АНГЛИЙСКИЙ ЯЗЫК

Методические рекомендации к практическим занятиям для студентов специальностей 1-70 02 01 «Промышленное и гражданское строительство» и 1-70 03 01 «Автомобильные дороги» дневной формы обучения

Задания для совершенствования лексических и грамматических навыков

Могилев 2016
Методические рекомендации содержат задания для совершенствования лексических и грамматических навыков, разработанные на основе аутентичных текстовых материалов, и предназначены для студентов специальностей 1-70 02 01 «Промышленное и гражданское строительство» и 1-70 03 01 «Автомобильные дороги».

Учебно-методическое издание

АНГЛИЙСКИЙ ЯЗЫК

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Unit 1. Word Order

Grammar for revision: There is/There are

Exercise 1. Fill in the gaps with the appropriate form of the verb to be.

1. There … two main groups of building materials: natural and man-made. 2. In Ireland and north-eastern UK counties there … very old stone walls made without any mortar. 3. There … a new garage behind my house. 4. There … a great number of construction sites in this area of the city. 5. There … no gravel in this concrete mixture. 6. There … around 100 people on this site every day. 7. There … a fresh load of concrete this mixer has just brought. 8. There … are a lot of heavy equipment operators here. 9. There … no unskilled laborers in this company. 10. There … a strict instruction we need to follow. 11. There … two windows in the room. 12. There … a trouble in this cement pump.

Exercise 2. Match the sentence halves, join them with an appropriate relative pronoun (that, which, or who).

Example: 1 + (g) There were two subcontractors who/that he usually hired.

1. There were two subcontractors … a) will have an increase in income
2. There is a company with a simple structure … b) helped with jobs requiring special knowledge and more experience
3. There are three appointed department heads … c) are handled by heavy equipment operators.
4. There are special jackets and helmets d) connects two villages.
5. There were a few consultants … e) report to the owner.
6. There aren't many workers … f) he usually hired.
7. There are cranes, cement mixers and cement pumps … g) they need to wear according to instructions.
8. There was a man … h) are headed by Mr. Jones.
9. There is a narrow bridge … i) could repair a generator at last.

Grammar for revision: Word order in questions with be

Exercise 3. Put general and special questions to each sentence.

Example 1: There is a free access to the site. – Is there a free access to the construction site? (Why … ?) Why is there a free access to the construction site?
Example 2: He is on the site today. – Is he on the site today? (Where … ?) Where is he today?
1. There are lots of vacant jobs in construction all over the country. (Where …?). 
2. There is a security guard on this construction site. (Why …?). 
3. There is ventilation and air conditioning equipment in this building. (What equipment …?). 
4. There is a small concrete supplier company in this town. (Where …?). 
5. There is a difference between a master electrician and an apprentice. (What difference …?). 
6. There is some trouble in the operation of these concrete mixers. (What trouble ...?). 
7. The company is responsible for the whole project. (What …?). 
8. Concrete delivery is to construction sites all over the country. (Where ...?). 
9. My phone number is 265775. (What …?). 
10. The work is supervised by instructors (Who …?). 
11. The gravel is not coarse enough. (Why …?). 
12. The site manager's office is on the right. (Where …?). 
13. One big problem on building sites is rain. (Why …?). 
14. Accidents are more common in bad weather (When …?).

**Grammar for revision: Word order in questions with auxiliary verbs do / does**

**Exercise 4.** Put general questions using the correct auxiliary verb and give a short answer to each question. Put special questions to the underlined parts of the sentences.

**Example 1:** I have a spare roll of insulating tape. Do you have a spare roll of insulating tape? (What …?) What do you have?

**Example 2:** He installs high quality steel staircases. Does he install high quality steel staircases? (What …?) What does he install?

1. They offer different construction aggregates. (What …?). 
2. We supply a wide range of electrical products. (What products …?). 
3. A concrete mixer mixes and pours concrete. (What …?). 
4. Brick has an affordable price, long durability and good insulating properties. (What properties …?). 
5. Manufacture of Portland cement requires the burning of large quantities of coal or natural gas resulting in considerable pollution. (What …?). 
6. Concrete has a rather low tensile strength. (What tensile strength …?). 
7. Concrete needs to be strengthened. (Why …?). 
8. The design consists of drawings and specifications. (What …?). 
9. Cement develops strong adhesive properties when combined with water. (What properties …?). 
10. The selection of the brick affect the appearance of the final surface. (What …?).
Unit 2. Noun

Grammar for revision: Singular and plural of nouns. Noun + noun combination

Exercise 1. Read the text and find the plurals. Put special questions to the underlined part of the sentence.

The construction industry in the UK consists of **four different sectors**. The residential sector deals with **houses and apartments**. The industrial sector deals with big projects like factories and power plants. The infrastructure sector is for projects like roads, bridges and tunnels. The commercial sector is for **things like schools, hospitals and office blocks**. The client pays for the project and hires **general contractors** to deal with subcontractors, equipment and materials.

Exercise 2. Translate the following noun + noun combinations:

- pre-construction stage; infrastructure projects; site investigation; data analysis; feasibility study; soil mechanics; measurement procedure; residential sector projects; site manager; crane operator; property boundaries; sea level; load distribution; heating, ventilation and air conditioning equipment; construction equipment manufacturer; turnkey project, glass fiber reinforced concrete.

Exercise 3. Complete these sentences with the nouns in the box. Use either a singular or a plural form of the noun.

- roofer(s), contractor(s), bridge(s), manager(s), contractor(s), client(s)

  1. The general … hires subcontractors. 2. General … deal with subcontractors, equipment and materials. 3. The team consists of a site …, three … and a plumber. 4. Roads and … are infrastructure sector projects. 5. The … pays for the project.

