МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАНИ
Київський національний університет будівництва і архітектури

Фахова іноземна мова
(англійська)

У двох частинах
Частина перша

Методичні вказівки та завдання
до проведення практичних занять
для здобувачів першого (бакалаврського) рівня вищої освіти
спеціальності G19 «Будівництво та цивільна інженерія» за освітньою
програмою «Промислове і цивільне будівництво»

Київ 2025

УДК 504
Ф29

Укладачі: В. В. Сало, старш. викладач;
О. Є Вітрук, старш. викладач;
В. М. Повар, старш. викладач

Рецензент Н. А. Дубина, старш. викладач

Затверджено на засіданні кафедри мовної підготовки і комунікації протокол №3 від 23 січня 2025 року.

В авторській редакції.

Фахова іноземна мова : методичні вказівки /уклад : В. В. Сало,
Ф29 О. Є. Вітрук, В. М. Повар: у 2 ч. – Ч. 1. – Київ : КНУБА, 2025. – 36 с.

Містять матеріали для вивчення фахової англійської мови, тексти з відповідною лексикою та граматичні вправи.

Призначено для здобувачів першого (бакалаврського) рівня вищої освіти спеціальності G19 «Будівництво та цивільна інженерія» за освітньою програмою «Промислове і цивільне будівництво».

Загальні положення

Знання, вміння та навички з використання фахової мови займає провідну роль у професійній будівельній сфері. Вміння грамотно вести листування, комунікувати, використовуючи термінологію та розуміти письмовий текст, який містить важливу інформацію, що стосується безпосередньої професійної діяльності - ось основні навички, якими має володіти кожен студент. Методичні вказівки мають за мету - ознайомити студентів з відповідними текстами, лексикою та граматичними структурами англійської мови, що можуть бути корисними для професійного росту кожного.

Завдання - навчитися застосовувати викладений матеріал у професійній діяльності, також виробити навички читання та розуміння літератури англійською мовою, усного та писемного мовлення з урахуванням вимог до опанування програми Фахова іноземна мова.

При укладанні текстів використовувалась оригінальна література з відповідної тематики.

Module 1. Importance of Construction

1.1. Learn the common terms and definitions, followed by activities to test your understanding and use of these terms.

1. Construction
2. Networks
3. Environment
4. Significance
5. Skyscraper
6. Facilitate
7. Demand
8. Thriving
9. Maintain
10. Crucial
11. Quality
12. Enhance
13. Hindered
14. Population
15. Streamline
16. Ingenuity
17. Prosperous

Quizlet learning: https://quizlet.com/ua/932227266/module-1-flash-cards/?i=3q09s9&x=1qqt

1.2. Read the text.

The Importance of Construction in Modern Society

Construction plays a vital role in shaping the world we live in today. From towering skyscrapers to intricate road networks, the built environment is a testament to human ingenuity and progress. The significance of construction in modern society and the numerous ways it impacts our lives cannot be underestimated.

1._____

One of the primary functions of construction is the development of infrastructure. This includes the construction of roads, bridges, airports, and other transportation systems that facilitate the movement of goods and people. Without a well-developed infrastructure, economic growth and development would be severely hindered. Construction projects also involve the creation of public utilities such as water and sewage systems, which are essential for maintaining a healthy and livable environment.

2._____

Construction projects have a significant impact on the economy. They create jobs, stimulate economic activity, and attract investments. The construction industry is a major contributor to the GDP of many countries, and its growth is often seen as a sign of a thriving economy. The demand for construction services also drives the growth of related industries such as manufacturing and transportation. In addition, the construction of commercial and residential buildings provides spaces for businesses to operate and people to live, further fueling economic activity.

3. _____

As the global population continues to grow, so does the need for housing and urban infrastructure. Construction plays a crucial role in accommodating this population growth by creating new residential and commercial spaces. Urbanization, driven by construction, leads to the development of cities and towns, which become centers of economic activity and cultural exchange. However, it is essential to ensure that construction is done sustainably, considering the environmental impact and well-being of the communities affected.

4. _____

Construction projects not only provide physical structures but also contribute to improving the quality of life for individuals and communities. The construction of schools, hospitals, and other public facilities enhances access to essential services and promotes social well-being. Additionally, construction projects that focus on sustainability and energy efficiency help reduce environmental impact and create healthier living environments. By creating safe and functional spaces, construction enhances the overall well-being and happiness of society.

5. _____

The construction industry is constantly evolving, driven by innovation and technological advancements. New construction methods, materials, and technologies are being developed to improve efficiency, safety, and sustainability. From 3D printing to modular construction, these innovations are transforming the way buildings are designed and constructed. The integration of digital tools and automation also streamlines construction processes, leading to cost savings and improved project outcomes.

6_____

Construction is an essential component of modern society, shaping our cities, economy, and overall quality of life. It provides the infrastructure and spaces necessary for economic growth, accommodates population growth, and contributes to the well-being of individuals and communities. As the construction industry continues to innovate and adapt to new challenges, it will play an even more crucial role in building a sustainable and prosperous future.

1.3 Match the subtitles with the paragraphs 1-6

a. Improving Quality of Life
b. Conclusion
c. Economic Growth
d. Innovation and Technological Advancements
e. Urbanization and Population Growth
f. Infrastructure Development

1.4. Answer the questions:

1. Does construction develop only infrastructure?
2. Public utilities are roads, bridges, airports, and other transportation systems, aren’t they?
3. How does the construction industry influence economic growth of a country?
4. Is it possible that construction projects can reduce negative impact on environment? How?
5. Does the construction industry use innovative approaches? What are they?

