hoisted into position. Finished blocks of prefabricated flats with interior decoration are assembled on many construction sites. Transport brings a complete flat to the prepared foundations of a building. A powerful gantry-crane lifts the 18 – 20 ton flat and carefully sets it on the foundation. After the final inspection, electricians, plumbers and gas-men can begin their work.

As a result our country builds more than any other country of the former Soviet Union. Thanks to special government's programmes thousands of Belarusian people get flats every year. Flats have all modem conveniences, such as hot and cold water supply, central heating, lifts, ventilating plants, etc.

The building industry is paid much attention in our country as it affects greatly the general level of living.

11. Answer the following questions:

1. What did the kind of house depend on? 2. What materials were the first houses made of? 3. Were they strong? 4. What country was the first to use brick to build houses? 5. What houses were built in ancient Egypt? 6. Why did Egyptians use a flat roof? 7. The Egyptian art of building was very beautiful, wasn't it? 8. What arouse our wonder to this day? 9. Where were given the first lessons in the art of marking columns? 10. Where did architecture flourish for the first time in our country? 11. In what way can you describe the churches of the old time? 12. What purposes did they often serve? 13. What do tourists come to see usually? 14. What new materials help to speed up the rate of building? 15. What method helped our country to restore its economy after the Second World War? 16. Who are engaged in construction nowadays? 17. What new materials are used by our builders? 18. Do they use any traditional materials? 19. What sort of panels is being widely used in construction in Belarus? 20. What is the main method of apartment and industrial construction? 21. What machines are used at all construction sites? 22. Where are the finished blocks of prefabricated flats with interior decoration assembled? 23. With the help of what a complete flat brings to the prepared foundations of a building? 24. What is the role of a powerful gantry-crane? 25. Who begins to work after the last inspection? 26. Why is the building industry paid great attention in our country?

12. Agree or disagree with the following statements:

1. Man has always been an inventor. 2. The kind of house he built in the beginning depended on his mood. 3. In some regions the most convenient building material was wood. 4. The ancient Egyptians built very fantastic houses. 5. Having dried the bricks in the sun they put up four walls, and above these they placed a thick roof. 6. The Egyptian art of building was very beautiful. 7. The first lessons in the art of marking columns were given to the world in ancient Greece. 8. In our country architecture flourished for the first time in Kiev Russ. 9. The churches of the time were small buildings with thin walls and without windows. 10. These churches had to serve as dwellings for the poor people. 11. The cornerstone of the famous Cathedral of St. Sophia in Polotsk was laid in 1237 to commemorate the victory over the Pechenegs. 12. Since the old times the architecture and structural materials were not changed. 13. A very advanced construction technique today is the use of timber. 14. The first blocks made of prefabricated units appeared in the villages in the Vitebsk and Minsk regions. 15. At present, the building industry is the largest in Belarus. 16. Many highly-educated civil engineers, who are trained abroad, are engaged in construction. 17. Synthetics are greatly used in construction. 18. Various elements and components are assembled at the plants. 19. Our builders do not use such traditional materials as stone, brick and wood. 20. Prefabricated structures are transported by gantry-cranes. 21. Lorries, cranes, bulldozers, excavators are available at all construction sites of Belarus. 22. After the final inspection, engineers, electricians and architects can finish their work. 23. The building industry is not paid much attention in our country.

13. Complete the sentences according to the text:

1. The kind of house a man built in the beginning depended on the climate ... . 2. The first houses in many parts of the world were made of wood because ... . 3. ... the remains of a few of them still exist. 4. Egyptians dried the bricks in the sun and … . 5. The roof in Egypt was flat because ... . 6. Egyptian pyramids and monuments, sphinxes and palaces arouse our wonder to this day because ... . 7. In our country architecture flourished … . 8. Tourists from all over the world come to see ... . 9. A very advanced construction technique today is ... . 10. According to the new method the reinforced concrete units ... and are then simply assembled … . 11. The building industry holds an important place in ... . 12. Builders use many new materials such as ... . 13. ... are in great use as

well. 14. Now everywhere in Belarus ... are being widely used in construction. 15. ... are available at all construction sites of Belarus. 16. Finished blocks of prefabricated flats with interior decoration ... . 17. ... the 18 – 20 ton flat and carefully sets it on the foundation. 18. Thanks to special government's programmes ... .

14. Choose a word to put into each gap:

Stone, prefabricated structures, fortresses, columns, the bricks, the building industry, precast concrete, wood, flat, unskilled, thick, the site, plumbers, cement, civil, building material, synthetics, architecture, machinery.

1. The first houses in many parts of the world were made of ... . 2. In some regions the most convenient ... was ... . 3. Although houses were built without ..., the remains of a few of them still exist. 4. Having dried ... in the sun Egyptians put up four walls, and above these they placed a ... roof. 5. The first lessons in the art of marking ... were given to the world in ancient Egypt. 6. In our country ... flourished for the first time in Kiev Russ. 7. The churches of the time were strong buildings with ... walls and small windows. 8. They often had to serve as . during enemy invasions. 9. A very advanced construction technique today is the use of ... . 10. Many highly-educated ... engineers, skilled and ... workers are engaged in construction. 11. ... are among the new building materials. 12. Various elements and components are assembled on ... . 13. ... are transported by lorries and immediately hoisted into position. 14. Modern construction can't be imagined without building ... . 15. After the final inspection, electricians, ... and gas-men can begin their work. 16. ... is paid much attention in our country as it affects greatly the general level of living.

15. Find out from your partner:

– what materials were used for the first houses in many parts of the world and why;

– why Egyptian pyramids, monuments, sphinxes and palaces arouse our wonder to this day;

– why the architecture and structural materials have been greatly changed.

16. Prove that:

– man has always been a builder;

– now the architecture and structural materials have been greatly changed;

– the building industry is paid much attention in our country.

17. Comment on:

– the art of building in ancient Egypt;

– the flourishing of architecture in our country;

– the process of building in our country.

18. Imagine that:

– You are to prepare a report about construction in the ancient times. What are you going to speak about?

– You meet you school friend who studies at Pedagogical University. His father is going to build a house in a village. He asks you to help them to buy some modern materials for their building and give your comments about these materials. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. The kind of house a man built many years ago depended on ....

a) the climate, on his enemies and on the building material at hand;

b) the weather, on his family and on the building material at hand;

c) the climate, on the surroundings and on the money he had.

2. The greater part of the earth was covered with forests that's why ...

a) the first houses in many parts of the world were made of wood;

b) all the houses in many parts of the world were built in the forests;

c) the first houses were built near these forests.

3. The ancient Egyptians put up four walls and ... .

a) above these they placed a decorative roof;

b) above these they placed a straight roof;

c) above these they placed a flat roof.

4. The roof was flat because ... .

a) there was very little rain in Egypt;

b) it looked very nice;

c) it was very hot in Egypt.

5. The first lessons in the art of marking columns ... .

a) were given to the world in ancient Greece;

b) were given to the world in ancient Egypt;

c) were given to the world in ancient Russia.

6. In our country architecture ... .
a) became to know for everybody in Kiev Russ;
b) flourished for the first time in Kiev Russ;
c) flourished for the first time in Belarus.
7. The churches of that time were ... .
a) small buildings with thin walls and round windows.
b) strong buildings with high walls and big windows;
c) strong buildings with thick walls and small windows.
8. The churches often had to ... .
a) serve as fortresses during enemy invasions;
b) serve as dwellings to poor people;
c) serve a place for meetings.
9. The famous Cathedral of St. Sophia ... .
a) was famous for its architecture;
b) was built by slaves;
c) was built in Polotsk.
10. A very advanced construction technique today is ... .
a) the use of prefabricated units;
b) the use of precast concrete;
c) the use of a reinforced concrete and wood.
11. According to the modern method the reinforced concrete units ... .
a) are assembled at a building plant;
b) are manufactured at a factory;
c) are produced at a construction site.
12. The first blocks made of prefabricated units ... .
a) appeared in the villages near the Polotsk and Mogilev regions;
b) were very expensive for building houses;
c) appeared in the villages in the Volgograd and Moscow regions.
13. Such traditional materials as stone, brick, wood are ... .
a) in great use nowadays;
b) used only to build small houses;
c) used as secondary materials.
14. The assembly method is developing into ... .
a) the progressive method in our country;
b) the main method of scientific investigation;
c) the main method of apartment and industrial construction.
15. Modern construction can't be imagined ... .
a) without prefabricated units;

b) without skilful workers;
c) without building machinery.
16. Prefabricated structures are transported by lorries and ... .
a) immediately hoisted into position;
b) hoisted by a big crane;
c) hoisted into position with the help of modern mechanisms.
17. ... and carefully sets it on the foundation.
a) A powerful gantry-crane lifts prefabricated structure
b) A powerful gantry-crane lifts the 18 – 20 ton flat
c) An excavator moves the 18 – 20 ton flat.
18. ... electricians, plumbers and gas-men can begin their work.
a) After the final inspection;
b) After the house is built;
c) After the final cleaning the territory.
19. ... thousands of Belarusian people get flats every year.
a) Thanks to good work of our builders;
b) Thanks to the good usage of modern methods of building;
c) Thanks to special government's programmes.
20. The building industry is paid much attention in our country as ... .
a) it is of great importance for everybody;
b) it gives possibility to get new flats for people;
c) it affects greatly the general level of living.

20. Group work:

Express your opinion on the contents of the Maltese proverb given above. Discuss all your pros and cons with your group-mates.

UNIT V

RESIDENTIAL AND INDUSTRIAL BUILDINGS

To every bird its own nest is beautiful.
English proverb

1. Read these international words and try to guess their meaning:

Technique, designer, proportion, National Economy, political, industry, factor, method, standardization, ventilation, refrigerator, modern, type, laboratory, office building.

2. Read out the following words and memorize them:

to advocate	пропагандировать
to design	проектировать
an advance	развитие
housing	жилищный, жилье
a site	строительная площадка
a storage	хранение
an advantage	преимущество
available	доступный, имеющийся в распоряжении
an issue	проблема
to affect	воздействовать
an amenity	удобство
to afford	позволить (себе)
a furnishing	меблировка
a mine	шахта
a tenant	квартиросъемщик
a hangar	ангар, склад
a fraction	доля
to acquire	достигать, приобретать
offsite	вне строительной площадки
precast	предварительно отлитый, сборный

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

a standard of living – жизненный уровень;
a managerial staff – управленческий аппарат;
the prefabricated structures – сборные конструкции;
a present-day design – современное проектирование;
the technological advance – технический прогресс;
a heating system – система отопления;
a hot-water supply – горячее водоснабжение;
washing machines – стиральные машины;
the storage facilities – складские помещения;
a site planning – планирование работ на строительной площадке;

a building industry – строительная промышленность;
a housing – жилищное строительство;
large-scale – широкомасштабный.