Exercise 4. Transform the following word combinations into noun + noun combinations and translate them.

**Example 1**: an industry that deals with the construction of housing and other structures – **construction industry**.

**Example 2**: rules that govern construction – **construction rules**.

1. the site where a building is to be constructed;
2. experience in construction;
3. contract for construction or repair of buildings (bridges, dams, other facilities)
4. schedule by which payments are made to a contractor;
5. a block of stone or other material, larger than a brick, used in building;
6. a construction technique that uses a frame as the basis of the structure;
7. a type of contract where the price is fixed;
8. insurance against hazards (e.g. fire, windstorms, or other common hazards);
9. a plan showing the use of a specified plot, (e.g. the location of a building, utilities, the position of the roads);
10. line at which frost penetrates and the earth will freeze;
11. equipment used for air-conditioning.

**Grammar for revision: Definitions**

**Exercise 5.** Link the left column to the right column and build definitions to be used for ordering building materials.

<table>
<thead>
<tr>
<th>1. Type in BLOCK CAPS</th>
<th>a) a document from the seller to the buyer with the details of delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. price quote</td>
<td>b) As Soon As Possible</td>
</tr>
<tr>
<td>3. in stock</td>
<td>c) information about how much the goods cost</td>
</tr>
<tr>
<td>4. FAQs</td>
<td>d) refers to data in electronic form and is as valid as a handwritten signature</td>
</tr>
<tr>
<td>5. ASAP</td>
<td>e) type in CAPITAL LETTERS</td>
</tr>
<tr>
<td>6. electronic signature</td>
<td>f) Frequently Asked Questions</td>
</tr>
<tr>
<td>7. delivery note</td>
<td>g) a detailed description of the design and materials used to make something</td>
</tr>
<tr>
<td>8. specifications</td>
<td>h) the seller has the items in his store</td>
</tr>
</tbody>
</table>

**Exercise 6.** Use the words in the box to complete the definitions below.

bricklayer and mason, electrician, feasibility study, carpenter, supervisor, 
apprentice, soil mechanics, concrete, aggregate, scaffolding, floor

1. A … … is an investigation of both financial and engineering aspects of a project.
2. … … is extensive investigation to evaluate the load-bearing qualities and stability of the ground.
3. … is broken or crushed stone or gravel used to make concrete, or more generally in building and construction work.
4. A … is a person who makes and repairs wooden objects and structures.
5. … is a substance used for building which is made by mixing together cement, sand, small stones, and water.
6. … is a temporary structure on the outside of a building, made usually of wooden planks and metal poles, used by workers while building or repairing the building.
7. A … is a person who supervises activities or people, especially workers or students.
8. A … and a … are persons whose job is to build walls and other structures using bricks.
9. A … is a person whose job is to install and repair electrical equipment.
10. A … is all the rooms or areas on the same level of a building.
11. A … a person who is learning a trade from a skilled worker.

Unit 3

**Grammar for revision: Prepositions**

**Exercise 1. Fill in the blanks with the suitable prepositions.**

The Institute … Masonry is … the centre of town. It has 28 apprentices and three instructors. All the work is supervised … instructors and includes on-the-job training, instruction on the use of modern equipment, tools and materials, and instruction … health and safety. The training takes three years … complete. At the end … the course, apprentices get the Level 2 Diploma … Stone Masonry Qualification.

**Exercise 2. Complete the following telephone conversation by adding the correct prepositions of time. If no preposition is required, leave the space blank. Make a dialogue on analogy.**

**Erik:** I was wondering if we could arrange a meeting … next week?
**Adam:** Yes, of course! I am going to Washington … Friday evening so can we arrange something … that?
**Erik:** Eh, Yes. I'm pretty busy … the beginning … the week but perhaps we could meet some time … Wednesday?
**Adam:** Could we meet … the morning … 9.30?
**Erik:** That's fine. I should have received the test results we've been waiting for … then.
**I** I'm looking forward to seeing the latest results. I haven't heard anything … we spoke … last month.
Unit 4. Adjective and Adverb

Grammar for revision: Adjective formation suffixes: -ible, -able, -al, -ful, -ic, -ive, -ous, -y, -ent

Exercise 1. Complete these sentences by choosing the correct words in italics.

1. Asphalt is used in road construction because it is strength / strong.
2. Hardness / Hard asphalt is often very brittleness / brittle.
3. Porosity / Porous asphalt improves safety by removing water from the surface of the road.
4. Toughness / Tough is a measure of the energy you need to break something.
5. It is important that roads have enough elasticity / elastic to return to their original shape after loading.

Exercise 2. Fill in the blanks with appropriate adjectives.

habitable, industrial, careful, previous, basic, possible, different

1. Storage buildings require as much internal space as …
2. A building has two … parts, the substructure (the part below ground) and the superstructure (the part above ground).
3. He did not mention his … experience in this field.
4. Civil engineering is the industry that makes the world a more … place to live.
5. To survey means to make … measurements of a piece of land.
6. Structures built by this large … company are found in … parts of the country.

Exercise 3. Transform the words listed below into adjectives.

nature, science, resist, comfort, structure, compress, vary, adhere, efficiency, chemistry, corrosion, residence, danger, industry, origin, flex

Exercise 4. Insert appropriate adjectives formed from the above words which are in bold.