1.5. Explain the following terms from the text in English (you may use dictionaries and additional tools to find out the meaning):

Urbanization, GDP, project outcomes, cost savings, sustainability, infrastructure, utilities.

Grammar Unit 1
Word order in English sentence.
Positive, negative and interrogative sentences.

1. Rearrange the words to form a correct sentence:

1. the / construction / role / in / world / a / vital / plays / shaping
2. primary / infrastructure / of / functions / development / one / the / is / of / construction
3. systems / of / facilitate / construction / movement / the / transportation / the / goods / and / people
4. economic / without / severely / growth / would / hindered / be / construction / infrastructure
5. the / built / a / is / to / environment / testament / human / progress / and / ingenuity
6. roads, / airports, / transportation / construction / other / of / systems / bridges, / involves / the
7. the / growth / construction / industry / GDP / major / contributor / many / countries
8. commercial / residential / buildings / spaces / provides / the / for / and / of / construction
9. urbanization, / leads / construction, / of / cities / driven / by / development / the / towns
10. centers / become / economic / cities / and / of / activity / exchange / cultural

2. Fill in the blanks with the correct word from the text:

1. Construction plays a vital role in shaping the _____ we live in today.
2. The built environment is a testament to human _____ and progress.

3. The construction of roads, bridges, airports, and other transportation _____ facilitates movement.
4. Without a well-developed infrastructure, economic _____ and development would be hindered.
5. Construction projects involve the creation of public _____ such as water and sewage systems.
6. Construction projects create jobs and stimulate economic _____.
7. The demand for construction services drives the growth of related _____.
8. Urbanization, driven by construction, leads to the development of cities and _____.
9. The construction of schools, hospitals, and other public _____ enhances access to services.
10. New construction methods, materials, and technologies improve efficiency, safety, and _____.

3. Question Formation. Form questions from the following statements:

1. The construction industry creates jobs. (What?)
2. Infrastructure development facilitates the movement of goods and people. (How?)
3. Construction of public utilities is essential for maintaining a healthy environment. (Why?)
4. Construction of residential buildings provides spaces for people to live. (Where?)
5. The construction industry is a major contributor to the GDP. (What?)
6. Urbanization leads to the development of cities. (What?)
7. New construction methods are transforming the way buildings are designed. (How?)
8. The construction of schools promotes social well-being. (Why?)
9. Innovations in construction lead to cost savings. (How?)
10. Construction projects focus on sustainability to reduce environmental impact. (Why?)

4. **Rewrite the sentences in the negative form:**

1. Construction projects create jobs and stimulate economic activity.
2. The construction industry is constantly evolving, driven by innovation and technological advancements.
3. Urbanization leads to the development of cities and towns
4. Construction plays a vital role in shaping the world we live in.
5. The built environment is a testament to human ingenuity and progress.
6. Construction of public utilities is essential for a healthy environment.
7. The construction industry is a major contributor to GDP.
8. New construction methods improve efficiency and safety.
9. Construction projects enhance the quality of life for individuals.
10. The demand for construction services drives the growth of related industries.

5. **Transform the given sentences using the words provided in parentheses:**

1. Construction projects also involve the creation of public utilities. (not only ... but also)
2. The demand for construction services drives the growth of related industries. (so ... that)
3. Construction projects create jobs. (both ... and)
4. Urbanization leads to economic activity and cultural exchange. (either ... or)
5. Construction is essential for economic growth. (neither ... nor)
6. New construction methods improve safety and efficiency. (both ... and)
7. The construction industry stimulates economic activity. (so ... that)
8. Construction of public utilities enhances a livable environment. (not only ... but also)
9. Innovations in construction are transforming the industry. (both ... and)
10. Construction of schools promotes social well-being. (neither ... nor)

Module 2: Health and Safety in Construction

2.1. Learn the common terms and definitions, followed by activities to test your understanding and use of these terms:

1. Hazard
   Definition: A potential source of harm or danger. In construction, hazards can be physical, chemical, environmental, or ergonomic.
   Example: Wet floors are a hazard that could cause slips and falls.
2. Risk
   Definition: The likelihood or probability that a hazard will cause harm. Risk is often assessed in terms of severity and likelihood.
   Example: The risk of falling from scaffolding is higher in windy conditions.
3. Personal Protective Equipment (PPE)
   Definition: Equipment worn to minimize exposure to hazards that cause injuries or illnesses. PPE can include helmets, gloves, safety goggles, hearing protection, etc.
   Example: Workers must wear PPE such as hard hats and gloves when working on the site.
4. Fall Protection
   Definition: Systems or equipment used to prevent or reduce the risk of a worker falling from heights.
   Example: Fall protection systems, such as guardrails and safety harnesses, are required on scaffolds.
5. Scaffolding
   Definition: A temporary structure used to support workers and materials during construction or maintenance at height.
   Example: Before starting work on the building, the contractor set up scaffolding around the perimeter.
6. Excavation
   Definition: The process of digging or removing earth, often in preparation for foundations or underground utilities.
   Example: Excavation work on the site was halted after a safety inspection identified risks of collapse.
7. First Aid

Definition: Emergency medical treatment given immediately after an injury to help prevent further harm or before professional medical help arrives.
Example: A worker received first aid after cutting his hand on a piece of metal.