5. Match the English words with their Russian equivalents:

1. a site	a. склад
2. an amenity	b. воздействовать
3. a furnishing	c. проблема
4. available	d. удобство
5. a fraction	e. достигать
6. a tenant	f. хранение
7. an advance	g. доля
8. a hangar	h. доступный
9. an issue	i. меблировка
10. a storage	j. строительная площадка
11. to affect	k. развитие
12. to acquire	l. квартиросъемщик

***6. Combine the words with the help of the preposition* of.**
Translate these word combinations:

1. a proportion	a. living
2. the problems	b. technological advance
3. the level	c. reinforced concrete panels
4. the improvement	d. the wall area
5. the concern	e. the labour force
6. new levels	f. glass walls
7. use	g. state
8. the advantages	h. construction
9. a large fraction	i. housing

7. Give the three forms of the following verbs:

To develop, to grow, to constitute, to carry, to pay, to bring, to classify, to demonstrate, to substitute, to enlarge.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Advocate, force, place, issue, rise, concern, demand, use, group, design, mark.

9. Write the derivatives of the following words:

Include, large, policy, form, develop, standard, technology, improve, consider, plan.

10. Read the text and get ready to speak about residential and industrial building:

RESIDENTIAL AND INDUSTRIAL BUILDINGS

In technically developed countries the building industry, comprising skilled and unskilled workers in many trades, building engineers and architects, managerial staff and designers employs a considerable proportion of the available labour force.

Building industry, including residential public and industrial construction, holds a considerable place in the National Economy and is being carried on a large scale. It is the largest single industry in the country. The problems of construction have grown into major, political issues in most countries.

Housing is prominent among the factors affecting the level of living. The improvement of the housing represents a concrete and visible rise in the general level of living. In many countries residential construction has constituted at least 12 per cent and frequently more than 25 per cent of all capital formation. Since the USSR home building industry is the concern of the state. The research and development in housing technology is carried out on a national scale and is being paid much attention to.

The ever growing housing demands have brought to life new methods of construction with great emphasis upon standardization, new levels of technological advance, utilizing such techniques as offsite prefabrication, precutting, use of reinforced concrete panels and large-scale site planning. At present, prefabricated structures and precast elements may be classified into two principal groups – for residential houses and industrial buildings.

Present-day design for residential construction envisages all modern amenities for a dwelling. They advocate larger, better built and better equipped flats and houses. Steel was gradually substituted for iron and permitted wider rooms and larger windows. Windows can be enlarged to the extent that they constitute a large fraction of the wall area. There is a marked improvement in the heating and ventilating systems as well as in hot-water supply, kitchen and sanitary fittings. Many tenants now can afford better furnishings, refrigerators, washing machines, etc. A house

which is a physical environment where a family develops is acquiring a new and modern look.

Industrial buildings comprise another significant type of construction. This type of construction involves factories, laboratories, food processing plants, mines, office buildings, stores, garages, hangars and other storage facilities, exhibition halls, etc. Modern industrial buildings have demonstrated the advantages of reinforced concrete arches, metal frames, glass walls and prefabricated standardized mass produced parts.

11. Answer the following questions:

1. What does building industry employ? 2. Why does building industry hold a considerable place in the National Economy? 3. What is prominent among the factors affecting the level of living? 4. Is building industry the concern of the state? 5. Why is it so? 6. What is being paid much attention to? 7. What new building methods are now used in building industry? 8. How many principal groups of prefabricated structures and precast elements do you know? 9. What changes have taken place in present day designs for residential structures? 10. Is there any improvement in heating and ventilating systems? 11. Who can afford better furnishings, refrigerators, washing machines, etc.? 12. What industrial buildings are mentioned in the text?

12. Agree or disagree with the following statements:

1. In technically developed countries work only engineers and architects in the building industry. 2. Building industry is the largest single industry in every country. 3. The problems of construction is of no importance in many countries. 4. Industrial building is prominent among the factors affecting the level of living. 5. Our government pays no attention to the problems of building. 6. The old methods of construction are used now. 7. The new methods of construction make great emphasis upon standardization and new levels of technological advance. 8. It is necessary to use offsite prefabrication and precutting. 9. Prefabricated structures and precast elements may be classified into three principal groups. 10. It is difficult for present-day designs for residential construction envisage all modern amenities for a dwelling. 11. Industrial buildings do not comprise another significant type of construction. 12. This type of construction involves only big factories, plants and buildings 13. Modern industrial buildings have demonstrated the advantages of some new building materials. 14. Concrete

was gradually substituted for iron. 15. New rooms and windows are the same as they were some years ago.

13. Complete the sentences according to the text:

1. Building industry, … holds a considerable place in the National Economy. 2. This industry is … . 3. … have grown into major, political issues in most countries. 4. Housing is prominent among the factors … . 5. … has constituted at least 12 per cent of all capital formation. 6. … is being paid much attention to. 7. At present, … may be classified into two principal groups – for … . 8. Present day designs … envisage all modern amenities for a dwelling. 9. There is a marked improvement in … . 10. A house … where a family develops is acquiring … . 11. … another significant type of construction. 12. … the advantages of reinforced concrete arches, metal frames, glass walls and … . 13. Windows can be enlarged to the extent that … .

14. Choose a word to put into each gap:

Building, offsite prefabrication, reinforced concrete, tenants, housing, site, issues, technology, frames, residential construction, furnishings, proportion, ventilating, steel, construction, level, amenities, fraction, labour, panels, heating, industrial buildings, enlarged.

1. In technically developed countries the building industry employs a considerable … of the available … force. 2. … industry is being carried on a large scale. 3. The problems of … have grown into major, political … in most countries. 4. The improvement of the … represents a concrete and visible rise in the general … of living. 5. The research and development in housing … is being paid much attention to. 6. At present it is necessary to utilize such techniques as…, precutting, use of reinforced concrete … and large-scale … planning. 7. Present day designs for … envisage all modern … for a dwelling. 8. There is a marked improvement in the … and … systems. 9. Many … now can afford better … , refrigerators, washing machines, etc. 10. … comprise another significant type of construction. 11. Modern industrial buildings have demonstrated the advantages of … arches, metal …, glass walls etc. 12. … was gradually substituted for iron. 13. Windows can be … to the extent that they constitute a large … of the wall area.

15. Find out from your partner:

– what he knows about building industry in our country;

– why building industry is the concern of the state.

16. Prove that:

– problems of construction are very important for every country;

– housing is prominent among the factors affecting the level of living;

– the new methods of construction are used in our country.

17. Comment on:

– the amenities which are in our modern houses;

– the advantages of the new materials which are used in construction.

18. Imagine that:

– Your friend wants to have a new flat in a new house. He asks you to help him to choose a flat. Explain him what is necessary to take into consideration in this case. Role-play a dialogue with your partner.

– A group of foreign students came to your faculty. It is necessary to tell them about residential and industrial building in our country. Your dean asked you to do this. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. In many countries the building industry, comprising ... employs a considerable proportion of the available labour force.

a) skilled and unskilled workers in many trades, building engineers and architects, managerial staff and designers;

b) workers in many trades, building engineers and building engineers;

c) skilled and unskilled workers in many trades, managerial staff and designers.

2. Building industry includes … .

a) a present-day design;

b) residential public and industrial construction;

c) technological advance.

3. The problems of construction have grown into … .

a) the most important factor in most countries;

b) major, political issues in most countries;

c) one of the frequently discussed issues in most countries.

4. Housing is prominent among the factors … .

a) making life of a man better;

b) spoiling the level of living;

c) affecting the level of living.

5. In many countries residential construction has constituted at least …

a) 12 per cent and frequently more than 35 % of all capital formation;

b) 12 per cent and seldom less than 25 % of all capital formation;

c) 12 per cent and frequently more than 25 % of all capital formation.

6. The research and development in housing technology … .

a) is being paid much attention to;

b) is given the first place in the National Economy;

c) is of great importance for everybody.

7. New methods of construction concentrate on … .

a) the usage of the new materials;

b) new levels of technological advance, use of reinforced concrete panels etc.;

c) the rise in the general level of living.

8. Our builders utilize such techniques as … .

a) offsite prefabrication, precutting and large-scale site planning;

b) prefabricated structures and standardization;

c) offsite prefabrication hand labour of workers.

9. Present day design for residential construction envisages … .

a) all modern amenities for a dwelling and a garage near it;

b) all modern amenities for a dwelling;

c) storage facilities near a dwelling.

10. A house is … .

a) a tower where a family develops;

b) a physical environment for a comfortable living;

c) a physical environment where a family develops.

11. All new houses … .

a) are similar for the first sight;

b) have their own image;

c) acquire a new and modern look.

12. Industrial buildings comprise … .

a) another significant type of construction;

b) another significant type of image;

c) the same type of construction.

13. Modern industrial buildings have demonstrated the advantages of …
a) reinforced concrete units and decorated materials;
b) metal frames, vibro-rolled panels and glass walls;
c) reinforced concrete arches, metal frames and glass walls.
14. Steel was gradually substituted for iron and … .
a) gives possibility to build wider kitchens;
b) permitted wider rooms and larger windows;
c) permitted wider rooms and larger doors.

20. Group work:
Express your opinion on the contents of the English proverb given above. Discuss all your pros and cons with your group-mates.

UNIT VI

TYPES OF BUILDINGS

The house shows the owner.
English proverb

1. Read these international words and try to guess their meaning:
Social, function, activity, condition, technique, technological, evolution, minimum, stimulate, industry, standardization, production, mechanization, bulldozer, decoration.

2. Read out the following words and memorize them:

an apartment	многоквартирный дом
recreational	развлекательный
a permanence	постоянство, прочность
to tend	направлять
an assemblage	сборка, монтаж
to erect	сооружать, воздвигать, устанавливать
a built-in	вставка, встроенность
a load	нагрузка
to conceal	скрывать, маскировать
a search	поиск
expressive	выразительный
meaningful	многозначительный

to suit	удовлетворять
resultant	результативный
private	частный
an excavation	земляные работы, выемка грунта
an output	Производительность

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

at once – одновременно;
to depend upon – зависеть от;
interchangeability of smth – взаимозаменяемость чего-либо;
modular design – блочная конструкция (модульное проектирование);
to classify according smth – классифицировать согласно чему-то;
a minimum of materials – минимальное использование материалов;
to protect smb from smth – защищать кого-то от чего-то;
the methods by which – методы, с помощью которых;
at lower cost – при наименьших затратах;
carefully think of smth – тщательно продумывать что-то;
in order to do smth – для того, чтобы сделать что-то;
to form from – производить из.

5. Match the English words with their Russian equivalents:

1. recreational	a. многозначительный
2. resultant	b. скрывать
3. a load	c. встроенность
4. meaningful	d. выемка грунта
5. an apartment	e. удовлетворять
6. to conceal	f. развлекательный
7. a permanence	g. поиск
8. a built-in	h. результативный
9. a search	i. выразительный
10. an assemblage	j. постоянство, прочность
11. to erect	k. частный

12. a permanence	l. многоквартирный дом
13. to suit	m. сооружать
14. private	n. сборка
15. an excavation	o. Нагрузка

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. types	a. materials
2. permanence	b. elements
3. character	c. techniques
4. technological development	d. the construction
5. the evolution	e. mechanization
6. maximum	f. buildings
7. combinations	g. built-in cabinets
8. standardization	h. better structures
9. interchangeability	i. society
10. output	j. an apartment
11. the high degree	k. stability
12. a variety	l. a structure
13. the upper part	m. a fixed unit
14. the built-in space	n. parts
15. the extent	o. construction methods

7. Give the three forms of the following verbs:

To classify, to build, to form, to influence, to condition, to dig, to tend, to lay, to think, to determine, to conceal.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Load, soil, condition, function, suit, form, influence, desire, change, design, part, aim, cost, contact, work.