1. I like physics, chemistry, and other … subjects.
2. Concrete has relatively high … strength.
3. The experience of this company in industrial and … construction is great.
4. Civil engineering deals with the design, construction and maintenance of … structures.
5. This technology is very ... and energy-saving.
6. ... steel is a strong steel that is used in all kinds of building construction.
7. This Portland cement has increased ... properties.
8. They produce highly ... chemicals and pay much attention to safety rules.

Grammar for revision: Degrees of comparison of adjectives
1. similarity (positive): as ... as
2. difference (comparative): ...-er, more ... than, less ... than, ...-er and ...-er
3. superiority (superlative): the ...-est, the most ..., the least ...

Exercise 5. Put the adjectives in brackets into a comparative or superlative form.

1. Aggregate should be much (small) than the finished item.
2. For (far) information on our concrete mixers consult our website.
3. A film is formed on the surface of steel, making it (resistant) to corrosion.
4. The bond between the concrete and the straight bars is less (strong) than that between the concrete and the twisted bars.
5. Concrete elements reinforced with steel resist tensile stresses much (good) than those without reinforcement.
6. Durability of concrete is (high) among these materials.
7. This structural element is as (strong) in tension as it is in compression.
8. This is the (important) advantage of this material.
9. One of (difficult) tasks in project management is avoiding cost overruns.
10. The lifetime for the concrete structure is (important) than its strength.

Grammar for revision: Parallel increase: the + comparative, the + comparative

Exercise 6. Combine each half-sentence from both columns to make sentences with parallel increase forms.

<table>
<thead>
<tr>
<th>1. The higher the building,</th>
<th>a) the sooner a concrete structure will fail.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The more powerful the equipment, which you use,</td>
<td>b) the better you are because the university provides all facilities which you need.</td>
</tr>
<tr>
<td>3. The higher the tensile stress,</td>
<td>c) the better chances to find a well-paid job you have.</td>
</tr>
<tr>
<td>4. The more experience you have,</td>
<td>d) the deeper foundation it must have.</td>
</tr>
<tr>
<td>5. The harder you study,</td>
<td>e) the faster you finish this job.</td>
</tr>
</tbody>
</table>
Grammar for revision: Adverbs of degree: too, enough, not enough, slightly, a bit, much, a lot, by far, considerably

Exercise 7. Insert the following adverbs of degree enough, not enough, too, a lot/considerably in the following sentences.

1. The aggregate is not fine … .
2. The ground is … soft for the scaffolding.
3. There are … many people involved in this construction project.
4. He is experienced … to do this project well.
5. The cost of this construction project is … lower than expected.
6. We are going to buy this crane. It is … cheaper than that one.
7. This project is … better financed than the previous ones.
8. There are 6 chairs. Is that … ?

Grammar for revision: Adverbs (adjective + ly)

Exercise 8. Supply the corresponding adverbs of the following adjectives: accurate, increasing, dangerous, harmful, necessary, correct, simple, technical, good.

Exercise 9. Complete the following sentences either with the adjective or the adverb given in brackets. Use each word once only.

1. The system will shut down … . There is an … temperature control (automatic / automatically).
2. New testing methods have made the process much more … . Quality control now runs more … (efficient / efficiently).
3. Our aim is to ensure … operation on the construction site. The manufacturing process should run … (smooth / smoothly).
4. People are becoming more interested in … friendly materials. There is a growing interest in … issues (environmental / environmentally).
5. Safety procedures must be … observed to avoid accidents. The manager on a construction site must be … about observing safety rules (strict / strictly).
6. The number of people who work in the construction industry in Belarus has increased … over the last 10 years. There has been a … growth in labor productivity recently (considerable/considerably).
Unit 4. Verb. Tenses in the Active Voice

Grammar for revision: Present Simple and Present Continuous

Exercise 1. Complete this conversation with the correct form of Present Continuous of the verbs in brackets.

1. A: What are you doing?
   B: I … (phone) the suppliers. Hello? Is that Harrisons? We have a problem. Your man … (unload) rebar in our car park. We don't need rebar.
   A: What's happening?
   B: It's a mistake. He … (phone) his driver now.
   A: Good morning. I have a delivery for the site carpenter.
   B: Ah, yes. He … (wait) for the timber. Flooring timber, right?
   A: No, roofing timber.
   B: Oh! Park over there, please. I think we have a problem.

2. A: Hello. I … (look) for the site manager.
   B: Sure. I'm the site manager. What's up?
   A: Hi! I'm Marc Martin, from Martin's Aggregates.
   B: Hello. Good to see you. We … (wait) for your sand.
   A: Yes, well, the sand … (come) in about two hours.
   B: Two hours? Why? I need the sand now.
   A: I'm sorry. We … (wait) for the driver. The driver … (run) late. I'm very sorry!

Exercise 2. Choose the correct verb forms of Present Simple or Present Continuous to complete this text.

The company representative is giving information about people's roles on site. We (have / are having) around 100 people on site every day. Today, most people (work / are working) on the basic structure of the building. The people in green jackets are concrete finishers from DKI Cement, the cement supplier. On this project, they (supervise / are supervising) the unskilled laborers, who are all local people. Of course, there are always a lot of heavy equipment operators. They (handle / are handling) the cranes, the cement mixers, the cement pumps, and so on. The drivers (bring / are bringing) fresh loads of cement several times a day. Over there, you see a couple of painters (paint / are painting) the staircase, and the electricians (repair / are repairing) one of the generators.
Grammar for revision: Present Continuous to talk about the future

Exercise 3. Match questions 1-5 with the correct responses a-e.

