**МИНИСТЕРСТВО ОБРАЗОВАНИЯ МОСКОВСКОЙ ОБЛАСТИ**

**Государственное бюджетное профессиональное образовательное**

**учреждение Московской области**

**«Воскресенский колледж»**

**МЕТОДИЧЕСКИЕ РЕКОМЕНДАЦИИ**

**по выполнению домашней контрольной работы**

**по дисциплине**

ОГСЭ.03 Иностранный язык в профессиональной деятельности

Специальность: 08.02.01 Строительство и эксплуатация зданий и сооружений

**Воскресенск 2022**

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1. **Пояснительная записка**

Материалы по написанию домашней контрольной работы по ОГСЭ.03 Иностранный язык в профессиональной деятельности для обучающихся по специальности 08.02.01 Строительство и эксплуатация зданий и сооружений.

Рекомендации составлены в соответствии с рабочей программой дисциплины «Иностранный язык в профессиональной деятельности».

При выполнении домашней контрольной работы можно пользоваться не только рекомендуемыми, но и другими источниками.

Домашняя контрольная работа является неотъемлемым этапом изучения материала дисциплины ОГСЭ.03 «Иностранный язык в профессиональной деятельности» и выполняется в соответствии с учебным планом.

Целью выполнения контрольной работы является самостоятельное приобретение и углубление знаний студентами в области иностранного языка, их знакомство с основными элементами лексико-грамматической моделью английского языка.

Выполнение домашней контрольной работы направлено на формирование компетенций, определенных ФГОС:

ОК 01. Выбирать способы решения задач профессиональной деятельности применительно к различным контекстам;

ОК 02. Осуществлять поиск, анализ и интерпретацию информации, необходимой для выполнения задач профессиональной деятельности;

ОК 03. Планировать и реализовывать собственное профессиональное и личностное развитие;

ОК 04. Работать в коллективе и команде, эффективно взаимодействовать с коллегами, руководством, клиентами;

ОК 05. Осуществлять устную и письменную коммуникацию на государственном языке Российской Федерации с учетом особенностей социального и культурного контекста;

ОК 06. Проявлять гражданско-патриотическую позицию, демонстрировать осознанное поведение на основе традиционных общечеловеческих ценностей;

ОК 07. Содействовать сохранению окружающей среды, ресурсосбережению, эффективно действовать в чрезвычайных ситуациях;

ОК 09. Использовать информационные технологии в профессиональной деятельности;

ОК 10. Пользоваться профессиональной документацией на государственном и иностранном языках;

ОК 11. Использовать знания по финансовой грамотности, планировать предпринимательскую деятельность в профессиональной сфере.

ПК 3.3. Обеспечивать ведение текущей и исполнительной документации по выполняемым видам строительных работ;

Оценка за выполнение домашней контрольной работы выставляется по пятибалльной системе.

**2. ОБЩИЕ ТРЕБОВАНИЯ К ВЫПОЛНЕНИЮ ДОМАШНЕЙ КОНТРОЛЬНОЙ РАБОТЫ**

Студент заочник в соответствии с учебным планом выполняет контрольную работу по дисциплине ОГСЭ.03 Иностранный язык в профессиональной деятельности.

Для правильного выполнения контрольной работы необходимо усвоить следующий материал:

1. Имя существительное. Множественное число.

2. Артикли и предлоги как показатели имени существительного. Выражение падежных отношений в английском языке с помощью предлогов и окончания -s.

3. Имя прилагательное. Степени сравнения имен прилагательных.

5. Местоимения: личные, притяжательные, неопределённые, отрицательные.

6. Формы глагола настоящего (Present), прошедшего (Past) и будущего (Future) времени группы Simple действительного залога.

7. Простое распространенное предложение: прямой порядок слов, обратный порядок слов вопросительного предложения.

Работа над текстом**.** Сначала рекомендуется прочитать весь текст, не прибегая к помощи словаря, стараясь уловить общее содержание текста и его направленность. При этом следует опираться на знакомые слова, интернационализмы, имена собственные, цифры и т. п.

Затем следует приступать к переводу текста. Каждое предложение нужно прочитать до конца, фиксируя знаки препинания, стараясь выделить подлежащее и сказуемое; незнакомые слова ищите в словаре, выписывайте их в свою рабочую тетрадь (или словарик), выбирая значения слов, подходящие по смыслу к данному тексту.

После изучения выше указанного материала приступите к выполнению контрольной работы. Вариант контрольной работы распределяется преподавателем.

**3. МЕТОДИЧЕСКИЕ ТРЕБОВАНИЯ К ВЫПОЛНЕНИЮ ДОМАШНЕЙ КОНТРОЛЬНОЙ РАБОТЫ**

Студент должен выполнять тот вариант контрольной работы, который ему предложил преподаватель.

Выполнять контрольную работу можно в отдельной тетради как ручкой, аккуратно, четким почерком, так и на компьютере. При оформлении текста на компьютере использовать следующие параметры:

- редактор MicrosoftWord;

- тип шрифта – TimesNewRoman, размер шрифта – кегль 14;

- цвет текста – черный;

- параметры страницы: ориентация – книжная;

- выравнивание текста – по ширине;

- размер абзацного отступа - 1,5см (15мм);

- межстрочное расстояние – 1,5 интервала;

- страницы работы нумеруются арабскими цифрами (нумерация сквозная по всему тексту). Титульный лист включается в общую нумерацию, номер на нем не ставится.