8. Safety Inspection
   Definition: A thorough review of a construction site to identify and address safety hazards.
   Example: The supervisor conducted a safety inspection before allowing workers to begin the day's work.
9. Ergonomics
   Definition: The science of designing work environments and tasks to fit the worker's physical capabilities, minimizing strain and injury.
   Example: Proper ergonomics help prevent musculoskeletal disorders from lifting heavy loads incorrectly.
10. Electrical Hazard
    Definition: Any situation involving exposed or faulty electrical systems or equipment that can cause electrocution or fires.
    Example: Electrical hazards on the construction site included exposed wires and overloaded power circuits.
11. Contingency Plan
    Definition: A pre-established plan of action to deal with potential emergencies or unforeseen situations, such as accidents or natural disasters.
    Example: The project manager presented a contingency plan to address potential delays due to bad weather.
12. Manual Handling
    Definition: The process of lifting, carrying, pushing, or pulling materials by hand. Improper manual handling can cause injuries, particularly to the back.
    Example: The construction team was trained in safe manual handling techniques to avoid strain injuries.
13. Chemical Exposure
    Definition: The risk of inhaling or coming into contact with hazardous chemicals, such as solvents, paints, or asbestos.

Example: Workers handling solvents were required to wear masks and gloves to prevent chemical exposure.

14. Safety Signage

Definition: Signs that communicate safety information or warnings, such as hazard warnings, mandatory actions, or restricted areas.

Example: The construction site was clearly marked with safety signage to warn workers of falling debris.

15. Lockout/Tagout (LOTO)

Definition: Procedures used to ensure that dangerous machinery or equipment is properly shut off and cannot be started up again while maintenance or repair work is being done.

Example: The maintenance team used lockout/tagout procedures to safely repair the crane.

Quizlet learning

https://quizlet.com/ua/970822867/module-2-health-and-safety-in-construction-flash-cards/?i=3q09s9&x=1qqt

2.2. Match the vocabulary word to its correct definition

1. Fall Protection
2. PPE
3. Risk
4. Safety Inspection
5. Chemical Exposure
6. Scaffolding
7. Manual Handling
8. Ergonomics

a. Equipment worn to reduce injuries.

b. A temporary structure for working at height.

c. The process of lifting and carrying materials.

d. The likelihood of a hazard causing harm.

e. Assessing a construction site to find safety hazards.

f. The danger of coming into contact with harmful substances.

g. Systems to prevent falls from heights.
h. Designing tasks to prevent injury from repetitive movement.

2.3. Fill in the Blanks, use the vocabulary words to fill in the blanks below.

1. Workers must wear _____ like helmets and gloves while on the construction site to protect themselves from injury.
2. The construction company regularly conducts a _____ to ensure all equipment and tools are safe to use.
3. The _____ involved the excavation of soil to prepare for the building's foundation.
4. All workers involved in lifting heavy materials must be trained in proper _____ techniques to prevent back injuries.
5. _____ should be used when working with electrical systems to prevent the risk of electrocution.
6. During high winds, additional _____ should be installed on scaffolding to prevent accidents.

2.4. Read the statements and decide if they are True or False.

1. PPE includes only clothing such as hard hats and gloves.
   True / False
2. Fall Protection is required only when working on scaffolds more than 6 feet above the ground.
   True / False
3. A Risk Assessment involves identifying hazards and evaluating the potential severity of those hazards.
   True / False
4. Ergonomics focuses on improving safety through personal protective equipment.
   True / False
5. Scaffolding is a permanent structure used for workers' safety at height.
   True / False.

2.5. Discuss the following questions with a classmate or write your answers:

1. Why is it important to regularly perform safety inspections on a construction site?
2. How can employers reduce the risk of chemical exposure to workers?
3. In what ways does ergonomics play a role in preventing injuries on construction sites?

Grammar Unit 2

Present Tenses (Continuous, Simple, Perfect)

1. ***Complete the sentences using the Present Continuous tense.***

1. The workers _____ (wear) PPE such as hard hats and gloves.
2. The contractor _____ (set up) scaffolding around the perimeter.
3. They _____ (conduct) a safety inspection on the site.
4. The team _____ (dig) for the excavation process.
5. Workers _____ (use) fall protection systems on the scaffolds.
6. The manager _____ (assess) the risk of falling from scaffolding.
7. Engineers _____ (check) for electrical hazards in the building.
8. The crew _____ (train) on proper manual handling techniques.
9. The team _____ (prepare) a contingency plan for potential delays.
10. Construction workers _____ (install) safety signage around the site

2. ***Complete the sentences using the Present Simple tense.***

1. Wet floors _____ (be) a hazard that could cause slips and falls.
2. The risk of falling from scaffolding _____ (be) higher in windy conditions.
3. Workers _____ (wear) PPE to minimize exposure to hazards.
4. Fall protection systems _____ (include) guardrails and safety harnesses.
5. Scaffolding _____ (support) workers and materials during construction.
6. Excavation work _____ (begin) after the safety inspection.
7. A worker _____ (receive) first aid for minor injuries.
8. Safety inspections _____ (identify) and address potential hazards.
9. Proper ergonomics _____ (prevent) musculoskeletal disorders.