1. What are you doing tomorrow? a) Nobody. I'm going on my own.
2. Aren't you going on leave next week? b) I'm going on my motorbike.
3. When are you visiting the site? c) Later this afternoon.
4. How are you getting there? d) No, I'm not. It was cancelled.
5. Who are you going with? e) I'm travelling to Cairo. I am having a meeting with a supplier.

Exercise 4. Complete this conversation using the Present Continuous (with future meaning) form of the verbs in brackets.

A: What … (you / do) tomorrow? … (you / meet) the clients?
B: Yes, that's right. They … (arrive) around nine o'clock. I … (give) a presentation first and then I … (take) them to the site.
A: How … (you / get) there? By car?
B: No, there are seven people in the group, so I … (use) the minibus.
A: What … (you / show) them? The foundations?
B: Yes. And then we … (go) over to the storage area to look at the glass panels. A: Where … (you / have) lunch? I might join you.
B: In the restaurant opposite the site. It is the Italian one.
A: Great!

Grammar for revision: Ways of expressing future actions: Future Tenses, Present Continuous, to be going to

Exercise 5. Complete the sentences choosing the correct future form. In some cases more than one variant is possible.

1. Do you know when they … the design phase (will start / are starting / are going to start)?
2. The whole project … about 24 months (will take / is taking / is going to take).
3. What sort of bridge … it … (will be / is being / is going to be)? It has not been decided as yet.
4. There (will be / are going to be) some big changes in the company. In fact, we (will restructure / are restructuring / are going to restructure) the whole company.
5. I think the overall length will be 300 meters. I have no idea when this bridge (is finished/ will be finished/ is going to be finished).
6. Does he know how many piers it (will have / is having / is going to have)?
7. I (will ask / am asking / am going to ask) by boss for a pay rise next week.
8. The training course (is starting / will start / is going to start / starts) on September 12.

**Grammar for revision: Present Perfect and Past Simple**

**Exercise 6. Complete these responses using Present Perfect forms.**

1. Have you seen the first draft of the project plan? – Yes, I … just … it.
2. Have you been to the site? – Yes, I … visited it many times.
3. Has the supervisor arrived yet? – Yes, he … . He is in Building 13.
4. Why haven't you checked the email? – Sorry, I have … too busy.
5. Has he finished? – Not yet. He has built the wall, but he … painted it yet.
7. Have you used the portal at all? – Yes, it's great. In fact, I've … entered the data.
8. Have you ever taken part in project meetings? – No, I … .

**Exercise 7. Complete this email with the Present Perfect form of the verbs in the box.**

I just want to update you on what … over the last few months. As you know we … now phase 2 of the project and the client … to the changes we wanted. Tom and his team … very busy with all the different sub-contractors and we … the number of people in the logistics group. There are now twenty, up from fifteen. I would now like to introduce Abdul Mohammed, who will be joining us for this phase. He … on many projects in this area and knows the local conditions very well. We … already a couple of very useful discussions about cement delivery, for example, and he … the reinforcement problem we had last week.

**Exercise 8. Make questions in the Present Perfect or Past Simple using these prompts.**

1. you / speak to / the electricians/ yet?
2. they / clear / the site / of trees / rocks / and debris / a week ago?
3. they / deliver / all the timber/ yesterday?
4. she / already /speak / to/ the client / to go ahead?
5. you / hear / the weather forecast / yet?
6. how many times / they / visit / the site / last week?
7. why / they / not answer / the email/ yet?
Exercise 9. Put the verbs in the brackets in Present Perfect or Past Simple.

1. Progress already (cause) deep technological changes.
2. Construction technologies (become/recently) more sophisticated and effective.
3. It was not until the early 1800s that people (begin) to use Portland cement.
4. The first skyscraper (appear) in Chicago in 1885 and it (be) the 10-story Home Insurance Building.
5. You (ever/wonder) how a house is built?
6. Methods of building construction constantly (improve/since) first primitive structures.
7. His company (become/by now) one of the leading companies in the USA.
8. He (already/take) different considerations into account when planning this structure.
9. I (never/be) able to fix the sewage system myself.
10. They (buy) this house just 10 years ago and (already/remodel) it twice.

Grammar for revision: Past Simple and Past Continuous

Exercise 10. Complete these sentences with the correct past form of the verbs in brackets.

1. We were thinking about going home when the cement ... (arrive).
2. We ... the column when the telephone rang (pour).
3. I was having a cup of tea when I ... that the warehouse was on fire (notice).
4. She ... the newspaper when the client came through the gate (read).
5. He ... the scaffolding when it suddenly (climb, collapse).

Exercise 11. Match conversations 1-7 with a-g. Analyze the examples of the Past Simple and Past Continuous.

<table>
<thead>
<tr>
<th>1. Where did you go yesterday?</th>
<th>a) He was lifting a load when one of the slings broke.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Where were they working yesterday?</td>
<td>b) I went to the hospital. I had to see the doctor.</td>
</tr>
<tr>
<td>3. What did you do last week?</td>
<td>d) They were repairing the bridge on the other site.</td>
</tr>
<tr>
<td>4. How did he burn his hand?</td>
<td>e) She was visiting the apprentices.</td>
</tr>
<tr>
<td>5. When did the accident happen?</td>
<td>f) I had a busy week. I worked on the new site plans.</td>
</tr>
<tr>
<td>6. What happened?</td>
<td>g) He was working with the welders.</td>
</tr>
<tr>
<td>7. What was she doing on site?</td>
<td>h) He forgot the metal was hot.</td>
</tr>
</tbody>
</table>
Unit 5. Verb. Tenses in the Passive Voice

Grammar for revision: Passive Voice (be + V₃)

Exercise 1. Combine each half-sentence from both columns to make sentences with Passive Voice forms.

| 1. Numerous building materials are used | a) habitable for hundreds of years. |
| 2. Homes were built that | b) in construction. |
| 3. Some of these buildings have been kept | c) for insulation purposes for centuries? |
| 4. Concrete is generally strengthened | d) by a big construction company. |
| 5. What materials have been used | e) suited specific local weather conditions. |
| 6. Now this design team is being employed | f) concrete dries after mixing and placement. |
| 7. It is wrongly believed that | g) by using steel bars (known as rebars). |

Exercise 2. Read this text about one of the greatest construction projects in history. Complete it with the correct Passive Voice form of the verb in brackets.