9. Write the derivatives of the following words:

Suit, education, industry, stable, technology, build, meaning, adapt, change, success, durable, available, firm, careful, consider, satisfy, free.

10. Read the text and get ready to speak about the types of buildings:

TYPES OF BUILDINGS

Types of buildings depend upon social functions and may be classified according to the role in the Community. The types of buildings may be domestic, educational, office, industrial, recreational, etc. The common and necessary conditions are:

a) its suitability to use by human beings in general and its adaptability to particular human activities;

b) the stability and permanence of its construction.

Speaking of residential construction we must say that the apartment houses are mostly built to suit urban conditions. Group housing provides home for many families and is at once public and private. The techniques of construction or the methods by which structures are formed from particular materials are influenced not only by the availability and character of materials but also by the total technological development of society.

The evolution of techniques is conditioned by two factors:

1) one is economic – the search for a maximum of stability and durability in building with a minimum of materials, labour and time;

2) the other is expressive – the desire to produce meaningful form.

Large housing programmes have tended to stimulate technological change in the building industry. Modular design (i.e. design in which the elements are dimensioned in combinations of a fixed unit) has led to standardization of elements, interchangeability of parts and increased possibilities for mass production, with resultant economies. Entire apartment assemblages are available and are being used to an increasing extent. These techniques aim at a higher output of better structures at lower cost. The high degree of mechanization and standardization is successfully achieved by reinforced concrete blocks and units. Reinforced concrete homes are produced by a variety of construction methods. Various methods of constructing reinforced concrete houses involve extensive use of large sections manufactured in heavily mechanized factories and erected at the site.

In order to build a house first an excavation is dug by bulldozers. Then a foundation is laid to carry the load of a structure and to keep the walls and the floors from the contact with soil. Floors divide a building into storeys and carry the loads too. The upper part of a structure is a roof; it ties a building, gives the firmness to the structure and protects

people from rain, wind, snow, etc. Doors, windows, stairs, lifts are integral elements of a building and they are always precast or prefabricated.

When a structure is ready builders start to decorate it. When decoration work is over a building is considered to be finished. The built-in space of an apartment should be carefully thought of as well. There is a considerable trend toward built-in furniture. Rooms should be both efficient and visually satisfying. The extent of built-in cabinets must be determined. Drawers and shelves can often be concealed behind walls, freeing valuable floor space.

11. Answer the following questions:

1. What do types of buildings depend upon? 2. In what way may be they classified? 2. What are the common and necessary conditions? 4. What is the function of group housing? 5. The evolution of techniques is conditioned by several factors, isn't it? 6. What is modular design? 7. Why is it used? 8. What is the aim of entire apartment assemblages? 9. What methods are used to produce reinforced concrete homes? 10. Where are large sections manufactured and erected? 11. What is necessary to first in order to build a house? 12. Why is the foundation laid? 13. What is the upper part of a structure? 14. What elements are integral? 15. Who starts to decorate the structure? 16. When is a building considered to be finished? 17. What do we call the built-in space of an apartment? 18. Should rooms be both efficient and visually satisfying? 19. What must be determined? 20. Where can be drawers and shelves concealed?

12. Agree or disagree with the following statements:

1. Types of buildings may be classified according to a special rule. 2. One of the necessary conditions of a building is its adaptability to particular human activities. 3. The apartment houses are mostly built to suit people who live in them. 4. The techniques of construction are influenced only by the availability and character of materials. 5. Large housing programmes have tended to stimulate technological change in the building industry. 6. Modular design is of no use in our country. 7. The techniques of assemblage are very expensive. 8. The high degree of mechanization and standardization is successfully achieved by good work of engineers. 9. Large sections manufactured in all building factories are of great use in residential construction. 10. In order to build a house it is necessary to have a project. 11. Floors are used for a flat to be warm. 12. Roofs protect

people from cold. 13. When a structure is ready special specialists are invited to decorate it. 14. When decoration work is over a commission comes to decide if the dwelling is ready for living. 15. The built-in space of an apartment is not convenient by the living standards. 16. Rooms should be both efficient and adaptable for living in them.

13. Complete the sentences according to the text:

1. … upon social functions. 2. The types of buildings may be … . 3. The apartment houses are mostly built … . 4. Group housing provides … and is at once public and private. 5. The methods by which structures are formed from particular materials are influenced by the total …. . 6. Large housing programmes have tended to … . 7. Modular design is … of a fixed unit. 8. … are available and are being used to … . 9. … is successfully achieved by reinforced concrete blocks and units. 10. Various methods of constructing … use of large sections. 11. In order to build a house first … . 12. Floors divide a building into … . 13. Doors, windows, stairs, lifts are integral elements of … . 14. … toward built-in furniture.

14. Choose a word to put into each gap:

Public, resultant, technological, private, meaningful, stability, assemblages, techniques, standardization, the load, the firmness, reinforced concrete, interchangeability, foundation, roof, mechanization, precast, built-in, the evolution, permanence, freeing, modular, a building.

1. Among the common and necessary conditions are … and … of the construction. 2. Group housing provides home for many families and is at once … and … . 3. The … of construction are influenced by the total … development of society. 4. One of the factures influenced … of techniques is the desire to produce … form. 5. … design has led to … of elements, … of parts and increased possibilities for mass production, with … economies. 6. Entire apartment … are available and are being used to an increasing extent. 7. The high degree of … and standardization is successfully achieved by … blocks and units. 8. A … is laid to carry … of a structure and to keep the walls and the floors from the contact with soil. 9. … ties a building and gives … to the structure. 10. Doors, windows, stairs, lifts are integral elements of … and they are always … or prefabricated. 11. There is a considerable trend toward … furniture. 12. Drawers and shelves can often be concealed behind walls, … valuable floor space.

15. Find out from your partner:

– what types of buildings he knows;

– what he knows about the large housing programme;

– what he knows about the common conditions which is necessary to observe.

16. Prove that:

– the apartment houses are mostly built to suit urban conditions;

– reinforced concrete blocks and units are widely used in construction;

– the built-in furniture is very often used in modern flats.

17. Comment on:

– the evolution of techniques;

– the perspectives of modular design;

– steps of building a house.

18. Imagine that:

– You are one of the members of the state commission. You are to decide if the house is ready for living. What is necessary to pay a special attention to? Role-play a dialogue with your partner.

– You are at a lesson. A teacher asks you to describe a house of your dream. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. Types of buildings may be classified according to … .

a) the place in the Community;

b) the role in the Community;

c) the position in the Community.

2. The stability and permanence of the construction are … .

a) the obligatory and necessary conditions;

b) the widely spread and common conditions;

c) the common and necessary conditions.

3. … to suit urban conditions.

a) The apartment houses are mostly built;

b) The new blocks of flats are mostly built;

c) The houses for one family are mostly built.

4. … and is at once public and private.

a) Group housing provides home for families with children;

b) Group housing provides home for poor families;

c) Group housing provides home for many families.

5. The techniques of construction are influenced by … .

a) the amount of the building materials;

b) the quality of the materials at a site;

c) the total technological development of society.

6. The economic factor in the evolution of techniques deals with … .

a) the search for the new building materials which are better in quality and more expensive in price;

b) the search for a maximum of stability and durability in building with a minimum of materials, labour and time;

c) the seat for the new talented engineers, designers and architects.

7. Large housing programmes have tended to … .

a) stimulate technological change in the building industry;

b) improve the process of building in the country;

c) accelerate technological change in the building industry.

8. Modular design has led to interchangeability of parts and … .

a) increased possibilities for mass production;

b) increased residential construction in the country;

c) increased availability of materials.

9. … and are being used to an increasing extent.

a) Group housing buildings are available;

b) Domestic and recreational buildings are available;

c) Entire apartment assemblages are available.

10. These techniques aim at a … .

a) stable output of better structures at acceptable cost;

b) higher output of better structures at lower cost;

c) new output of better materials at lower cost.

11. The high degree of mechanization and standardization is successfully achieved by … .

a) the usage of the new methods of building;

b) reinforced concrete blocks and units;

c) reinforced units formed from particular materials.

12. Large sections manufactured in heavily mechanized factories … .

a) are erected at the site;

b) are transported to the site;

c) give a great economic effect.

13. In order to build a house … .
a) first an excavation is dug by bulldozers;
b) first some necessary documentation is worked out;
c) first is necessary to receive the permission to do this.
14. … and to keep the walls and the floors from the contact with soil.
a) Necessary materials are used to carry the load of a structure;
b) Ground works are done to carry the load of a structure;
c) A foundation is laid to carry the load of a structure.
15. The upper part of a structure is a roof which … .
a) considers the main part of a house;
b) protects people from rain, wind and snow;
c) protects people from different accidents.
16. When a structure is ready … .
a) tenants can move into their flats;
b) builders start to decorate it;
c) builders start to improve some defects.
17. There is a considerable trend toward built-in furniture because …
a) rooms should be both efficient and visually satisfying;
b) it makes rooms both efficient and visually satisfying;
c) it makes rooms modern and comfortable.
18. … , freeing valuable floor space.
a) Built-in wardrobes can often be concealed behind walls;
b) All furniture can often be concealed behind walls;
c) Drawers and shelves can often be concealed behind walls.

20. Group work:

Express your opinion on the contents of the English proverb given above. Discuss all your pros and cons with your group-mates.

UNIT VII

BUILDING A HOUSE

Don't build a bigger house
than you may set roof on.
Swedish proverb

1. Read these international words and try to guess their meaning:

Person, consult, expert, zone, specification, contract, information, code, skeleton, material, idea, factory, form, architect, design.

2. Read out the following words and memorize them:

a lot	участок земли (*амер.*)
to check	проверять
to permit	разрешать
a frame	каркас, станина, корпус
a footing	нижняя часть фундамента
to supervise	руководить
to bolt	скреплять, закреплять
a sill	лежень
a joist	брус
a beam	балка, перекладина
midway	середина расстояния
a plywood	фанера
to nail	прибивать (гвоздями)
a lumber	лесоматериал
a stud	стойка
a plate	пластина, планка
a carpenter	плотник
to brace	скреплять
a sheathing,	обшивка, опалубка
a fiberboard	древесно-волокнистая плита (ДВП)
a plasterboard	гипсокартон
to tack	соединять
a tar paper	рубероид
a siding	обшивка, облицовка
slanted	наклонный, скошенный
a rafter	стропило
a ridgeboard	коньковый брус (на крыше)
a ridge	конек
a shingle	кровельная плитка
a flashing	слив, фартук (элементы кровли)
a chimney	дымоход
a slate	сланец
to insulate	защищать, изолировать

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

around which – вокруг которой;
to place directly – непосредственно присоединить;
about midway – примерно в середине;
to place directly – размещать непосредственно;
at the top of smth – на верху чего-то;
a building felt – строительный тряпичный картон (войлок);
to prevent smth from smth – предотвращать что- то от чего-то;
to protects smb in both the present and the future – защитить кого-то как в настоящем, так и в будущем.