- номер страницы ставится в центре нижней части листа без точки.

Оформление титульного листа выполняется в соответствии с положением написания контрольных работ (приложение А)

 При выполнении контрольной работы переписывайте все задания, после этого приступайте к их выполнению.

Выполненную контрольную работу направляйте для проверки в колледж в методический кабинет в установленные сроки.

**4. КРИТЕРИ ОЦЕНКИ ДОМАШНЕЙ КОНТРОЛЬНОЙ РАБОТЫ**

Контрольная работа оценивается по следующим критериям:

- соответствие выполненной работы данному заданию;

- полнота разработанности вопросов, проявление собственной позиции к изучаемой теме;

- соответствие оформления требованиям, предъявляемым к выполнению контрольной работы;

- работа выполнена в установленные сроки.

Контрольная работа оценивается и вместе с письменной рецензией возвращается студенту для ознакомления, затем хранится в учебной части до списания.

Обучающиеся, чьи работы были оценены на неудовлетворительно, имеют право на выбор новой темы или доработку прежней, при этом им определяется новый срок ее исполнения.

**Вариант 1**

**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.

1. **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?

1. **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, ... .

1. **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 postgraduate course.

1. **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.

**Вариант 2.**

**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.

1. **Answer the following questions:**
2. Where does a man spend most of the time?
3. What is the aim of building houses?
4. What buildings are built for cultural activities of the people?
5. Why did primitive men build their houses?
6. Where did primitive men look for protection?
7. What was the weather like after the Ice Age?
8. Why were caves chosen?
9. Where did the ancient people paint their pictures?
10. Where can you find such decorated caves?
11. Where were caves imitated?
12. What was taken as a model for huts built of branches?
13. Where were skins raised?
14. What is the earliest type of human dwellings?
15. What was lost in the prehistoric past?
16. Where did people live in the country?
17. What did rich people build in the country?
18. What did these castles serve?
19. When did a man feel a need to have a number of different kinds of houses in one place?
20. What was a dwelling of the chief like?
21. Why was it necessary to build higher houses in towns than in countries?
22. What was a typical town house like?
23. What material did ancient people use in Egypt for building?
24. What were the houses like in Greece?
25. What materials were used in Rome?
26. Where was the centre of family life concentrated?
27. Were the earliest houses in Britain small?
28. What was in the centre of their houses?
29. How did the light come into early English houses?
30. **Complete the sentences according to the text:**
31. Most of the time of a modern man … .
32. … are built for cultural activities of the people.
33. In prehistoric times men looked for … .
34. Some covered themselves with … but others settled in caves.
35. The people of the Old Stone Age had to … from bad weather.
36. … caves were imitated in stone structures.
37. They were lost in the prehistoric past but … .
38. In the country ordinary people lived in … which did not differ much … of an earlier age.
39. … was mainly in size.
40. Much later, … , there grew up a difference … .
41. … of a shop opening on the street.
42. The earliest houses … are those of ancient Egypt. … in the middle and round their courtyard ran a covered walk.
43. The houses were often finished with … and outside walls.
44. The earliest houses in Britain were round, built … .
45. In the centre of the house was the hearth and … above it.
46. **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 … .
22. **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, …*

**Вариант 3.**

**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 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.

1. **Answer the following questions:**
2. What did the kind of house depend on?
3. What materials were the first houses made of?
4. Were they strong?
5. What country was the first to use brick to build houses?
6. What houses were built in ancient Egypt?
7. Why did Egyptians use a flat roof?
8. The Egyptian art of building was very beautiful, wasn’t it?
9. What arouse our wonder to this day?
10. Where were given the first lessons in the art of marking columns?
11. Where did architecture flourish for the first time in our country?
12. In what way can you describe the churches of the old time?
13. What purposes did they often serve?
14. What do tourists come to see usually?
15. What new materials help to speed up the rate of building?
16. What method helped our country to restore its economy after the Second World War?
17. Who are engaged in construction nowadays?
18. What new materials are used by our builders?
19. Do they use any traditional materials?
20. What sort of panels is being widely used in construction?
21. What is the main method of apartment and industrial construction?
22. What machines are used at all construction sites?
23. Where are the finished blocks of prefabricated flats with interior decoration assembled?
24. With the help of what a complete flat brings to the prepared foundations of a building?
25. What is the role of a powerful gantry-crane?
26. Who begins to work after the last inspection?
27. **Complete the sentences according to the text:**
28. The kind of house a man built in the beginning depended on the climate ... .
29. The first houses in many parts of the world were made of wood because ... .
30. ... the remains of a few of them still exist.
31. Egyptians dried the bricks in the sun and … .
32. The roof in Egypt was flat because ... .
33. Egyptian pyramids and monuments, sphinxes and palaces arouse our wonder to this day because ... .
34. In our country architecture flourished … .
35. Tourists from all over the world come to see ... .
36. A very advanced construction technique today is ... .
37. According to the new method the reinforced concrete units ... and are then simply assembled … .
38. The building industry holds an important place in ... .
39. Builders use many new materials such as ... .
40. ... are in great use as well.
41. Now everywhere... are being widely used in construction.
42. ... are available at all construction sites of Belarus.
43. Finished blocks of prefabricated flats with interior decoration ... .
44. ... the 18 – 20 ton flat and carefully sets it on the foundation.
45. Thanks to special government’s programmes …….
46. **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.
17. **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 а 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.