The Great Pyramid of Giza … (design) as a tomb for an Egyptian Pharaoh. Many people think it … (construct) using slave labor but we have no real evidence of this. The pyramid has changed over the years. For example, it … originally … (cover) in casing stones but these … (remove) by later generations. The pyramid contains at least three chambers. The lowest is under the pyramid and … (cut) into the rock. It … never … (finish). The other chambers … (build) into the pyramid itself.

Exercise 3. Put the Active Voice sentences into the passive. Use the right form of be + past participle, be being + past participle or have + past participle)

1. We ordered some spare parts for our bulldozer. 2. They sent us the wrong order. 3. The supplier gave him the wrong phone number. 4. Special vehicles deliver concrete to the construction site. 5. The supervisor signed the paperwork. 6. We have to pay a lot of money for the new equipment. 7. Concrete takes compression, and steel takes the tension. 8. Pre-stressing reduced tensile stresses. 9. When concrete hardens, it develops certain physical and chemical properties. 10. Currently, people are buying more and more construction materials online. 11. They are selling cement at a reduced price.
12. Their team is designing the overall plan of a very unusual building. 13. Now they are reinforcing concrete elements that are under greater tensile stresses. 14. The truck has delivered the heaviest box. 15. The concrete worker has placed concrete in a plastic state. 16. He has received spare parts in good order and condition. 17. They have roughened steel bars to improve the cohesions between concrete and steel.

**Exercise 4. Turn the following sentences into the active voice.**

1. The site is cleared by a special crew.
2. The location of walls, doors and windows is shown in the Appendix to the plan.
3. Invoices are sent from the seller to the buyer which list the products supplied, the amount to be paid and the payment term.
4. The project management software is being worked out by them.
5. The new job description has already been written by the staff manager.
6. The meeting has been cancelled by them.
7. The ventilating/acoustical system provides fresh air.
8. Partitions divide rooms in a building.
9. The structure of a building transfers all the loads acting on the building to the ground.

**Unit 6. Reported Speech**

_Grammar for revision: Sequence of tenses. Reporting verbs: say, tell, advice, announce, argue, claim, declare, explain, note, insist, point out, predict, remark, state, warn, ask, suggest_

**Exercise 1. Complete these conversations with say, said, tell or told.**

1. A: Put out the road works sign.
   B: What did he … me to do?
   C: He … you to put out the road works sign.
   B: Where do I get a road works sign from?
   C: I don't know. Go and ask him. He … us to ask him if we had any questions.

2. A: Pick up the debris and put it in the skip.
   B: What did she … ?
   C: She … , “Pick up the debris and put it in the skip.” I don't know why she … it. Just do as you are … .

3. A: Get Tony to pull out the plug.
   B: What did he … ?
C: He ... us to get Tony to pull out the plug.
B: Sorry. What did you ... ?
C: I ... that he ... us to get Tony to pull out the plug. He should unplug equipment when it isn’t in use.
B: OK, OK, no need to shout! What else did he ... ?
C: He also ... that we should keep wet hands away from electrical equipment and light switches and should not disconnect anything by pulling on the cable.

Exercise 2. Turn the following statements into direct speech.

1. The supervisor asked us to listen carefully to his instructions.
2. He explained that we needed to fix signs properly.
3. He recommended us to use sand bags to stop the signs falling over.
4. He advised us to make sure the signs were at least 15 meters away from the ditch.
5. The supervisor also warned us to keep checking the signs to make sure they were not knocked over by traffic.
6. He said that we needed to give drivers enough warning.

Unit 7. Participles

Grammar for revision: Participle I (doing) and Participle II (done)

Exercise 1. Translate the following word combinations into Russian:

1. specifying documents – concrete mixtures specified in the documents;
2. added amount of water – a timing device adding water to the concrete mixture;
3. a delivering vehicle – delivered by the vehicle;
4. the paste coating each aggregate particle – each particle coated with paste;
5. the reaction causing the mixture to harden – the reaction caused by it;
6. a changing action – the proportion arbitrarily changed;
7. reinforcing bars – concrete element reinforced by steel bars.

Exercise 2. Translate the following word combinations into English:

1. to build – строительная бригада; дом, построенный этой бригадой;
2. to develop – развивающиеся страны, развитые страны;
3. to survey – топографические снимки, обследованная местность;
4. to mix – смешивающее устройство, смешанные ингредиенты;
5. to harden – затвердевающая бетонная смесь, затвердевшая смесь;
6. to reinforce – укрепляющая арматура, укрепленные конструкции.
Exercise 3. Open the brackets and use the right Participle.