5. Match the English words with their Russian equivalents:

1. a chimney	a. кровельная плитка
2. a plywood	b. лесоматериал
3. a siding	c. брус
4. a shingle	d. фартук
5. a sill	e. балка, перекладина
6. a joist	f. дымоход
7. to nail	g. стойка
8. a flashing	h. гипсокартон
9. a lumber	i. лежень
10. a rafter	j.пластина
11. a stud	k. фанера
12. slanted	l. прибивать
13. a plate	m. наклонный
14. a beam	n. обшивка, облицовка
15. a plasterboard	o. стропило

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. knowledge	a. factories
2. the construction	b. the outside wall
3. the value	c. the joists

4. top	d. the roof
5. the bottom layer	e. the floor
6. vertical pieces	f. sheet metal
7. inner layer	g. the floor
8. the bottom ends	h. lumber
9. the ridge	i. the house
10. the weight	j. asphalt
11. the final layer	k. the rafters
12. strips	l. these codes

7. Give the three forms of the following verbs:

To form, to attach, to nail, to raise, to brace, to build.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Nail, brace, tack, place, step, check, design, bolt, run, support, lift, weight.

9. Write the derivatives of the following words:

Architecture, electricity, know, buy, build, permanent, flash, roof.

10. Read the text and get ready to explain what is necessary to begin with if you want to build a house:

BUILDING A HOUSE

Planning a house. If a person decides to build a house, he or she must first select a lot or piece of land. The next step is to consult an architect or builder. This expert will check local zoning laws and electrical, building and plumbing codes. Knowledge of these codes protects the buyer in both the present and the future. For example the zoning law in the area may permit the construction of factories near the new house. Such construction might well decrease the value of the house.

The architect then designs the house, according to the buyer's ideas. He or she makes specifications and blue prints that become the basis for the contract between the builder and the buyer. They provide information on size, materials, and how the house is to be built. The architect also supervises the construction of the house.

The frame is the skeleton around which the rest of the house is built. After the footings and foundation have been formed, workers bolt wooden sills or base plates to the foundation. The sills support the outside walls. Floor joists or support beams are attached to the sills about 16 inches (41 centimeters) apart. A joist runs from one sill and joins with another joist from the opposite sill. They meet at a main support beam or basement wall about midway between the house's sides. Floor boards or plywood nailed on top of the joists make the bottom layer of the floor. The structure then is solid enough to hold the wall frames of the house. Wall frames include vertical pieces of lumber called studs and horizontal pieces called plates. Carpenters assemble and nail together each wall frame separately before attaching it to the sill. Then they lift each frame into place and brace it temporarily. When all the outside walls have been raised, they are nailed together and braced permanently.

The sheathing or inner layer of the outside wall may be wood, fiberboard, or plasterboard nailed to the studs. Sometimes builders tack tar paper to the sheathing before adding the siding or outer layer. Siding may be aluminium, brick, stone, or wood placed directly over the sheathing or tar paper.

The roof seals the top of the house. Some roofs are flat, but most are slanted. Slanted roofs are often formed by pieces of lumber called rafters. Carpenters nail the bottom ends of the rafters to the plates at the top of the outside walls. The rafters slant from the plates and meet at the ridgeboard. A board places at the ridge, or top edge of the roof. Rafters support the weight of the roof just as joists support the weight of the floor.

After carpenters nail sheathing to the tops of the rafters, they add heavy building paper or building felt to it. Then they add the final layer of asphalt or slate shingles, or roofing asphalt. Flashings, or strips of sheet metal, placed around the chimney and other roof openings, insulate the roof from the chimney and also prevent water from leaking into the house.

11. Answer the following questions:

1. What is necessary to do first if you decide to build a house? 2. Whom is necessary to consult with? 3. Why is it necessary to consult with an expert? 4. What protects the buyer in both the present and the future? 5. Who designs the house, according to the buyer's ideas? 6. Is it important to sign the contract between the builder and the buyer and why? 7. Who supervises the construction of the house? 8. What is the frame? 9. When

do workers bolt wooden sills or base plates to the foundation? 10. What supports the outside walls? 11. What runs from one sill? 12. Where do they meet? 13. What is called studs? 14. What do carpenters do? 15. What materials are used for sheathing or inner layer of the outside wall? 16. What materials are used for siding? 17. What seals the top of the house? 18. What is the form of the roofs? 19. How do we call slanted roofs formed by pieces of lumber? 20. Where do carpenters nail the bottom ends of the rafters to? 21. What supports the weight of the roof and the floor? 22. When do carpenters add heavy building paper or building felt to sheathing? 23. What is placed around the chimney and other roof openings? 24. Why is it necessary to do?

12. Agree or disagree with the following statements:

1. If a person decides to build a house, it is necessary to have money. 2. The next step is to consult with relatives. 3. The architect suggests the designs according to his own taste. 4. The sill is the skeleton around which the rest of the house is built. 5. The frame supports the outside walls. 6. Floor joists or support beams are attached to the sills about 18 inches (42 centimeters) apart. 7. A joist runs from one sill and joins with another joist from the sill which is above it. 8. Horizontal pieces are called footing. 9. Carpenters assemble all the parts of the house. 10. The sheathing or inner layer of the outside wall may be steel, iron, or plasterboard nailed to the studs. 11. Sometimes builders tack decorative paper to the sheathing before adding the siding or outer layer. 12. Carpenters put siding on the roof. 13. The roof seals the top of the house. 14. Roofs are always flat. 15. Flat roofs are called rafters. 16. Rafters are pieces of wood. 17. Rafters support the weight of the floor. 18. At the end carpenters add the final layer of asphalt or slate shingles, or roofing asphalt.

13. Complete the sentences according to the text:

1. … he or she must first select a lot, or piece of land. 2. Knowledge of these codes protects … . 3. … , according to the buyer's ideas. 4. The frame is … . 5. After the footings and foundation have been formed, … or base plates to the foundation. 6. A joist runs from one sill and … from the opposite sill. 7. … make the bottom layer of the floor. 8. Carpenters assemble and nail together … before attaching it to the sill. 9. … may be wood, fiberboard, or plasterboard nailed to the studs. 10. … before adding the siding or outer layer. 11. Some roofs are flat, but … . 12. Carpenters

nail the bottom ends of the rafters to … . 13. After carpenters nail sheathing to the tops of the rafters, … . 14. Then they add the final layer of asphalt or … .

14. Choose a word to put into each gap:

Carpenters, a joist, lumber, the frame, rafters, the sheathing, slate shingles, plates, plywood, plasterboard, studs, the footings, nail, the roof, stone, layer, the ridgeboard, bolt, asphalt, pieces, aluminium, leaking, slanted, the siding, sill, fiberboard, wall frame, tar paper, the chimney, wood, slant, the weight.

1. … is the skeleton around which the rest of the house is built. 2. After … and foundation have been formed, workers … wooden sills or base … to the foundation. 3. … runs from one … and joins with another joist from the opposite sill. 4. Floor boards or … nailed on top of the joists make the bottom … of the floor. 5. Wall frames include vertical pieces of … called … and horizontal … called plates. 6. … assemble and … together each … separately before attaching it to the sill. 7. … or inner layer of the outside wall may be wood, … , or … . 8. Sometimes builders tack … to the sheathing before adding … or outer layer. 9. Siding may be… , brick, … , or … placed directly over the sheathing or tar paper. 10. … roofs are often formed by pieces of lumber called … . 11. The rafters … from the plates and meet at … . 12. Rafters support the weight of … just as joists support … of the floor. 13. Carpenters add the final layer of … or … , or roofing asphalt. 14. Flashings insulate the roof from … and also prevents water from … into the house.

15. Find out from your partner:

– if he knows what is necessary to do to build a house;
– what the role of an architect is.

16. Prove that:

– the frame is a skeleton of a house;
– knowledge of codes are important.

17. Comment on:

– the role of a carpenter in building a house;
– the procedure of making roofs.

18. Imagine that:

– You want to have a new house but you know nothing about the procedure. You ask an architect to help you. Role-play a dialogue with your partner.

– You are an engineer. A young carpenter comes to a site after professional college but he has no experience. You are appointed as his supervisor. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. If a person decides to build a house, … .

a) he or she must have enough money;

b) he or she must first select some partners;

c) he or she must first select a lot or piece of land.

2. … , according to the buyer's ideas.

a) The architect fulfils all the documents;

b) The architect designs the house;

c) The lawyer chooses everything necessary.

3. The basis for the contract between the builder and the buyer are … .

a) agreements for building the house;

b) documents selected by the lawyer;

c) specifications and blue prints.

4. *The documents which are the basis for the contract provide information on … .*

a) size, materials, and how the house is to be built;

b) qualification of the workers who will build the house;

c) money which is necessary to pay.

5. *The frame is the skeleton … .*

a) around which all the works are organized;

b) around which the rest of the house is built;

c) which is the main part of the house.

6. Workers bolt wooden sills or base plates to the foundation … .

a) after the footings and foundation have been formed;

b) after they are asked to do this;

c) before the footings and foundation have been formed.

7. Floor joists or support beams are attached to the sills about … .

a) 17 inches (41 centimeters) apart;

b) 16 inches (42 centimeters) apart;
c) 16 inches (41 centimeters) apart.
8. A joist runs from one sill and joins with another… .
a) joist from the nearest sill;
b) plate from the opposite sill;
c) joist from the opposite sill.
9. Floor boards or plywood … make the bottom layer of the floor.
a) covered the top of the joists;
b) nailed on top of the joists;
c) nailed on the bottom of the joists.
10. … separately before attaching it to the sill.
a) Carpenters assemble and nail together each wall frame;
b) Carpenters select and paste together each wall frame;
c) Builders assemble and nail together each wall frame.
11. The sheathing or inner layer of the outside wall … nailed to the studs.
a) may be wood, fiberboard, or plasterboard;
b) may be cement, fiberboard, or plasterboard;
c) is necessary to be wood, fiberboard, or plasterboard.
12. … before adding the siding or outer layer.
a) Obligatory builders tack tar paper to the sheathing;
b) Sometimes builders tack tar paper to the sheathing;
c) Sometimes builders tack clay to the sheathing.
13. Siding may be aluminium, brick, stone, or wood placed … .
a) directly above the fiberboard or tar paper;
b) directly over the sheathing or tar paper;
c) at the sides of the walls.
14. The roof seals the top of the house, they may be … .
a) flat, but most are slanted;
b) only slanted;
c) slanted, but most are flat.
15. Slanted roofs are often formed by … .
a) pieces of plasterboard called sills;
b) plates of tar paper called rafters;
c) pieces of lumber called rafters.
16. Rafters support the weight of the roof just as … .
a) beams support the weight of the whole house;
b) studs support the weight of the floor;
c) joists support the weight of the floor.

17. After carpenters nail sheathing to the tops of the rafters, … .

a) they finish their work and declare about it to a master;

b) they add heavy building paper or building felt to it;

c) they add tar paper or shingle to it.

18. Flashings or trips of sheet metal, placed around the chimney and other roof openings, … .

a) prevent water from leaking into the house;

b) prevent mud and clay from coming into the house;

c) make the roof not dangerous for living.

20. Group work:

Express your opinion on the contents of the Swedish proverb given above. Discuss all your pros and cons with your group-mates.

UNIT VIII

FOUNDATIONS

He who has not first laid his foundations may able with great ability to lay them afterwards; but they will be laid with trouble to the architect and danger to the building.
Niccolo Machiavely

1. Read these international words and try to guess their meaning:

Press, engineer, structure, perpendicular, balance, mechanics, problem, construction, column, garage, granite.