**Вариант 4.**

**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.

1. **Answer the following questions:**
2. What does building industry employ?
3. Why does building industry hold a considerable place in the National Economy?
4. What is prominent among the factors affecting the level of living?
5. Is building industry the concern of the state?
6. Why is it so?
7. What is being paid much attention to?
8. What new building methods are now used in building industry?
9. How many principal groups of prefabricated structures and precast elements do you know?
10. What changes have taken place in present day designs for residential structures?
11. Is there any improvement in heating and ventilating systems?
12. Who can afford better furnishings, refrigerators, washing machines, etc.?
13. What industrial buildings are mentioned in the text?
14. **Complete the sentences according to the text:**
15. Building industry, … holds a considerable place in the National Economy.
16. This industry is … .
17. … have grown into major, political issues in most countries.
18. Housing is prominent among the factors … .
19. … has constituted at least 12 per cent of all capital formation.
20. … is being paid much attention to.
21. At present, … may be classified into two principal groups – for … .
22. Present day designs … envisage all modern amenities for a dwelling.
23. There is a marked improvement in … .
24. A house … where a family develops is acquiring … .
25. … another significant type of construction.
26. … the advantages of reinforced concrete arches, metal frames, glass walls and … .
27. Windows can be enlarged to the extent that … .
28. **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.
14. **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.

**Вариант 5.**

**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.

1. **Answer the following questions:**

1 What do types of buildings depend upon?

2 In what way may be they classified?

3 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?

1. **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.

1. **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.

1. **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.

**Вариант 6.**

**BUILDING A HOUSE**

Planning а 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, fiber-board, 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 ridge-board. 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.

**5. 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
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?

**6. 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 … .

**7. 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.

**8.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.

**Вариант 7.**

**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 the building on″float″whether he must aim at lightness and, as it were,

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.

1. **Answer the following questions:**
2. Were the foundations of the Tower of Pisa soundly laid?
3. What were the problems of a building’s foundations from the earliest times?
4. What was difficult to realize for architects and engineers at that time?
5. Has the Tower toppled down?
6. What has been done to prevent the Leaning Tower of Pisa from this?
7. Why is it difficult to lay foundation of a tall modern structure?
8. What supports a house?
9. What is most important for the foundation engineer to know?
10. What must engineer learn before deciding what type of foundation is necessary for that soil?
11. What is necessary to do first?
12. What is necessary to do to collect undisturbed samples of earth from various depths?
13. What can the engineer forecast?
14. What is the most important decision of all in the building’s construction?
15. Each wall load is supported by wood, isn’t it?
16. What are the footings made by?
17. Why do workers place the footings below the frost line?
18. What is used for the house’s foundation?
19. In what cases the piles are used?
20. What are piles?
21. Each pile supports its load in one or both of two ways, doesn’t it?
22. In what functions a pile may serve?
23. What is a basement?
24. When do the foundations take the form of a vast, hollow concrete box?
25. Why is this box divided into chambers?
26. When a filler is used?
27. What prevents moisture from coming through the slab?
28. **Complete the sentences according to the text:**
29. The Learning Tower of Pisa lean because … .
30. Laying a building’s foundation was a problem for … .
31. Too little allowance has sometimes been made for … by architects and engineers.
32. The Tower of Pisa has never toppled in spite of the fact that … .
33. the builders altered the design of … as the building began … .
34. The earth beneath was compressed … .
35. … the foundations of small buildings possess few problems.
36. The foundation engineer has an extremely important job to do if … .
37. The knowledge of soil mechanics, which entails … without dangerous movement.
38. First construction workers begin excavating, … .
39. In order to collect undisturbed samples of earth from various depths it is necessary …. .
40. … that workers place below the frost line or the depth to which the ground freezes.
41. Footings usually extend from … .
42. The foundation engineer may use piles if … .
43. A pile may stand firm because … .
44. … , but they provide extra room.
45. The foundations take the form of a vast, hollow concrete box when … .
46. … above the ground on concrete piers, or supports.
47. … especially if the earth beneath a house is hard.
48. Workers then spread a filler, … , and cover it with a moistureproof paper.
49. The filler and the paper prevent … that is made by pouring concrete, about 4 inches (10 centimeters) thick, … .
50. Neither piles nor flotation need to be used if … .
51. **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, moistureproof,″grips″

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.

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*Образец титульного листа домашней контрольной работы*

**МИНИСТЕРСТВО ОБРАЗОВАНИЯ МОСКОВСКОЙ ОБЛАСТИ**

**Государственное бюджетное профессиональное образовательное**

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