1. Masonry is the building of structures from individual units (laid / laying) and (bound / binding) together.
2. Concrete is a composite building material (made / making) from the combination of aggregate and a binder such as cement.
3. Hardening of concrete may lead to tensile stresses (resulted / resulting) in cranks.
4. Concrete (placed / placing) in a plastic state can be (molded, molding).
5. Masonry is used for load- (born / bearing) walls and non-load- (born / bearing) walls.
6. For the foundations of small buildings wet concrete can be poured directly into trenches (dug / digging) into the earth below frost level.
7. Depending on the thickness of the structure to be built, the size of aggregate particles (used / using) can vary widely.
8. Concrete mixtures are usually (specified / specifying) in terms of ratios of cement, sand and aggregate (used / using).
9. The chemical reaction between cement and water (caused / causing) the paste to harden requires time.
10. The amount of water (added / adding) to this mixture is about 1 to 1,5 times the volume of the cement.

Exercise 4. Translate the following sentences with Participles and Participle constructions into Russian.

1. Pre-stressing concrete, we get high-strength structural elements having good durability.
2. While growing older, concrete grows stronger.
3. Being mixed with water, cement forms the cementing paste.
4. Causing the paste to harden, this reaction also binds the aggregates together.
5. While hardening, concrete adheres and bonds to the bars.
6. Keeping the water content low, we will get high-strength concrete.
7. Depending on applications, the proportions of the ingredients in the concrete can be altered.
8. Being delivered to the job site in a plastic state, concrete can be molded to any form.
9. Having been invented in 1928, the technique of overcoming concrete's natural weakness in tension became widely used throughout the world.
10. Having finalized the work here, the construction workers moved to a new construction site.
11. Having placed a steel mesh, they started pouring concrete.
12. Having been prefabricated in a factory, concrete elements are transported to the construction site.
Unit 8. Gerund and Infinitive

Grammar for revision: Gerunds

Exercise 1. Translate the sentences with Gerunds and Gerundial constructions.

1. We know of aggregates being extracted primarily from land quarries.
2. The decrease of environmental damage would be impossible without using recycled and waste materials as aggregates.
3. Gravel and sand have the advantage of being strong, durable and watertight.
4. Long ago people began making bricks by shaping clay into blocks and allowing them to dry hard in the sun.
5. The minister reported of the annual consumption of aggregate in Britain being equivalent to about 5 tons per person.
6. They improved the efficiency of work by using self-compacting concrete.
7. He insists on the of particle size being controlled very thoroughly.
8. They are interested in determining the optimal proportions of different-sized particles.
9. Aggregates are very predictable in their meeting the requirements of the specifications.
10. I am sure of his having included both sand and gravel in the concrete mixture he has made.

Grammar for revision: Gerund vs. Infinitive

Exercise 2. Complete the following sentences using either Gerund or Infinitive form of the verb in brackets.

1. We would like (introduce) our new supervisor to you.
2. We prefer better corrosion resistance of aluminum despite its (be) so expensive.
3. Can we really afford (spend) any more money on such expensive equipment?
4. (make) reinforced concrete, the steel rods are held in position and the concrete is poured round them.
5. Different kinds of mortar were used (hold) stones together.
6. The house needs (remodel) badly.
7. Please excuse our (take) so long (deliver) the last batch of concrete to the site.
8. In (proportion) the concrete mix, the aggregates are graded in size.
9. There is a big difference between (build) a house and (design) a computer system.
Grammar for revision: Infinitive and Infinitive Constructions (Complex Object, Complex Subject)

Exercise 3. Translate the following sentences with the Infinitive and Infinitive Constructions into Russian:

1. To avoid cracking, it is important to place concrete in accordance with the best recommended practice.
2. What needs to be done to increase the workability of concrete?
3. Will it be enough to add one gallon of water to each cubic yard of concrete?
4. It is advisable to use recycled/reused materials as concrete ingredients.
5. To deliver concrete to the construction site, one needs special vehicles.
6. They want us to pump concrete to where it is needed.
7. He wanted us to measure the workability of fresh concrete.
8. We know concrete to develop certain physical and chemical properties during hydration and hardening.
9. These shapes are reported to be very strong in compression.
10. This concrete is expected to have good mechanical strength and low moisture permeability because we followed all recommendations while we were making it.
11. Concrete compressive strength is considered to be relatively high, though its tensile strength is known to be significantly lower.
12. The reinforcement is specified to be provided by steel bars or mesh.
13. This construction element is likely to fail from tensile stresses as it has not been reinforced.

Grammar for revision: Complex Object with the Infinitive after to hear, to see, to watch, to feel, to notice, to make

Exercise 4. Open the brackets and use the infinitive with or without to.

1. We watch him (mix) cement, aggregate and water to make concrete.
2. He seems (work) hard on designing a structure that will function optimally.
3. We saw him (switch on) the concrete mixer.
4. The general contractor made the sub-contractor (sign) a compensation clause for delays.
5. They made him (provide) connection to the water supply and sewage systems.
6. I want you (help) me with choosing a sub-contractor.
7. I know a non-load-bearing wall (not support) any other load except its own weight.
8. They made him (check) the quality of concrete.
9. They usually don't normally force painters, plasterers and plumbers (use) specific products.
10. Last week I noticed him (put) less cement than it is required according to the specifications.
11. This training course will make you (become) a better civil engineer.

**Grammar for revision:** Complex Object with the Infinitive after to let, to allow, to enable, to help

- **let** + object + to infinitive
- **allow, enable** + object + to infinitive

**Exercise 5. Complete the gap in each sentence with the correct form of the verb in brackets.**

1. Building regulations do not allow construction companies (use) asbestos in public buildings.
2. Improving quality control will enable us (construct) more effectively.
3. Using a videophone allows you (see) the client you are talking to.
4. Regulations do not allow all unauthorized personnel (enter) this area.
5. Don’t let this problem (bother) you.
6. The internal design must enable office workers (move) freely from one part of the building to another and emergency escape routes must also be provided.
7. It will enable us (decrease) the total weight of the entire structure.
8. They let us (plan) partitions in the way we thought proper to separate rooms.