2. Read out the following words and memorize them:

to lean	наклоняться
a sinking	опускание
unevenly	неравномерно
to topple	падать
to entail	предусматривать
trial	пробный
a pit	карьер
undisturbed	цельный, неповрежденный
to forecast	предвидеть
a shift	изменение
hollow	пустой

a pile	столб
a load	нагрузка
a shaft	шпиндель
to float	поддерживать на поверхности
to grip	крепко держать
to bore	бурить
an ironstone	железная руда, бурый железняк
a flotation	флотация
a plant	установка
a chamber	отсек
a basement	цокольный этаж, подвальное помещение
a slab	плита
a filler	заполнитель

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

to lay the foundation of smth – заложить фундамент;
to press down – прижимать;
at the same time – в то же самое время;
to begin with – для начала;
in order to – для того, чтобы;
by examining smth – путем исследования чего-либо;
as well as – так же как;
to come to the decision – принять решение;
a moistureproof paper – влагонепроницаемая (влагоустойчивая) бумага.

5. Match the English words with their Russian equivalents:

1. a shift	a. опускание
2. undisturbed	b. наклоняться
3. a shaft	c. падать
4. a pile	d. железная руда
5. a sinking	e. шпиндель
6. trial	f. поддерживать на поверхности

7. to topple	g. крепко держать
8. a pit	h. столб
9. to lean	i. пробный
10. to forecast	j. изменение
11. to float	k. неравномерно
12. hollow	l. карьер
13. to grip	m. цельный, неповрежденный
14. unevenly	n. предвидеть
15. an ironstone	o. пустой

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. the weight	a. the upper stories
2. the possibility	b. the ground
3. 14 feet out	c. a heavy structure's sinking
4. the design	d. floating a building
5. one side	e. earth
6. the foundations	f. a building
7. a thorough understanding	g. all
8. a scientific study	h. the perpendicular
9. undisturbed samples	i. foundation
10. the sort	j. two ways
11. important decision	k. small buildings
12. in one or both	l. a vast, hollow concrete box
13. a question	m. soil mechanics
14. the form	n. the Tower

7. Give the three forms of the following verbs:

To involve, to realize, to make, to topple, to begin, to alter, to dig, to find, to divide, to use, to lay, to sink, to drive, to bore.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Lean, press, shift, weigh, sink, lean, design, balance, compress, load, bore, study, bear, pit, aim, plant.

9. Write the derivatives of the following words:

Allow, found, sound, possible, even, light, architecture, move, extreme, science, danger, construct, examination.

10. Read the text and try to explain the problem of foundations:

FOUNDATIONS

Why does the Learning Tower of Pisa lean? The answer is that its foundations were not soundly laid. From the earliest times, architects and engineers have been aware of the problems involved in laying a building's foundations. But they have not always realized what extent the earth can be pressed down by the weight of a building. Too little allowance has sometimes been made for the possibility of a heavy structure's sinking unevenly. (Though the Leaning Tower is 14 feet out of the perpendicular, it has never toppled. As the building began to lean over, the builders altered the design of the upper stories to balance it. At the same time as one side of it sank into the ground, the earth beneath was compressed until it became dense enough to prevent further movement.)

The foundation supports a house. If the earth is stable, laying the foundations of small buildings possess few problems. But in a tall modern structure the load may be very heavy indeed. That's why the foundation engineer has an extremely important job to do. To begin with, he must have a thorough understanding of soil mechanics, which entails a scientific study of the ground to see what load it can bear without dangerous movement.

First construction workers begin excavating, or digging holes or trenches for the footings, the lowest part of the foundation. Trial pits are dug, or holes are bored, in order to collect undisturbed samples of earth from various depths. By examining these, the engineer can forecast the probable shifts in the earth during and after building, according to the sort of foundation he designs. Thus he comes to the most important decision of all in the building's construction: he decides whether the earth is of the type that can best support each column on a separate solid block, or whether he must aim at lightness and, as it were, ″float″ the building on hollow foundations.

The footings support each wall load. They are made by pouring concrete into wood or steel forms that workers place below the frost line or the depth to which the ground freezes. This is done so that the footings will not freeze and shift. Footings usually extend from 1 to 6 feet (30 to 180 centimeters)

beneath ground level. Builders generally use concrete or concrete block for the house's foundation. The foundation may extend from 8 inches to 3 feet (20 to 91 centimeters) above the ground.

If firm ground has been found only at great depth, the foundation engineer may use piles. These are solid shafts made either by driving reinforced, precast concrete deep into the ground, or by boring holes in the earth and pouring in the concrete. Each pile supports its load in one or both of two ways. It may serve as a column with its foot driven into solid earth or rock or it may stand firm because friction along its sides ″grips″ the column and prevents it from sinking.

The area within the foundation below the first story is the basement. Basements add to the cost of building a house, but they provide extra room. In other words, when it is a question of floating a building, the foundations take the form of a vast, hollow concrete box. This box is divided into separate chambers for the home's heating unit, ventilating plants and laundry equipment, and for storage space for the building. Some basements also have a recreation room.

Only about 40 per cent of the houses, built today, have basements. In many low or damp regions, houses are raised above the ground on concrete piers, or supports.

Sometimes a slab foundation is laid directly on the ground, especially if the earth beneath a house is hard. The ground must first be leveled. Workers then spread a filler, usually stone, and cover it with a moistureproof paper. The filler and the paper prevent moisture from coming through the slab that is made by pouring concrete, about 4 inches (10 centimeters) thick, directly on top of the paper.

Luckiest of all are those foundation engineers whose buildings stand on hard rock like granite or ironstone. For them neither piles nor flotation need to be used.

11. Answer the following questions:

1. Were the foundations of the Tower of Pisa soundly laid? 2. What ware the problems of a building's foundations from the earliest times? 3. What was difficult to realize for architects and engineers at that time? 4. Has the Tower toppled down? 5. What has been done to prevent the Leaning Tower of Pisa from this? 6. Why is it difficult to lay foundation of a tall modern structure? 7. What supports a house? 8. What is most important for the foundation engineer to know? 9. What must engineer

learn before deciding what type of foundation is necessary for that soil? 10. What is necessary to do first? 11. What is necessary to do to collect undisturbed samples of earth from various depths? 12. What can the engineer forecast? 13. What is the most important decision of all in the building's construction? 14. Each wall load is supported by wood, isn't it? 15. What are the footings made by? 16. Why do workers place the footings below the frost line? 17. What is used for the house's foundation? 18. In what cases the piles are used? 19. What are piles? 20. Each pile supports its load in one or both of two ways, doesn't it? 21. In what functions a pile may serve? 22. What is a basement? 23. When do the foundations take the form of a vast, hollow concrete box? 24. Why is this box divided into chambers? 25. When a filler is used? 26. What prevents moisture from coming through the slab?

12. Agree or disagree with the following statements:

1. The foundation of the Tower of Pisa is very properly done. 2. From the earliest times architects and engineers pay a lot of attention to the problems of foundation. 3. The Tower of Pisa can topple at any moment. 4. If the earth is stable, laying the foundations of small buildings possess a lot of problems. 5. The foundation engineer has an extremely important job to do if the load is very heavy. 6. The foundation engineer must have thorough knowledge of architecture. 7. First construction workers begin excavating, or digging holes or trenches for the footings, the highest part of the foundation. 8. To collect undisturbed samples of earth from various depths it is necessary to use bulldozers. 9. It is difficult for the engineer to forecast the probable shifts in the earth during and after building. 10. The footings are made by pouring water into iron and steel forms. 11. This is done so that the footings will not freeze and shift. 12. Footings usually extend from 1 to 8 feet above ground level. 13. Builders generally use cement or cement block for the house's foundation. 14. In all the cases the foundation engineer may use piles. 15. Piles are light shafts. 16. Each pile supports its load in one or both of two ways. 17. A pile may serve as a support. 18. The area within the foundation below the second story is the basement. 19. Basement is very cheap. 20. When it is a question of floating a building, the foundations take the form of a vast, hollow concrete box. 21. This box is divided into sections. 22. Each section has its own function. 23. Garage and storage space are placed under a building. 24. The best variant for buildings to stand on hard rock like granite or ironstone.

13. Complete the sentences according to the text:

1. The Learning Tower of Pisa lean because … . 2. Laying a building's foundation was a problem for … . 3. Too little allowance has sometimes been made for … by architects and engineers. 4. The Tower of Pisa has never toppled in spite of the fact that … . 5. the builders altered the design of … as the building began … . 6. The earth beneath was compressed … . 7. … the foundations of small buildings possess few problems. 8. The foundation engineer has an extremely important job to do if … . 9. The knowledge of soil mechanics, which entails … without dangerous movement. 10. First construction workers begin excavating, … . 11. In order to collect undisturbed samples of earth from various depths it is necessary …. . 12. … that workers place below the frost line or the depth to which the ground freezes. 13. Footings usually extend from … . 14. The foundation engineer may use piles if … . 15. A pile may stand firm because … . 16. … , but they provide extra room. 17. The foundations take the form of a vast, hollow concrete box when … . 18. … above the ground on concrete piers, or supports. 19. … especially if the earth beneath a house is hard. 20. Workers then spread a filler, … , and cover it with a moistureproof paper. 21. The filler and the paper prevent … that is made by pouring concrete, about 4 inches (10 centimeters) thick, … . 22. Neither piles nor flotation need to be used if … .

14. Choose a word to put into each gap:

Sinking, a slab foundation, hollow, to prevent, soil mechanics, concrete piers, column, the foundations, concrete, the design, trial pits, solid, sank, extent, toppled, the load, basements, floating, dense, pile, thick, sinking a building, to lean, the paper, a filler, undisturbed, "grips", moistureproof.

1. Architects and engineers have not always realized what … the earth can be pressed down by the weight of … . 2. They paid little attention for the possibility of a heavy structure's … unevenly. 3. The Tower has never … though it is 14 feet out of the perpendicular. 4. To balance it the builders altered … of the upper stories when the building began … over. 5. One side of the Tower … into the ground that's why the earth beneath was compressed until it became … enough … further movement. 6. In a tall modern structure … may be very heavy indeed. 7. The foundation engineer must have a thorough understanding of … . 8. To collect … samples of earth from various depths it is necessary to dig … . 9. The engineer

decides whether the earth is of the type that can best support each … on a separate … block. 10. Each … supports its load in one or both of two ways. 11. A pile may stand firm because friction along its sides … the column and prevents it from … . 12. But when it is a question of … a building, … take the form of a vast, … concrete box. 13. Some … also have a recreation room. 14. In many low or damp regions, houses are raised above the ground on… , or supports. 15. Sometimes … is laid directly on the ground. 16. Workers then spread … , usually stone, and cover it with a … paper. 17. The filler and ... prevent moisture from coming through the slab that is made by pouring… , about 4 inches (10 centimeters) … , directly on top of the paper.

15. Find out from your partner:

– if he knows the history of the Tower of Pisa;
– why the Tower of Pisa leans;
– the role of a basement.

16. Prove that:

– the Tower of Pisa has never toppled;
– the foundation engineer has an extremely important job to do;
– foundation supports a house.