10. Electrical hazards _____ (pose) a significant risk on construction sites.

3. ***Complete the sentences using the Present Perfect tense.***

1. The workers _____ (wear) PPE to protect themselves.
2. The contractor _____ (set up) scaffolding for the project.
3. They _____ (conduct) multiple safety inspections.
4. The team _____ (complete) the excavation work.
5. Workers _____ (install) fall protection systems.
6. The manager _____ (assess) the risks of various hazards.
7. Engineers _____ (identify) electrical hazards in the area.
8. The crew _____ (receive) training on manual handling.
9. The team _____ (develop) a contingency plan for emergencies.
10. Construction workers _____ (put up) safety signage around the site.

4. ***Form questions in Present Continuous based on the prompts.***

1. What _____ the workers _____ (wear) on the site?
2. Where _____ the contractor _____ (set up) the scaffolding?
3. When _____ they _____ (conduct) the safety inspection?
4. Why _____ the team _____ (dig) at this location?
5. What type of fall protection systems _____ the workers _____ (use)?
6. How _____ the manager _____ (assess) the risks?
7. What hazards _____ the engineers _____ (check) for?
8. What techniques _____ the crew _____ (train) on?
9. What _____ the team _____ (prepare) for potential delays?
10. What kind of signage _____ the construction workers _____ (install)?

5. ***Complete the sentences using the correct form of Present Continuous, Present Simple, or Present Perfect.***

1. Wet floors _____ (be) a hazard that could cause slips and falls.
2. The workers _____ (wear) PPE such as hard hats and gloves right now.

3. The contractor _____ (set up) scaffolding around the perimeter yesterday.
4. They _____ (conduct) a safety inspection every week.
5. The team _____ (dig) for the excavation process since this morning.
6. Engineers _____ (check) for electrical hazards right now.
7. The team _____ (prepare) a contingency plan for potential delays over the past month.
8. Construction workers _____ (install) safety signage around the site last week.
9. Workers _____ (use) fall protection systems on the scaffolds at the moment.
10. Safety inspections _____ (identify) potential hazards and ensure safety.

Module 3: Building Materials

3.1. Learn the vocabulary to the text and read the text:

Essential
properties
lightweight
frame house
furniture
cement
gravel
versatile
durability
consumption
fiberglass
steel beams
moisture
piping
reduce
skyscrapers
mold

support
provide
efficiency
Learn the vocabulary with Quizlet:
https://quizlet.com/ua/982098232/module-3-building-materials-flash-cards/?i=3q09s9&x=1qqt

3.2. Read the text

Building Materials

Building materials are essential for the construction of homes, offices, schools, and many other structures. There are various types of materials used in construction, each with its own properties and uses. Let's explore some common building materials:

Wood

Wood is a natural material that has been used for construction for thousands of years. It is strong, lightweight, and easy to work with. Wood is commonly used for framing houses, making furniture, and creating decorative elements.

Concrete

Concrete is a composite material made of cement, sand, gravel, and water. It is known for its strength and durability. Concrete is often used for foundations, sidewalks, and buildings. It can be molded into different shapes and is very versatile.

Steel

Steel is a strong and flexible metal. It is used in the construction of large buildings, bridges, and skyscrapers. Steel beams and columns provide structural support and are essential for modern construction.

Brick

Bricks are made from clay and are commonly used for building walls. They are strong, durable, and fire-resistant. Bricks can be used in various patterns to create attractive designs and are often used in both residential and commercial buildings.

Glass

Glass is used in construction for windows, doors, and facades. It allows natural light to enter buildings and provides visibility. Modern glass can be treated to improve its strength and energy efficiency, making it a valuable building material.

Insulation Materials

Insulation materials, such as fiberglass and foam, are used to keep buildings warm in the winter and cool in the summer. They help to reduce energy consumption and improve the comfort of indoor environments.

Gypsum Board

Gypsum board, also known as drywall, is used to create interior walls and ceilings. It is easy to install and provides a smooth surface for painting and finishing.

Plastic

Plastics are used in various ways in construction, including piping, insulation, and flooring. They are lightweight, durable, and resistant to moisture.

Building materials play a crucial role in construction, providing the necessary strength, durability, and aesthetics for different structures. Understanding these materials helps students and professionals alike to make informed decisions in their construction projects

3.3. Decide whether the following statements are true or false:

1. Wood is a composite material made of cement, sand, gravel, and water.
2. Concrete is known for its flexibility and is commonly used for making furniture.
3. Steel beams and columns provide structural support in modern construction.
4. Bricks are made from glass and are used for building walls.
5. Glass allows natural light to enter buildings and provides visibility.
6. Insulation materials are used to reduce energy consumption in buildings.
7. Gypsum board is also known as drywall and is used for interior walls and ceilings.
8. Plastics are resistant to moisture and are used in various ways in construction.
9. Understanding building materials is crucial for making informed construction decisions.
10. Wood is commonly used for framing houses and creating decorative elements.

3.4. Choose the correct answer for each question:

1. What material is commonly used for framing houses?

a) Steel
b) Wood
c) Concrete
d) Brick

2. Which material is known for its strength and durability and is used for foundations?

a) Wood
b) Glass
c) Concrete
d) Plastic

3. What provides structural support in large buildings and skyscrapers?

a) Gypsum board
b) Steel beams and columns
c) Insulation materials
d) Bricks

4. What allows natural light to enter buildings?

a) Brick
b) Gypsum board
c) Concrete
d) Glass

5. Which materials are used to keep buildings warm in the winter and cool in the summer?

a) Insulation materials
b) Plastics
c) Steel
d) Wood

6. What is also known as drywall?

a) Concrete
b) Gypsum board
c) Insulation materials
d) Brick

7. What is used for creating piping, insulation, and flooring in construction?

a) Plastic
b) Steel
c) Glass
d) Concrete

8. What is made from clay and used for building walls?

a) Wood
b) Brick
c) Steel
d) Gypsum board

9. What material is treated to improve its strength and energy efficiency?

a) Concrete
b) Brick
c) Glass
d) Wood

10. What material has been used for construction for thousands of years?

a) Plastic
b) Glass
c) Gypsum board
d) Wood.