**Exercise 6. Complete the following sentences with let, allow, enable, help.**

1. Can you … me look through these documents, please?
2. Good air-conditioning systems … a large number of people to work in a single office.
3. Please … us know the exact time of delivery.
4. These special provisions … us to reduce the risk of fire.
5. This method will … the designers to calculate wind loads more exactly.
6. This special design … us to use this building both as business administration and storage purposes.
7. Who … you to use my computer?
8. Are you ready? Just … me finish this report. I won’t take more than five minutes.
Unit 9. Modals

 Grammar for revision: Ability: can/ could/ be able to

Exercise 1. Complete the blanks in text using can/ could/ be able to in a correct form.

1. She … translate this text from English into Russian. 2. Beam is a horizontal structural element, which … to withstand load primarily by resisting bending. 3. In columns steel … carry compressive loads as well as tensile ones. 4. You … mix concrete by hand for small jobs. 5. Concrete … be pumped to where it is needed because it is fluid. 6. You … to see cities surrounded by modern high-rise building. 7. Once the foundation was complete, the main part of the house … be built up. 8. The deep pile foundation … to support this high-rise building. 9. Designers … design complex structures using computer-aided design tools. 10. A sudden bulldozer breakdown meant that we … finish earthwork yesterday. 11. With these off-road tires, the vehicle … to perform well on rough ground.

 Grammar for revision: Requirement: need to/ have to/ must

Exercise 2. Match 1–7 with a-g to make sentences about a document management system.

1. We need to send the amendments a) enter. 2. You have to press b) has a serial number. 3. We have to log and c) first thing tomorrow. 4. We must make sure that each document d) track every document. 5. Key documents must be e) all the subcontractors. 6. The name has to be f) locked in the safe at night. 7. We have to keep certain documents g) written in capital letters. 8. This has to be sent to h) for three years.

Exercise 3. Fill in the blanks with the appropriate form of the modal verbs, need to/ have to/ must, to make statements.

1. The foundation … to be strong to hold up the building. 2. Wet plaster … be given a few weeks to dry out before that can be done. 3. The designer … plan the position of the crane, the location of the loads to be lifted and the position where they are to be placed in the building. 4. The first courses of bricks … to be built carefully because the whole building will rest on the. 5. Do you … to commute long distances by car or bus every day? 6. Floors … bear loads and be constructed in such a way as to ensure an even load distribution.
7. The walls … to carry and transmit loads, and they also … to provide acoustic isolation and security (restrict the spread of fire).

8. A civil engineer … to have a thorough knowledge of surveying, of the properties of construction materials, of the mechanics of structures and soils, and of hydraulics and fluid mechanics.

9. You … to have experience in pouring concrete.

10. You … be able to use a mechanized concrete mixer.


**Grammar for revision: Advice: should**

**Exercise 4. Complete the sentences using should/ shouldn’t.**

1. If you want to save time, you … rely on outdated construction technologies.
2. You … be more careful working on scaffolds.
3. Before buying this equipment, the buyers … get expert advice.
4. We … waste a lot of money on technology which we do not know how to use.
5. You … have any errors in your calculations, otherwise the building will collapse.
6. They … refuse to see the systems in operation which they want to buy.
7. Any civil engineering project … start with a feasibility study.
8. You … start a civil engineering project without assessing both financial and engineering aspects.
9. He … ignore the essential duties and responsibilities of a consulting engineer.
10. This is a very dusty environment; therefore, all workers … wear masks.

**Grammar for revision: Possibility: may/ might/ can/ can’t**

**Exercise 5. Fill in the blanks with can/can’t or may/might. More than one answer is possible.**

1. An apartment with only one room … be called a studio or a loft.
2. Maintenance … be carried out by the contractor as part of the agreement.
3. He said he … come to the meeting, but he was not sure.
4. You … get firefighting equipment here. You should go to Room 101 to get it.
5. They … have made some error in their calculations as the building is about to collapse.
6. You … smoke after this point (both positive and negative).
7. You … do your job in such a careless way!!!
8. He … have left the documents in the office.
9. The structure … be subject to different loads and must be designed properly.
10. People without authorization … enter this building.
11. You … possibly do it! It is very dangerous.

Unit 10. Conditionals

Grammar for revision: Types of conditional sentences
I type: if + Present Simple, Future Simple
II type: if + Past Simple, would + Infinitive
III type: if + Past Perfect, would + have + Participle II
if, only if = provided (providing that), on condition that; if … not = unless

Exercise 1. Translate the following sentences. Mind the translation of different types of conditional sentences.

1. If these machines have huge magnets, they require nonmetallic buildings. 2. If you used the corrosion proof reinforcement, you would extend the life of this concrete structure considerably. 3. If iron is left in contact with air and water it will rust. 4. The test won’t be continued unless there are better safety measures. 5. If you use 10 cm of concrete surface over the reinforcement, you will isolate steel from water. 6. If steel were less expensive, we would use it rather than that reinforcement. 7. If plastic reinforcement were as strong as steel, we would rather have it. 8. If the manufacture of Portland cement didn’t require the burning of large quantities of fuel, it would not result in significant emissions of pollutants. 9. If I were you, I would use metal as an external surface covering. 10. If they had used concrete of better quality, cracking would not have started so quickly.

Exercise 2. Supply the correct tense of the verbs in brackets.