17. Comment on:

– the usage of piles;
– work of construction workers;
– the usage of footings.

18. Imagine that:

– You are in Italy in Pisa. You want to know as much as possible about the Tower of Pisa. Role-play a dialogue with your partner.

– You want to be a foundation engineer. What is necessary to know to be a good engineer?

19. Comprehensive check. Choose the best alternative according to the text:

1. The Tower of Pisa leans because ... .

a) its foundations were not soundly laid;
b) the ground under it is very soft;
c) weather at this region is very wet.

2. From the earliest times it was necessary to know … .
a) everything about the foundations of small buildings;
b) soil mechanics;
c) what extent the earth can be pressed down by the weight of a building.
3. … for the possibility of a heavy structure's sinking unevenly.
a) No attention was paid;
b) Too little allowance has sometimes been made;
c) A lot of allowance has been made.
4. The Tower of Pisa has never toppled … .
a) though it is 14 feet out of the vertical;
b) though it is 14 feet out of the perpendicular;
c) though it is 16 feet out of the perpendicular.
5. As the building began to lean over, … to balance it.
a) the builders built some supports;
b) the builders altered the design of the upper stories;
c) the builders reconstructed it.
6. If the earth is stable, … .
a) laying the foundations of small buildings possess few problems;
b) laying the foundations of new buildings possess few problems;
c) laying the foundations of small buildings arises many problems.
7. If the load is very heavy … .
a) it is difficult to build a big construction;
b) the foundation engineer must change the project;
c) the foundation engineer has an extremely important job to do.
8. The footings are … .
a) the main support of the foundation;
b) the lowest part of the foundation;
c) used to decorate a house.
9. The footings are made by … .
a) pouring water into wood or steel forms;
b) pouring cement into wood or iron forms;
c) pouring concrete into wood or steel forms.
10. The foundation may extend from … the ground.
a) 8 inches to 3 feet (20 to 91 centimeters) above;
b) 8 feet to 3 inches (21 to 90 centimeters) above;
c) 8 inches to 3 feet (20 to 91 centimeters) below.
11. *Soil mechanics entails a scientific study of the ground … .*
a) to see what load it can bear without dangerous movement;

b) to understand its structure for future building;
c) to know what weight of a building it can bear.

12. In order to collect undisturbed samples of earth from various depths … .

a) it is possible to dig some holes in the ground;
b) it is necessary to ask a geologist for help;
c) it is necessary to dig the trial pits or to bore the holes.

13. With the help of undisturbed samples the engineer can … .

a) correct his project if there are any drawbacks in it;
b) forecast the future earthquakes at this place;
c) forecast the probable shifts in the earth during and after building.

14. …, if firm ground has been found only at great depth.

a) The foundation engineer may use piles;
b) The foundation engineer may change the place of building;
c) New project is recommended to work out.

15. Piles are solid shafts made by … .

a) boring holes in the earth and pouring in the concrete;
b) driving cement deep into the ground;
c) boring holes in the foundation and pouring in these holes.

16. ... with its foot driven into solid earth or rock.

a) A pile may serve as a subsidiary material;
b) A pile is used usually as a column;
c) A pile may serve as a column.

17. ... because friction along its sides "grips" the column.

a) A pile may stand in one and the same position;
b) A pile may stand firm;
c) A building may stand firm.

18. The area within ... is the basement.

a) the house below the second story;
b) the foundation below the first story;
c) the foundation below it.

19. Basements add to the cost of building a house, but … .

a) they provide extra room;
b) they are very necessary for a house;
c) they are very useful.

20. The foundations take the form of a vast, hollow concrete box when … .

a) it is necessary to have a spare place for garages;

b) it is a question of floating a building;
c) it is a question of a building's weight.
21. This box is divided into chambers that … .
a) combines house heating and ventilating plants;
b) combines some additional plants;
c) serves as location for building materials.
22. … , especially if the earth beneath a house is hard.
a) Sometimes special machines are necessary;
b) Sometimes a slab foundation is made from concrete;
c) Sometimes a slab foundation is laid directly on the ground.
23. Workers then spread a filler, usually stone, and … .
a) put it deep in the ground;
b) cover it with cement;
c) cover it with a moistureproof paper.
24. The filler and the paper prevent moisture from coming … .
a) through the ground that is made by pouring water;
b) through the slab that is made by pouring concrete;
c) through the piles that is made by pouring cement.
25. Luckiest of all are those foundation engineers … .
a) whose buildings stand on hard rock like stone or wood;
b) whose buildings stand on hard rock like granite or ironstone;
c) whose buildings on hard rock like granite or metal.

20. Group work:

Express your opinion on the contents of the utterance by Nicolo Machiavely given above. Discuss all your pros and cons with your group-mates.

UNIT IX

INTERIOR CONSTRUCTION OF A HOUSE

Into the house where joy lives,
happiness will gladly come.
Japanese proverb

1. Read these international words and try to guess their meaning:

Metal, horizontally, finish, plastic, linoleum, asphalt, electrician, standard, volt, centimetre, aluminium, lamp, conditioning system.

2. Read out the following words and memorize them:

a lip	фланец, выступ
a groove	выемка
a slot	паз
a tongue	шип, шпунт
snugly	плотно
a maple	клен
an oak	дуб
to sand	зачищать, шлифовать шкуркой
to seal	закреплять, покрывать
a filler	уплотнитель
a wax	мастика из воска, озокерит
a shellac	шеллак (природный лак)
a varnish	лак, мастика, глазурь
Vinyl	виниловый
a tile	керамическая плитка
a covering	покрытие
a partition	перегородка, внутренняя стенка
a girder	ригель, балка
a lath	дранка, рейка, обшивка
a pulley	блок, ролик
a sash	оконный переплет (рама)
to swing	открывать (дверь), пролетать
a rug	коврик (небольшой)
a threshold	порог
an outlet	розетка
an appliance	прибор, приспособление
a furnace	котел (центрального парового отопления)
a fuse	предохранитель

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning*:*

tongue and groove boards – шпунтовое соединение досок;

a nail head – шляпка гвоздя;

hardwoods – древесина твердых пород;
a lumber mill – лесопилка, завод по обработке дерева;
ready-made – готовый (не требующий изготовления);
a circuit breaker – автоматический выключатель, прерыватель;
later – позже;
to cut in the proper sizes – вырезать нужного размера;
to be made of – быть сделанным из;
a lightweight steel – легковесная сталь;
to be high enough – быть достаточно высоким;
a water heater – нагреватель воды;
heavy-duty – мощный, сверхмощный.

5. Match the English words with their Russian equivalents:

1. a partition	a. прибор
2. an outlet	b. оконный переплет
3. an appliance	c. шип, шпунт
4. a varnish	d. перегородка
5. a sash	e. лак
6. a fuse	f. дранка
7. a girder	g. фланец
8. a shellac	h. розетка
9. a threshold	i. озокерит
10. a wax	j. блок, ролик
11. a lath	k. паз
12. a pulley	l. порог
13. a lip	m. ригель
14. a slot	n. шеллак
15. a tongue	o. предохранитель

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. the tongue	a. a fuse box
2. strips	b. hardwoods
3. place	c. a window
4. most parts	d. wires
5. sashes are made	e. metal or plasterboard
6. floors are made	f. circuits

7. type	g. one board
8. a series	h. wood or metal
9. each set	i. wiring
10. instead	j. plaster

7. Give the three forms of the following verbs:

To finish, to see, to make, to apply, to use, to install, to do, to buy.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Slot, sand, seal, wax, finish, varnish, partition, lath, rug, start, fuse, part.

9. Write the derivatives of the following words:

Cover, found, horizon, electrical, light, wash, equip, condition, protect, automat.

10. Read the text and get ready to speak about the interior construction of a house:

INTERIOR CONSTRUCTION OF A HOUSE

Interior construction of a house includes: floors, walls, windows, and doors.

Floors have two layers. The lower layer lies at an angle across the floor joists. The upper, finished layer is made from tongue and groove boards. One side of each board has a tongue, or lip, and the other side has a groove or slot. The tongue of one board fits snugly into the groove of another board. Carpenters drive nails through the groove side so that the nail heads can not be seen on the finished floor. Most finished floors are made of hardwoods, such as maple or oak, which have been finely sanded and later sealed with wood filler. The wood may then be finished with wax, shellac, varnish, or plastic. Other floors have such coverings as linoleum or rubber, vinyl or asphalt tile.

Walls. Rooms are made by building inside walls after the outside walls have been attached to the foundation. Inside walls, also called partitions, are really small-sized frames like the outside walls. They have studs and must be supported by plates, joists and girders.

If plaster is to be applied, the interior walls must first be covered with lath, or strips of wood, metal, or plasterboard. The lath is set horizontally

about 3 inches (8 centimeters) apart. Wallboard, plasterboard, or plywood may be used in place of plaster.

Windows. Most parts of a window come from a lumber mill, already cut in the proper sizes. Carpenters leave space in the frame for windows and window pulleys, weights and sashes. Window sashes are made of wood or metal, usually either aluminium or lightweight steel.

Doors. Both doors and door frames may usually be bought ready-made. Carpenters attach the doors high enough to swing over rugs or carpets. A threshold fills in the space under an outside door.

Electricity. Electrical wiring provides lighting and furnishes outlets for lamps, washing machines, and other appliances. In some houses, electricity also provides heat. Before construction starts, the builder determines the location and type of wiring. Wires vary in size, depending on the equipment in the house and how far the current must travel. Standard wiring is designed for 110 volt current. But builders often specify heavy-duty, 220-volt wiring if large electrical appliances, such as a stove and a water heater, or an air conditioning system are installed.

Electricians install wiring while carpenters build the frame. Wiring is done in a series of circuits. Each set of wires has several outlets. Electricians often place the wiring for a furnace on a separate circuit. This keeps the furnace running in ease if another circuit breaks down.

Wires become hot and can cause fires if they are overloaded, so electricians install a fuse for each electrical. A fuse box usually holds all the fuses. If too much current passes through a circuit, the wire in the fuse melts or ″blows″. Electricians often install another protective device called a circuit breaker, instead of a fuse box. If the circuit becomes overloaded, the circuit breaker automatically cuts off the current.

11. Answer the following questions:

1. What does interior construction of a house include? 2. How many layers have floors? 3. What is the upper, finished layer made from? 4. What has both sides of a board? 5. Who drives nails through the groove side? 6. What are most finished floors made of? 7. What materials are used to finish wood? 8. What is linoleum or rubber, vinyl, or asphalt tile used for? 9. When are rooms made? 10. What is called partitions? 11. In what case must the interior walls first be covered with lath, or strips of wood, metal, or plasterboard? 12. Where do most parts of a window come from? 13. What are window sashes made of? 14. May doors be bought ready-made?

15. Who attaches the doors high enough to swing over rugs or carpets? 16. What fills in the space under an outside door? 17. What provides lighting and furnishes outlets for lamps, washing machines, and other appliances? 18. Who does this? 19. What does a builder determine before construction starts? 20. Why do builders specify heavy-duty, 220-volt wiring? 21. Who installs wiring? 22. What can cause fires? 23. In what case does the wire in the fuse melt? 24. What installs instead of a fuse box.