3.5. Match the building material with its description:

1. Wood
2. Concrete
3. Steel
4. Brick
5. Glass
6. Insulation materials
7. Gypsum boar
8. Plastic

A. A composite material made of cement, sand, gravel, and water.

B. A strong and flexible metal used in construction of large buildings.

C. A natural material used for thousands of years for construction.
D. Material made from clay, commonly used for building walls.
E. Used for windows, doors, and facades to allow natural light.
F. Materials like fiberglass and foam used to reduce energy consumption.
G. Also known as drywall, used for interior walls and ceilings.
H. Used for piping, insulation, and flooring, resistant to moisture.

3.6. Fill in the blanks with the correct building material:

1. _____ is a natural material that has been used for construction for thousands of years.
2. _____ is known for its strength and durability and is used for foundations.
3. _____ beams and columns provide structural support in large buildings and skyscrapers.
4. _____ are made from clay and are used for building walls.
5. _____ allows natural light to enter buildings and provides visibility.
6. _____ materials, such as fiberglass and foam, are used to reduce energy consumption.
7. _____ board, also known as drywall, is used for interior walls and ceilings.
8. _____ is used in various ways in construction, including piping and insulation.
9. Understanding _____ materials helps in making informed construction decisions.
10. Modern _____ can be treated to improve its strength and energy efficiency.

3.7. Answer the following questions in short sentences:

1. What are some common uses of wood in construction?
2. What makes concrete a versatile building material?
3. How is steel used in modern construction?
4. Why are bricks considered a durable building material?
5. What are the benefits of using glass in construction?
6. How do insulation materials improve the comfort of indoor environments?
7. What is the purpose of gypsum board in construction?

8. How are plastics used in construction?
9. Why is it important to understand different building materials?
10. How can modern glass improve energy efficiency in buildings?

Grammar Unit 3

Past simple, Present Perfect

Exercise 1. **Complete the sentences using the Past Simple tense:**

1. Last year, we _____ (build) a new office building in the city center.
2. The workers _____ (install) the glass windows yesterday.
3. She _____ (receive) safety training before starting the job.
4. They _____ (complete) the excavation work last month.
5. He _____ (supervise) the construction project for three years.
6. The company _____ (develop) new safety protocols last quarter.
7. We _____ (inspect) the scaffolding for any hazards.
8. The contractor _____ (set up) the equipment before the crew arrived.
9. The team _____ (find) several structural issues during the inspection.
10. They _____ (repair) the electrical system last week.

Exercise 2: Complete the sentences using the Present Perfect tense:

1. The workers _____ (wear) PPE throughout the project.
2. She _____ (conduct) several safety inspections this year.
3. They _____ (install) the new fall protection systems.
4. He _____ (work) on construction projects for over a decade.
5. We _____ (identify) potential hazards on the site.
6. The team _____ (finish) the excavation work recently.
7. The company _____ (implement) new safety measures.
8. They _____ (train) the crew on manual handling techniques.
9. The contractor _____ (set up) the scaffolding multiple times.
10. The supervisor _____ (develop) a comprehensive contingency plan.

Exercise 3: Form questions in the Past Simple tense:

1. When _____ the workers _____ (start) the project?
2. What _____ the contractor _____ (set up) before the crew arrived?
3. Where _____ she _____ (receive) her safety training?
4. How many inspections _____ they _____ (conduct) last month?
5. Why _____ he _____ (repair) the electrical system?
6. What _____ the company _____ (develop) last quarter?
7. Who _____ (supervise) the construction project?
8. When _____ we _____ (inspect) the scaffolding?
9. What issues _____ the team _____ (find) during the inspection?
10. How long _____ they _____ (build) the new office building?

Exercise 4: Form questions in the Present Perfect tense:

1. How long _____ the workers _____ (wear) PPE on the site?
2. How many safety inspections _____ she _____ (conduct) this year?
3. What new systems _____ they _____ (install) recently?
4. How long _____ he _____ (work) in construction?
5. What hazards _____ we _____ (identify) on the site?
6. When _____ the team _____ (finish) the excavation work?
7. What new measures _____ the company _____ (implement)?
8. How many training sessions _____ they _____ (conduct)?
9. How many times _____ the contractor _____ (set up) the scaffolding?
10. What comprehensive plan _____ the supervisor _____ (develop)?

Exercise 5: Complete the sentences using the Past Simple or Present Perfect tense:

1. Last year, we _____ (start) a new construction project.
2. The workers _____ (complete) the safety training this week.

3. She _____ (inspect) the site yesterday.
4. They _____ (install) the new windows this month.
5. He _____ (work) in construction for the past five years.
6. The company _____ (implement) new protocols last quarter.
7. We _____ (find) several issues during the latest inspection.
8. The contractor _____ (set up) the scaffolding before the crew arrived.
9. They _____ (repair) the electrical system last week.
10. The team _____ (develop) a new safety plan recently.

Module 4. Environment and construction.