1. If he … (have) more money, he would remodel the house.
2. If you … (add) less water to the concrete mixture, you would have got high-strength concrete.
3. If the proportions of the ingredients had been altered, concrete strength and durability would … (be) higher.
4. If you … (cover) it with something, it would not have got frozen.
5. If there had been maintenance problems, he would … (pay) for them.
6. If they … (have) a turnkey project, the building contractor would finance, design, construct and commission the whole project.
7. Where we … (be) without reinforced concrete today?
8. If you … (provide) support for less experienced staff, we would have
finished the project already.
9. If glass fiber were as strong as steel we would … (use) it because of its
being so inexpensive.
10. I … (ask) him if I … (be) you.

**Exercise 3. Two site workers are discussing the weather. Complete
the conversation with the correct form of the verbs in brackets.**

A: We will carry on with the work when the weather conditions …
(improve).
B: If we had known that weather was going to be this bad, we … (delay)
the start of the project.
A.: Well, if the rain … (stop) soon, we will get the foundations laid by
evening.
B.: It could have been worse. Do you remember building that bridge last
year? If we … (not build) the dike of sandbags, the river would have flooded the
town.
A.: And if we hadn’t brought that earthmover, we … (not make) it in time.
B.: If we get any more rain here, we … (have to) repair the potholes in the
road before we can use it.
A.: Provided it … (stop) soon, we will be able to start to prepare the
timber. If they had chosen another time of year, we … (not have) these
problems. It would be much nicer if we … (have) indoor jobs at this time of
year!

**Unit 11. Linkers**

*Grammar for revision: Relative clauses*

**Exercise 1. Match 1-7 to a-g to make sentences.**

1. Here's the letter which you          a) on his desk.
   2. The document that you          b) need is with the client.
   3. We are still looking for the drawings which  c) wrote this morning?
   4. The letter which I sent you yesterday  d) revised.
   5. Where is the contract that I signed   e) was not the final draft.
   6. Have you looked at the draft which I          f) last week?
   7. Here are the documents that we found   g) you redrafted.
Exercise 2. Read these sentences. Show where we can leave out which or that (if it is followed by a pronoun).

Example: It's about an email (which/that) I sent you on 27 May.
1. The manual which I sent you has not come back.
2. He needs to rebuild the foundation that he made two months ago.
3. We discussed the specifications which we received last week.
4. Where is the change order that was sent this morning?
5. The email which I sent last week was ignored.
6. I'm looking for the information pack that arrived this morning.
7. The documents which are kept in the safe are all confidential.
8. Where is the drawing which contains the details of the retaining wall?
9. Have they sent us the change order which we asked for?
10. It is our intention to bid for the project that was advertised on your website.
11. Is it your company that is repairing the bridge on the same highway?

Exercise 3. Insert which or that, if necessary (if it is not followed by a pronoun).

1. The letter … I sent yesterday has come back with the mark «not known at this address». 2. Have you seen the change order … arrived yesterday? 3. A load-bearing wall is known to be a wall … supports a vertical load as well as its own weight. 4. Where is the copy of the contract … I asked for? 5. He wants us to look at the drawings … are in the archives. 6. An unheated building, a cellar or a basement are examples of places … are often damp.

Grammar for revision: Conjunctions of contrast

Exercise 4. A small company is looking for a new site to build a new factory. The Director is discussing three possible sites. Join the sentences in A and B using the conjunctions of contrast in C.

Example: Site 1 provides a suitable amount of space but it’s the most expensive.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1 provides a suitable amount of space</td>
<td>It is the most expensive</td>
<td>But</td>
</tr>
<tr>
<td>It could be difficult</td>
<td>It is worth considering</td>
<td>Although</td>
</tr>
<tr>
<td>Roads and rail connections are not far away</td>
<td>A bridge across the river will be necessary</td>
<td>Although</td>
</tr>
<tr>
<td>It's surrounded by trees and close to the mountains</td>
<td>It is only 4 km from the nearest town</td>
<td>However</td>
</tr>
</tbody>
</table>
There is a large labor market. Workers in this area are unskilled even though Site 1 is close to road and rail connections. Site 2 is close to the airport. While Government finance is available for companies moving into the area. Nevertheless Site 2 is fairly small. Site 3 is almost too big. Whereas Site 3 is not expensive. It is in the center of town. Despite It may be difficult to get planning permission for new industrial buildings even though

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**Grammar for revision: Linking words**

**Exercise 5. List at least five reasons to major in construction. Use the linking words:**

a) to list: one, two three... / first, second, third... / firstly, first of all, secondly, thirdly / the main, the first, the greatest (advantage, reason, purpose, aim ...);

b) to add more points: then, next, later, moreover, in addition, besides, furthermore, what is more;

c) to balance: while/ whereas, on the one hand, on the other hand;

d) to finalize: lastly, finally, last but not least, now, to conclude, to sum up, all in all, all thing considered.

**Exercise 6. Read the paragraph and fill in the blanks using appropriate linkers.**

When building a house, (1)… … , the surveyor examines the site and makes a plan of the size and shape of the plot of land. (2)… , an architect makes a detailed drawing of the building, and gives information about the materials which are to be used. (3)… , a quantity surveyor calculates exactly how much of these materials will be needed for the building. (4)… , the ground is dug out and the foundation is laid. (5)… , carpenters make the wooden structures, masons place bricks, roofers construct the roof and plasterers cover walls and ceilings with plaster. (6)… , once the building has been completed, electricians lay meters of electrical cable, and plumbers install pipes for heating and water. (7)… , painters paint the walls and ceilings of the building. (8)… , jobs in construction are many and varied, ranging from architects to painters.
Список литературы