12. Agree or disagree with the following statements:

1. Floors have three layers. 2. The upper, finished layer is made from wood. 3. Builders drive nails through the groove side so that the nail heads can be seen on the finished floor. 4. Most finished floors are made of plastics. 5. Floors have such coverings as paper, plasterboard or plywood. 6. Inside walls, also called partitions, are really small-sized frames like the outside walls. 7. The interior walls must first be covered with paint or oil. 8. The lath is set vertically about 2 inches (6 centimeters) apart. 9. Most parts of a window come from factories. 10. Window sashes are made of gypsum or cement. 11. Both doors and door frames is necessary to produce in carpenters' workshops. 12. Carpenters attach the doors high enough to swing over a threshold. 13. Rugs or carpets fill in the space under an outside door. 14. Electricity never provides heat. 15. Before construction starts, the builder determines the location and type of wiring. 16. Standard wiring is designed for 120 volt current. 17. Carpenters install wiring while electricians build the frame. 18. Each set of wires has only one outlet. 19. Electricians often place the wiring for a furnace on the whole circuit. 20. Wires become cold and can cause fires if they are overloaded. 21. It is impossible for electricians to install another protective device called a circuit breaker.

13. Complete the sentences according to the text:

1. The lower layer of a floor lies at … . 2. … into the groove of another board. 3. Carpenters drive nails … so that the nail heads … on the finished floor. 4. … such as maple or oak. 5. The wood may then be finished with … . 6. Other floors have such coverings as … . 7. Inside walls, … , are really small-sized frames … . 8. They have studs and … . 9. … may be used in place of plaster. 10. Most parts of a window … , already cut in the proper sizes. 11. … of wood or metal. 12. Carpenters attach the doors high enough … . 13. Electrical wiring provides … ,

washing machines, etc. 14. … and how far the current must travel. 15. Builders often specify … if large electrical appliances, such as … are installed. 16. Electricians often place the wiring for … . 17. Wires become hot and can cause fires if … . 18. …, the circuit breaker automatically cuts off the current.

14. Choose a word to put into each gap:

Hardwoods, a furnace, carpenters, joists and girders, wax, partitions, window pulleys, tongue and groove, wood filler, a circuit breaker, heavy-duty, wiring, a threshold, the lath, studs, lip, outlets, shellac, a fuse box, sashes, a fuse, snugly, lightweight, appliances, a lumber mill, the current.

1. The upper, finished layer is made from … boards. 2. One side of each board has a tongue or … . 3. The tongue of one board fits … into the groove of another board. 4. Most finished floors are made of … . 5. Floors have been finely sanded and later sealed with … . 6. The wood may then be finished with …, … , varnish, or plastic. 7. Inside walls are also called … . 8. Inside walls have … and must be supported by plates, … . 9. … is set horizontally about 3 inches (8 centimeters) apart. 10. Most parts of a window come from … . 11. … leave space in the frame for windows and … , weights and … . 12. Window sashes are made of … steel. 13. … fills in the space under an outside door. 14. Electrical … provides lighting and furnishes … for lamps. 15. Wires vary in size, depending on the equipment in the house and how far … must travel. 16. Builders often specify … , 220-volt wiring if large electrical … are installed. 17. Electricians often place the wiring for … on a separate circuit. 18. Electricians install … for each electrical. 19. Electricians often install another protective device called … , instead of … .

15. Find out from your partner:

– if he knows why floors have two layers;
– why most finished floors are made of hardwoods.

16. Prove that:

– it is necessary to finish floors with coverings;
– it is convenient when most parts of windows come from a lumber mill.

17. Comment on:

– work of a carpenter;
– work of an electrician.

18. Imagine that:

– You are a young carpenter. It is necessary to make a floor in a new house. But it is a new work for you and you ask an engineer to explain you the procedure. Role-play a dialogue with your partner.

– Two men are speaking about their work. One is a carpenter and the other is an electrician. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. The lower layer of a floor lies … .

a) at an angle across the floor joists;

b) at the bottom of a house;

c) at an angle to a groove.

2. One side of each board has a tongue or lip, and … .

a) the other side has a groove or slot;

b) the other side has a pulley;

c) the other side has a filler.

3. Carpenters drive nails through the groove side … .

a) for floors to be stable and firm;

b) but sometimes they use glue instead of nails;

c) so that the nail heads can not be seen on the finished floor.

4. Most finished floors are made of hardwoods, … .

a) such as birch and ash-tree;

b) such as poplar and oak;

c) such as maple or oak.

5. Some floors have such coverings as … .

a) linoleum or rubber, rugs or carpets;

b) linoleum or rubber, vinyl or asphalt tile;

c) parquet or paper, vinyl or asphalt tile.

6. Rooms are made by building inside walls … .

a) just on the foundation;

b) after the outside walls have been attached to the foundation;

c) after the house have been attached to the foundation.

7. Inside walls have studs and … .

a) must be supported by plates, joists and girders;

b) must be supported by plates, tongs and girders;

c) must be supported by plates, laths and pulleys.

8. Most parts of a window come from … .

a) a factory, it is necessary to cut them in the proper sizes;

b) a special master, already cut in the proper size;

c) a lumber mill, already cut in the proper sizes.

9. … , usually either aluminium or lightweight steel.

a) Window sashes are made of plastic or metal;

b) Window sashes are made of wood or metal;

c) Window sashes are made of stone or metal.

10. Carpenters attach the doors … .

a) high enough to swing over animals' skins;

b) high enough to swing over rugs or carpets;

c) vary low over rugs or carpets.

11. Electrical wiring provides … .

a) heat and furnishes outlets for lamps, telephones and other appliances;

b) lighting and furnishes outlets for lamps, gas stoves and other appliances;

c) lighting and furnishes outlets for lamps, washing machines, and other appliances.

12. Wires vary in size, … .

a) depending on the equipment in the house;

b) depending on the rooms' quantity in the house;

c) depending the location of the house.

13. Builders often specify heavy-duty, 220-volt wiring if … .

a) large electrical appliances are installed;

b) there will live a lot of people in a flat;

c) a flat is very large.

14. Electricians often place the wiring for a furnace on a separate circuit because … .

a) this keeps the furnace running in ease if there is no another circuit;

b) this keeps the furnace running in ease if another circuit breaks down;

c) this helps the furnace running in ease if another circuit is in a bad condition.

15. Wires become hot and can cause fires if they are overloaded, … .

a) so electricians install a fuse for each electrical;

b) that's why electricians install a telephone to call fire-brigade;

c) so electricians install a fire-shield to put out fires.

16. … , the wire in the fuse melts or "blows".

a) If no current passes through a circuit;

b) If too little current passes through a circuit;
c) If too much current passes through a circuit.
17. Electricians often install … , instead of a fuse box.
a) another electrical device called a circuit breaker;
b) some additional outlets;
c) another protective device called a circuit breaker.
18. If the circuit becomes overloaded, … .
a) it is necessary to telephone for an electrician for help;
b) the circuit breaker automatically cuts off the current;
c) it is necessary to switch off the light.

20. Group work:

Express your opinion on the contents of the Japanese proverb given above. Discuss all your pros and cons with your group-mates.

UNIT X

THE LAST STEPS IN FINISHING A HOUSE

True man's house stands the longest.
German proverb

1. Read these international words and try to guess their meaning:

Construction, fixture, function, ventilation, interval, cellulose, plastics, mineral, form, climate, central, system, radiator, conditioner, professional, decorator.

2. Read out the following words and memorize them:

a plumber	сантехник (водопроводчик)
a pipe	труба
a fixture	приспособление, зажим
a sink	сточная труба,
a trap	затвор-ревизия (санитарных приборов)
sewage	сточные воды, нечистоты
a washbasin	умывальник, раковина
a drain	водосток, спускное отверстие
a tip	штекер
to leak	просачиваться, течь

a cast-iron	чугун
to dissolve	растворять, разжижать
a sludge	отстой, осадок сточной жидкости
an insulation	изолирующий материал
a perlite	перлит (вулканическое стекло)
a fiberglass	стекловолокно
flaky	пластинчатый, чешуйчатый, хлопьевидный
vermiculite	вермикулит
a crumb	крошка
loose	сыпучий, рыхлый
a fan	вентилятор
to hire	нанимать
to preserve	сохранять, оберегать

3. Make up your own sentence with the words given above. Use as many words as you can in this sentence.

4. Read out these phrases several times till you remember their meaning:

to carry away waste – избавляться от отходов;
to keep out – выводить, выбрасывать;
a disposal pipe – очистная труба;
the city sewerage system – городская канализационная система;
a septic tank – отстойник;
a dead-air space – застойная зона;
to save fuel costs – экономить тепловые затраты;
a rock wool – шлаковата;
in radiant heating – при радиантной подаче тепла.

5. Match the English words with their Russian equivalents:

1. to hire	a. растворять
2. a drain	b. крошка
3. sewage	c. нанимать
4. a fixture	d. остаток сточной жидкости
5. to dissolve	e. сточные воды

6. a fiberglass	f. сантехник
7. flaky	g. водосток
8. a crumb	h. зажим
9. a tip	i. стекловолокно
10. to leak	j. сыпучий
11. loose	k. вентилятор
12. a sink	l. штекер
13. a fan	m. чешуйчатый
14. a sludge	n. сточная труба
15. a plumber	o. просачиваться

6. Combine the words with the help of the preposition* of. *Translate these word combinations:

1. the lower part	a. the land
2. a pipe	b. trees
3. the amount	c. insulation
4. the type	d. the contract
5. part	e. another material
6. the natural outline	f. the city
7. different sorts	g. heat or cold
8. outside ventilation	h. a house
9. the sewerage system	i. the air
10. walls, floors, and ceilings	j. the pipe

7. Give the three forms of the following verbs:

To use, to make, to call, to heat, to remove, to shape, to connect.

8. These words can be used both as verbs and nouns. Make up your own sentences to show the difference in their usage:

Waste, sink, leak, crumb, fan, function, form, paint, step, heat.

9. Write the derivatives of the following words:

Construct, low, ventilate, remain, warm, heat, circulate, profession, decorate, differ.

10. Read the text and get ready to speak about the last steps in finishing a house:

THE LAST STEPS IN FINISHING A HOUSE

Plumbing. During construction, plumbers install the pipes that will supply gas and water, and carry away waste. They install bathroom fixtures and sinks just before other workers add the finishing touches to the house. Plumbers also install traps to keep out sewages. The trap used for bathroom washbasins, for example a P-shaped pipe, locates directly below the drain. Water settles in the lower part of the pipe and prevents sewages from backing tip and leaking into the room. To function properly, traps must have outside ventilation of the air.

A cast-iron waste disposal pipe runs from inside the house to about 5 feet (1,5 meters) outside, where it connects with a pipe of another material, usually clay. This pipe connects home-disposal pipe with the sewerage system of the city. In areas without a city sewerage system, a septic tank near the house holds sewage until it dissolves. Water from the sewage flows through pipes into the ground. The sludge, remaining in the tank, must be removed at intervals.

Insulation reduces the amount of heat or cold that passes through walls, floors, and ceilings of a house. When the air around the house is warmer or colder than the air inside, heat passes from the warm air to the cold air. This means that in winter the heat will pass to the outside, and the house will become cold. In summer the heat outside passes into the house. Insulation fills the air spaces in walls, floors and ceilings and creates dead-air space. This helps to prevent heat from passing through. Insulation can save fuel costs in heating a house.