4.1. Learn the vocabulary to the text and read the text:

Impact
environment
landfills
pollution
include
crucial
to be aware of
recycled
long-term
fuel
appliances
waste
excess
maintain
cost-effectively
equipment
silencer
rubber
achieve
reduce

Learn the following vocabulary with Quizlet:
https://quizlet.com/ua/982111785/module-4-environment-and-construction-flash-cards/?i=3q09s9&x=1jqt

4.2. Read the text

Environment and construction

Construction impacts the environment in both positive and negative ways. Buildings disrupt natural environments, but can also provide new, biodiverse areas and be created using green materials, minimising waste and energy-intensive production of materials. Let's take a look at how construction can help the environment and some of the job roles you can find in the industry.

According to some studies, construction is responsible for up to 50% of climate change. It also impacts landfills and air, water, and noise pollution. However, the industry is seeking to make positive changes to their ways of working, materials used and production, to minimise the negative effects of construction and protect the environment for future generations.

How the construction industry can help the environment? The construction industry can help support the environment in a number of ways, using new technology and developing greener materials is just the beginning.

Eco-friendly building design

Eco-friendly design includes the use of recycled materials, (which produce less CO2 in the manufacturing process), structural durability and long-term plans for energy and waste production. This part of the construction process is crucial to being aware of the environment and the impact each project could have. Smart appliances, solar panels and even the inclusion of natural light are all things designers consider to ensure a building's design is as eco-friendly as possible.

Green construction practices

Construction can be noisy, produce excess waste and be energy inefficient. That's why green construction practices are being introduced to minimise the negative effects of these issues. Quieter, fuel-efficient tools and machines are now available, as well as recycling and reusing materials where possible to reduce waste.

Sustainable building operations

Buildings are created to last, so it is important they will be as efficient as they can

be while they stand and impact an environment. As well as durable materials, people who use the building should be educated how to maintain good environmental practices such as recycling, managing waste and being energy efficient.

Limiting the environmental impact of construction

For construction projects on existing buildings, there are ways to limit some negative environmental impacts.

Limit fuel usage

Proper maintenance of tools and equipment which require fuel is key to limiting how much they need. Leaving them running idle is wasteful and should be avoided. There are also technologies available to manage maintenance and replacing parts more cost-effectively.

Reduce noise

To reduce noise pollution, construction managers should consider different processes which use quieter equipment, or a quieter process to achieve the same result. Metal-on-metal impact can be reduced by using rubber panels or covers and barriers erected around noisier sites to help reduce their impact. Some tools can also be fitted with silencers. The HSE has an article on noise reduction.

4.3. Decide whether the following statements are true or false:

1. Buildings always have a negative impact on natural environments.
2. Construction can use green materials to minimize waste.
3. Construction is responsible for up to 50% of climate change.
4. The construction industry is not making any changes to protect the environment.
5. Eco-friendly design includes the use of recycled materials.
6. Solar panels are considered in eco-friendly building designs.
7. Green construction practices aim to minimize noise and waste.
8. Quieter, fuel-efficient tools are part of green construction practices.
9. Sustainable building operations focus only on the initial construction phase.
10. Reducing fuel usage is a way to limit the environmental impact of construction.

4.4. Fill in the blanks with the correct word from the text:

1. Buildings disrupt natural environments, but can also provide new, _____ areas.
2. Construction is responsible for up to 50% of _____ change.
3. The industry is seeking to make positive changes to their ways of working, materials used and _____.
4. Eco-friendly design includes the use of _____ materials.
5. Smart appliances, solar panels, and natural light are part of _____-friendly design.
6. Green construction practices aim to minimize the negative effects of noise and _____.
7. Quieter, fuel-efficient tools and machines are now _____.
8. Buildings are created to last and should be as _____ as possible.
9. Proper maintenance of tools and equipment is key to limiting _____ usage.
10. Rubber panels or covers can reduce _____ impact.

4.5. Choose the correct answer for each question:

1. What can buildings provide besides disrupting natural environments?

a) Biodiverse areas
b) More pollution
c) Higher noise levels
d) None of the above

2. What percentage of climate change is construction responsible for?

1. 10%
2. 25%
3. 50%
4. 75%

3. What does eco-friendly design include?

a) Use of new materials
b) Use of recycled materials
c) Use of older construction methods

d) None of the above

4. Which of the following is part of green construction practices?

a) Using louder machines
b) Producing more waste
c) Recycling and reusing materials
d) Ignoring environmental impact

5. What are smart appliances used for in eco-friendly designs?

a) Reducing noise
b) Increasing energy consumption
c) Improving energy efficiency
d) Adding to waste production

6. What is crucial for being aware of the environmental impact of a construction project?

a) Using cheap materials
b) Ignoring waste production
c) Long-term plans for energy and waste production
d) None of the above

7. What should people using the building be educated about?

a) How to increase energy usage
b) How to recycle and manage waste
c) How to avoid maintenance
d) None of the above

8. What is a key method to limit fuel usage?

a) Using older tools
b) Proper maintenance of tools and equipment
c) Leaving tools running idle
d) None of the above

9. How can noise pollution be reduced in construction?

a) Using louder equipment
b) Increasing metal-on-metal impact
c) Erecting barriers around noisier sites
d) Ignoring noise levels

10. What should be used to manage maintenance and replace parts more cost-effectively?

a) Traditional methods
b) Old technologies
c) New technologies
d) None of the above

4.6. Match the concept with its description:

1. Eco-friendly design
2. Green construction practices
3. Sustainable building operations
4. Limiting fuel usage
5. Reducing noise

A. Includes the use of recycled materials and smart appliances.
B. Involves using quieter, fuel-efficient tools and recycling materials.
C. Ensures buildings are efficient throughout their lifespan.
D. Proper maintenance and avoiding idle running of equipment.
E. Using rubber panels and erecting barriers to reduce impact.