Insulation is made from many materials, including cellulose, rock wool, a glassy lava called perlite, gypsum, certain plastics, fiberglass, and a flaky mineral called vermiculite. Insulation comes as blankets, boards, paper and sheathing. It is also available in a loose, crumb like form. The type of insulation used depends on the climate and on whether it insulates floors, ceilings or walls.

Heating and air conditioning. Most houses have central heating systems. One furnace or heating unit, supplies heat for the entire house. Such houses are heated by warm air, steam, or hot water. In hot-air heating a fan, connected to the furnace, blows warm air through pipes into the rooms. In steam or hot-water heating the steam or hot water passes through radiators that stand throughout the house. In radiant heating, hot-water pipes run under the floors or in the ceilings or walls.

Air-conditioning units may be used to cool and heat houses. An air conditioner takes warm air from the house, cools it, removes moisture, and recirculates cool air. It also may warm cold air, add moisture and recirculate warm air.

Interior decoration. In a new house, builders usually paints the rooms and finish the floors as a part of the contract with the homeowner. The owner generally selects, buys and arranges the furnishings. But sometimes the owner hires a professional interior decorator to do this job.

Landscaping is the last step in building a house. Most builders try to keep the natural outline of the land and to preserve different sorts of trees which grow in this place.

11. Answer the following questions:

1. What do plumbers do during construction? 2. What is necessary to install to keep out sewages? 3. What is the trap used for? 4. When do the traps function properly? 5. Where does a cast-iron waste disposal pipe run from? 6. What is necessary to install in areas without a city sewerage system to hold sewage until it dissolves? 7. Where does water from the sewage flow? 8. What is the function of insulation? 9. When does heat pass from the warm air to the cold air? 10. What creates dead-air space? 11. What saves fuel costs in heating a house? 12. What is insulation made from? 13. What does the type of insulation used depend on? 14. Do most houses have central heating systems? 15. What supplies heat for the entire house? 16. What passes through radiators that stand throughout the house? 17. When may air-conditioning units be used? 18. Who paints the rooms and finishes the floors? 19. Why does the owner hire a professional interior decorator to do some jobs? 20. What is the last step in building a house? 21. Why is it important to keep the natural outline of the land?

12. Agree or disagree with the following statements:

1. During construction, plumbers install the pipes that will supply heat and ventilation. 2. These pipes carry away cold water. 3. Plumbers also install special cranes to keep out sewages. 4. The trap used for bathroom washbasins is a V-shaped pipe which locates directly above the drain. 5. To function properly, traps must have inside ventilation of the air. 6. A cast-iron waste disposal pipe connects with another pipe made of metal. 7. This pipe connects home-disposal pipe with the sewerage system of the city. 8. In areas without a city sewerage system, a sink near the house

holds sewage until it comes into ground. 9. Insulation increases the amount of heat or cold that passes through walls, floors, and ceilings of a house. 10. In winter the cold outside passes into the house. 11. Insulation fills the air spaces in walls, floors, and ceilings and creates dead-air space. 12. Insulation is made from many materials, including cotton, wool, wadding etc. 13. The type of insulation used depends on size of a house. 14. Only some houses have central heating systems. 15. One furnace or heating unit, supplies heat for all houses in a certain region. 16. Such houses are heated by hot air or warm water. 17. In radiant heating, cold-water pipes run between the walls. 18. In a new house, the builder usually makes all repaired works as a part of the contract with the homeowner. 19. The owners move into a ready flat to live in. 20. The owners of the flats clean themselves the territory near their house.

13. Complete the sentences according to the text:

1. During construction, plumbers install the pipes which carry … . 2. ... is a P-shaped pipe directly below the drain. 3. To function properly, … 4. A cast-iron waste disposal pipe … to about 5 feet (1,5 meters) outside. 5. In areas without a city sewerage system, a septic tank … . 6. When the air around the house is … , heat passes from the warm air to the cold air. 7. This means that … , and the house will become cold. 8. Insulation is made from many materials, including … , fiberglass. 9. The type of insulation used depends on … . 10. In hot-air heating a fan, connected to the furnace, … . 11. … through radiators that stand throughout the house. 12. An air conditioner … , cools it, removes moisture and … . 13. The owner generally … . 14. Most builders try to keep the natural outline of the land and … .

14. Choose a word to put into each gap:

The drain, a loose, dissolves, insulation, waste disposal pipe, fixtures and sinks, sewerage, sheathing, traps, the sludge, an air conditioner, dead-air space, moisture, perlite, hires, radiant heating, washbasins, a septic tank, interior decorator, fuel costs, a flaky mineral, landscaping, furnace.

1. Plumbers install bathroom … just before other workers add the finishing touches to the house. 2. Plumbers also install … to keep out sewages. 3. The trap used for bathroom … , for example a P-shaped pipe, locates directly below … . 4. A cast-iron … connects with a pipe of another material, usually clay. 5. In areas without a city … system, …

near the house holds sewage until it … . 6. … remaining in the tank must be removed at intervals. 7. … fills the air spaces in walls, floors, and ceilings and creates … . 8. Insulation can save … in heating a house. 9. A glassy lava is called … . 10. … is called vermiculite. 11. Insulation comes as blankets, boards, paper and … . 12. Insulation is also available in …, crumb like form. 13. One … or heating unit, supplies heat for the entire house. 14. In … , hot-water pipes run under the floors or in the ceilings or walls. 15. … takes warm air from the house, cools it, removes … , and recirculates cool air. 16. Sometimes the owner … a professional … to do this job. 17. … is the last step in building a house.

15. Find out from your partner:

– if he thinks a plumber's work to be very important;
– what he knows about heating and air conditioning.

16. Prove that:

– insulation can save fuel costs in heating a house;
– it is necessary to keep the natural outline of the land near a new house.

17. Comment on:

– the materials which are used for insulation;
– interior decoration of a house.

18. Imagine that:

– You want to hire a professional interior decorator to do all works in your new flat. You ask your neighbour to help you because all works in his flat have been finished already. Role-play a dialogue with your partner.

– There is something wrong with plumbing system in your new flat. Water leaks on the floor from time to time. You invited a plumber to clear up the situation. Role-play a dialogue with your partner.

19. Comprehensive check. Choose the best alternative according to the text:

1. Plumbers install the pipes that will supply … .

a) heat and water, and carry away bad smell;
b) gas and water, and carry away waste;
c) gas and heat, and carry out cold air.

2. The trap used for bathroom washbasins, locates … .

a) directly above the sink;

b) directly below the drain;
c) directly below the sewage system.
3. ... and prevents sewages from backing tip and leaking into the room.
a) Water settles in the higher part of the pipe;
b) Water settles in the middle part of the pipe;
c) Water settles in the lower part of the pipe.
4. A cast-iron waste disposal pipe runs from ... .
a) inside of the house to about 5 feet outside;
b) the lower ground of the house to about 5 feet to the roof;
c) the basement of the house to about 5 feet outside.
5. From outside a cast-iron waste disposal pipe connects with ... .
a) a pipe of another material, usually clay;
b) another pipe made from concrete;
c) a pipe of strong material, usually steel.
6. ... , a septic tank near the house holds sewage until it dissolves.
a) In areas which are rather far from a city sewerage system;
b) In village areas which have no sewerage system near their houses;
c) In areas without a city sewerage system.
7. Water from the sewage flows ... .
a) through pipes into a special septic tank;
b) directly into the ground;
c) through pipes into the ground.
8. When the air around the house is warmer or colder, than the air inside, ...
a) heat passes from the cold air to the warm air;
b) heat passes from the warm air to the cold air;
c) water passes from one pipe to the other.
9. This means that ... , and the house will become cold.
a) in summer the heat will pass to the outside;
b) in autumn the heat will pass to the outside;
c) in winter the heat will pass to the outside.
10. Insulation fills ... and creates dead-air space.
a) the air spaces in walls, floors and ceilings;
b) all spear places in walls, floors and ceilings;
c) the air spaces in floors and ceilings.
11. Insulation is made from many materials, including ... .
a) cellulose, rock wool, a glassy lava called perlite;

b) cellulose, cotton, wool, a glassy lava called perlite;
c) cellulose, rock wool, a glassy lava called vermiculite.

12. The type of insulation used depends on … .

a) the weather and the building materials;
b) the climate and on whether it insulates floors, ceilings or walls;
c) the climate and on whether it insulates doors, windows or walls.

13. One furnace or heating unit, … .

a) uses for heating a house;
b) supplies heat for only one room;
c) supplies heat for the entire house.

14. In hot-air heating a fan, connected to the furnace, … .

a) blows cold air through pipes into the kitchen;
b) blows warm air through pipes into the rooms;
c) blows hot air through pipes into the bathroom.

15. An air conditioner … , and recirculates cool air.

a) takes warm air from the house, cools it, removes moisture;
b) takes hot air from the lower floor, cools it, removes moisture;
c) takes warm air from radiators, cools it, removes moisture.

16. *An air conditioner may … .*

a) cold hot air, add moisture and recirculate cold air;
b) moisture warm air, add cold air and recirculate warm and cold air;
c) warm cold air, add moisture and recirculate warm air.

17. In a new house, builders usually … .

a) paint the rooms and finish the floors;
b) paper the rooms and paint the floors;
c) buy everything necessary to finish flats.

18. Sometimes the owner hires a professional interior decorator … .

a) to help him to buy necessary tools for making a repair of a flat;
b) to select, to buy and to arrange the furnishings;
c) to select and to buy new wall papers for his flat.

19. … and to preserve different sorts of trees which grow in this place.

a) Professional decorators advise to keep the natural outline of the land;
b) Most builders try to keep the natural outline of the land;
c) Most builders try to clean the territory round the new house.

20. Group work:

Express your opinion on the contents of the German proverb given above. Discuss all your pros and cons with your group-mates.

APPENDIX 1

USEFUL PHRASES FOR DISCUSSION

1. INTRODUCING A POINT

First of all I'd like to point out …	Прежде всего мне хотелось бы указать … .
To start with …	Следует начать с … .
The main problem is …	Основная проблема … .
Let's get this clear first …	Давайте сначала выясним … .
I want to draw your attention to…	Я хочу обратить внимание на …
The question of …	Проблема … .
Speaking of …	Говоря о … .
What we have to decide is …	Что мы хотим решить …

2. EXPRESSING A PERSONAL OPINION

In my opinion … .	По моему мнению … .
It seems to me that … .	Мне кажется, что … .
In my view … .	С моей точки зрения … .
I have the feeling that … .	У меня чувство, что … .
I rather think that … .	Я вообще-то думаю … .
I'm absolutely convinced that … .	Я абсолютно уверен, что … .
If you ask me, I think that … .	Если ты спрашиваешь меня, то я думаю … .
You can take it from me that … .	Можешь сослаться на меня, что
Let me tell you … .	Позвольте мне сказать вам … .
I don't quite follow you … .	Я не совсем вас понимаю …. .
I mean to say … .	Я имею в виду (Я могу сказать)
On the surface (of it) … .	На первый взгляд … .
I take it for granted that … .	
That's neither here nor there.	
You have got it all wrong.	
The way things are …	
Generally speaking … .	
Under circumstances … .	

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