4.7. Answer the following questions based on the text:

1. How does construction impact the environment positively?
2. What is the construction industry's responsibility in climate change?
3. How can eco-friendly building design help the environment?
4. What are green construction practices aiming to minimize?
5. Why is it important for buildings to be sustainable?
6. How can fuel usage be limited in construction projects?
7. What methods can be used to reduce noise pollution during construction?
8. How can people using a building contribute to its sustainability?
9. Why is proper maintenance of construction tools important?
10. What role do smart appliances play in eco-friendly designs?

Grammar Unit 4

Past Perfect, Past Continuous

1. Complete the sentences using the Past Perfect tense:

1. Before they introduced green materials, construction projects _____ (have) a significant negative impact on the environment.
2. By the time new technologies were adopted, the industry _____ (contribute) to 50% of climate change.
3. They _____ (finish) the eco-friendly building design before starting on the construction.
4. The company _____ (develop) quieter, fuel-efficient tools before starting the project.
5. Until then, they _____ (ignore) the importance of sustainable building operations.
6. The construction team _____ (install) solar panels by the end of the month.
7. Before recycling practices were introduced, construction sites _____ (generate) excess waste.
8. The industry _____ (seek) to minimize the negative effects of construction before implementing green practices.
9. The designers _____ (consider) natural light in the buildings' designs before finalizing the plans.
10. The workers _____ (reduce) noise pollution by using rubber panels before beginning the main construction.

2. Complete the sentences using the Past Continuous tense:

1. While they _____ (build) the new structure, they considered the impact on natural environments.
2. The construction team _____ (install) eco-friendly materials when the inspector arrived.
3. They _____ (develop) quieter tools during the initial phase of the project.
4. The designers _____ (plan) for the inclusion of solar panels.
5. The company _____ (seek) to make positive changes in their practices.
6. Engineers _____ (monitor) the noise levels throughout the construction.
7. Workers _____ (set up) barriers to reduce noise pollution.

8. The project manager _____ (educate) the team on environmental practices.
9. They _____ (recycle) materials to minimize waste.
10. The construction crew _____ (use) fuel-efficient machines during the project.

3. Form questions in the Past Perfect tense:

1. What _____ the construction industry _____ (do) to minimize the negative effects before implementing green practices?
2. How _____ they _____ (reduce) the impact on landfills before introducing recycling?
3. When _____ the company _____ (develop) new safety protocols?
4. Why _____ the team _____ (install) eco-friendly materials before the main construction?
5. What _____ designers _____ (consider) before finalizing the building plans?
6. Where _____ the workers _____ (reduce) noise pollution before the project started?
7. How _____ the industry _____ (support) the environment before adopting new technologies?
8. When _____ they _____ (educate) the team on sustainable practices?
9. Why _____ they _____ (seek) to make positive changes in their methods?
10. What _____ they _____ (include) in the design plans before starting the construction?

4. Form questions in the Past Continuous tense:

1. What _____ the construction team _____ (do) when the inspector arrived?
2. How _____ they _____ (develop) quieter tools?
3. What _____ designers _____ (plan) for the eco-friendly building?
4. Why _____ the company _____ (seek) positive changes?
5. Who _____ (monitor) the noise levels during construction?
6. What _____ workers _____ (set up) to reduce noise pollution?

7. How _____ the project manager _____ (educate) the team on environmental practices?
8. What _____ they _____ (recycle) to minimize waste?
9. Why _____ the crew _____ (use) fuel-efficient machines?
10. When _____ engineers _____ (monitor) the construction process?

5. Complete the sentences using the correct form of Past Perfect or Past Continuous tense:

1. They _____ (build) new structures while considering their environmental impact.
2. Before the industry introduced green practices, they _____ (generate) significant waste.
3. While they _____ (develop) eco-friendly materials, they also looked at reducing CO2 emissions.
4. The team _____ (reduce) noise pollution by using silencers before beginning the project.
5. They _____ (seek) to make positive changes in their methods while developing new technologies.
6. The construction crew _____ (install) solar panels when the weather improved.
7. Before recycling practices were implemented, the sites _____ (create) a lot of waste.
8. They _____ (educate) the workers on sustainable practices during the training session.
9. The company _____ (plan) for sustainable operations before starting the building project.
10. While the team _____ (use) fuel-efficient tools, they also maintained them properly.

MODULAR CONTROL

Variant 1

Part 1: Grammar (Past Simple, Present Perfect, Past Perfect, Past Continuous)

Complete the sentences with the correct tense.

1. Last year, the construction team _____ (use) eco-friendly materials to reduce the environmental impact.
2. They _____ (develop) new green construction practices over the past decade.
3. Before adopting quieter tools, they _____ (cause) significant noise pollution in the area.
4. While the workers _____ (install) the solar panels, the inspector arrived.
5. The industry _____ (seek) to minimize the negative effects of construction before implementing sustainable operations.
6. By the time they _____ (complete) the safety inspection, the site was already active.
7. They _____ (consider) various eco-friendly designs when they started the project.
8. Proper maintenance of tools _____ (limit) fuel usage since last year.
9. The construction team _____ (educate) the workers on recycling while they were setting up the site.
10. They _____ (implement) new noise reduction methods during the construction phase.

Part 2: Vocabulary (Fill in the Blanks)

Complete the sentences with the appropriate vocabulary from the texts.

1. _____ can be used to minimize waste and energy-intensive production of materials.
2. The construction industry is responsible for up to 50% of _____ change.
3. Smart appliances and solar panels are part of _____-friendly building design.
4. _____ practices are introduced to reduce the negative effects of construction.
5. _____ materials help maintain good environmental practices in buildings.
6. The industry is seeking to make _____ changes to their ways of working.

7. _____ pollution can be reduced by using quieter equipment and processes.
8. The company introduced _____-efficient tools to minimize fuel usage.
9. They _____ (have) significant impact on landfills before adopting recycling practices.
10. _____ design considers the long-term plans for energy and waste production.

1 answer = 5 points

Variant 2

Part 1: Grammar (Past Simple, Present Perfect, Past Perfect, Past Continuous)

Complete the sentences with the correct tense.

1. The construction team _____ (introduce) green materials last year to reduce their environmental impact.
2. Over the past decade, they _____ (adopt) new technologies for sustainable construction.
3. Before implementing noise reduction methods, they _____ (generate) high levels of noise pollution.
4. While the engineers _____ (monitor) the noise levels, the construction was ongoing.
5. The company _____ (seek) to minimize waste production since the beginning of the project.
6. By the time the project _____ (begin), they _____ (conduct) several safety inspections.
7. They _____ (design) the eco-friendly building while considering energy efficiency.
8. The construction industry _____ (develop) greener materials to support the environment.
9. They _____ (educate) workers on sustainable practices during the training sessions.
10. The team _____ (reduce) noise pollution by using rubber panels before starting the main construction.

Part 2: Vocabulary (Fill in the Blanks)

Complete the sentences with the appropriate vocabulary from the texts.

1. Buildings _____ natural environments but can provide new, _____ areas.
2. The construction industry is responsible for up to _____% of climate change.
3. Eco-friendly building design includes the use of _____ materials.
4. _____ construction practices are introduced to reduce excess waste.
5. Durable materials and proper maintenance help achieve _____ building operations.
6. The industry is _____ to make positive changes in materials and production methods.
7. Noise pollution can be reduced by using _____ equipment.
8. Fuel _____ tools are essential for limiting environmental impact.
9. Proper _____ of tools and equipment can limit fuel usage.
10. Sustainable _____ plans are crucial for long-term energy efficiency.

1 answer = 5 points

Variant 3

Part 1: Grammar (Past Simple, Present Perfect, Past Perfect, Past Continuous)

Complete the sentences with the correct tense.

1. The industry _____ (implement) new green practices last year to reduce environmental impact.
2. Recently, they _____ (develop) a new method to minimize noise pollution.
3. Before adopting recycling practices, they _____ (dispose) of materials wastefully.
4. While the construction team _____ (install) solar panels, the engineers monitored the process.
5. The company _____ (seek) to make changes in material usage for several years.
6. By the time the building was completed, they _____ (conduct) multiple safety checks.
7. They _____ (design) the eco-friendly building to maximize natural light.

8. The team _____ (adopt) fuel-efficient tools since the beginning of the project.
9. They _____ (educate) the workers on sustainable practices during the entire training period.
10. The workers _____ (reduce) fuel usage by maintaining their equipment properly before the project started.

Part 2: Vocabulary (Fill in the Blanks)

Complete the sentences with the appropriate vocabulary from the texts.

1. _____ can help minimize waste and reduce energy-intensive production.
2. Construction is responsible for up to _____% of climate change.
3. Eco-friendly design includes using _____ materials.
4. Green construction practices aim to minimize noise and _____.
5. _____ building operations ensure efficiency and durability over time.
6. The industry is _____ positive changes in working methods and material usage.
7. Noise _____ can be managed by using quieter equipment.
8. Proper maintenance of _____-efficient tools helps limit fuel usage.
9. Ensuring _____ of tools and equipment is key to limiting environmental impact.
10. _____ designs focus on long-term plans for energy and waste management.

1 answer = 5 points

Список джерел

1. https://bidbookcompany.eu/the-importance-of-construction-in-modern-society/
2. https://www.autodesk.com/blogs/construction/types-construction-documents/
3. https://www.goconstruct.org/why-choose-construction/whats-happening-in-construction/construction-and-the-environment/
4. Quizlet resource for learning URL: www.quizlet.com

Навчально-методичне видання

Фахова іноземна мова
(англійська)

У двох частинах

Частина перша

Методичні вказівки та завдання
до проведення практичних занять
для здобувачів першого (бакалаврського) рівня вищої освіти
за спеціальністю G19 «Будівництво та цивільна інженерія» за освітньою
програмою «Промислове і цивільне будівництво»

Укладачі: **Сало** Вікторія Василівна;
Вітрук Ольга Євгенівна;
Повар Вікторія Миколаївна

Комп'ютерне верстання *А. П. Селівестрової*

Підписано до друку. Формат 60 × 84 1/ 16.
Ум. друк. арк.2,09. Обл.-вид. арк. 2,25.
Вид. № 3/IV-25. Зам. № 5/1-25

Видавець і виготовлювач
Київський національний університет будівництва і архітектури

Повітрофлотський проспект, 31, Київ, Україна, 03037

Свідоцтво про внесення до Державного реєстру суб'єктів
видавничої справи ДК № 808 від 13.02.2002