

МІНІСТЕРСТВО ОСВІТИ І НАУКИ, МОЛОДІ ТА СПОРТУ УКРАЇНИ  
ХАРКІВСЬКА НАЦІОНАЛЬНА АКАДЕМІЯ МІСЬКОГО ГОСПОДАРСТВА

**МЕТОДИЧНІ ВКАЗІВКИ**  
**ДО ВИКОНАННЯ САМОСТІЙНОЇ ТА КОНТРОЛЬНОЇ РОБОТИ**  
**З ДИСЦИПЛІНИ “ІНОЗЕМНА МОВА” (АНГЛІЙСЬКА МОВА)**

(для студентів 1 курсу заочної форми навчання  
напряму 6.060103 “Гідротехніка (Водні ресурси)”  
спеціальності “Водопостачання та водовідведення”)



Харків – ХНАМГ - 2012

Методичні вказівки до виконання самостійної та контрольної роботи з дисципліни “Іноземна мова” (англійська мова) (для студентів 1 курсу заочної форми навчання напряму 6.060103 “Гідротехніка (Водні ресурси)” спеціальності “Водопостачання та водовідведення”)/ Харк. нац. акад. міськ. госп-ва; уклад.: Г.Б. Сергєєва. – Х.: ХНАМГ, 2012. – 43с.

Укладач: Г.Б. Сергєєва

Методичні вказівки до виконання самостійної та контрольної роботи відповідають змісту програми учбової дисципліни “Іноземна мова” та націлені на формування навичок практичного володіння англійською мовою в обсязі загальної тематики необхідної для комунікативної спроможності в сферах професійного та ситуативного спілкування.

Рекомендовано для студентів 1 курсу заочної форми навчання.

Рецензент: доцент кафедри іноземних мов ХНАМГ,  
канд. філол. наук Ільєнко О.Л.

Рекомендовано кафедрою іноземних мов  
протокол № 1 від 30.08.2011 р.

## Методичні рекомендації для студентів щодо виконання контрольних завдань та оформлення контрольних робіт.

Перед тим як виконувати контрольну роботу студенту необхідно докладно вивчити граматичний матеріал, для чого надається список рекомендованої літератури з граматики англійської мови. Перекладаючи текст, слід користуватися англо-українським словником.

Роботи студентів повинні відповідати наступним вимогам:

а) перша сторінка зошита залишається вільною для рецензії викладача. У зошиті повинні бути поля для зауважень та рекомендацій рецензентів;

б) вся контрольна робота виконується в зошиті в *лінію*;

в) завдання (Tasks) переписуються в зошит; завдання (Tasks) перекладати рідною мовою не потрібно;

г) матеріал контрольної роботи слід розміщати у зошиті за наступним зразком:

(текст на англійській мові)	(текст на рідній мові)	Поля

д) виконуючи лексико-граматичні завдання кожне речення потрібно переписувати у зошит та перекладати на рідну мову;

е) перекладаючи *текст* з англійської мови на рідну, кожне речення слід писати *з нового рядка*: речення на англійській мові – з лівої сторони, а переклад – з правої сторони сторінки зошита;

ж) скорочення слів при перекладі на рідну мову не допустимі.

Перевірена контрольна робота повинна бути виправлена студентом згідно з вказівками рецензента, а недостатньо засвоєні теми семестру слід проробити додатково перед усним заліком.

Якщо контрольна робота виконана без дотримання вказівок чи не повністю, вона повертається студенту без перевірки.

Номер варіанту, який виконує студент заочного відділення, визначається по останній цифрі номера залікової книжки: 1, 2 – **варіант 1**; 3, 4 – **варіант 2**; 5, 6 – **варіант 3**; 7, 8 – **варіант 4**; 9, 0 – **варіант 5**.

### Вимоги до заліку

До заліку допускаються студенти, які виконали передбачене програмою контрольне завдання та склали усний переклад текстів за фахом. До текстів повинен бути складений словник, яким можна користуватися при перекладі.

Для отримання заліку необхідно

1) виконати контрольне завдання на впізнавання і правильний переклад граматичних форм,

2) знати лексичний мінімум до текстів (30 лексичних одиниць у семестр)

Студенти, які не захистили контрольну роботу, не допускаються до заліку (чи до екзамену) за відповідний навчальний період.

Приклад оформлення контрольної роботи:

Міністерство освіти і науки, молоді та спорту України  
Харківська національна академія міського господарства

Контрольна робота № ... варіант .....  
з дисципліни.....  
(англійська мова)  
студента заочної форми навчання ..... курсу  
спеціальності .....  
.....  
(прізвище, ім'я та по батькові)  
шифр залікової книжки .....

Кафедра іноземних мов  
Перевірила .....

Харків 2012 -2013

## Контрольне завдання 1

Для того, щоб вірно виконати контрольне завдання 1, необхідно засвоїти наступний граматичний матеріал:

1. Іменник. Множина. Артиклі та прийменники як показники іменника.  
Висловлювання відмінкових відносин у англійській мові за допомогою прийменників та закінчення 's. Іменник в функції означення та його переклад на рідну мову.
2. Прикметник. Ступені порівняння прикметників. Конструкція типу *the more...the less; as...as; not so...as*.
3. Числівники: кількісні, порядкові, вживання артикля з числівниками.
4. Займенники: особові, питальні, вказівні, неозначені та заперечні.
5. Видо-часові форми дієслова: Indefinite (Present, Past, Future) у дійсному стані. Відмінювання дієслів *to be, to have* в Indefinite (Present, Past, Future). Наказовий спосіб та його заперечна форма.
6. Просте поширене речення: порядок слів розповідного, спонукального, питального та заперечного речення. Зворот *there + to be*.

7. Головні випадки словотворення: суфікси іменників, прикметників, дієслів, заперечні префікси.

### Зразок виконання 1.

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of sentences A, B and C.**

- A. Ancient Rome is famous for *its* water and wastewater systems.  
a) Is ancient Rome famous for its water and wastewater systems?  
b) Is ancient Rome or Greece famous for its water and wastewater systems?  
c) Ancient Rome is famous for its water and wastewater systems, isn't it?  
d) What is famous for its water and wastewater systems?  
e) Whose water and wastewater systems is ancient Rome famous for?

### Зразок виконання 2.

**Task 2. Arrange these words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

1 pipe / Single / are / systems / designed / no longer / constructed / or

1. Single pipe systems are no longer designed or constructed.	Системы с одной единственной трубой более не создаются и не сооружаются.
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### Зразок виконання 3.

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

1 The Roman Aqueducts are among the \_\_\_\_\_ (*great*) achievements in the history of Europe.

1. The Roman aqueducts are among <u>the greatest</u> achievements in the history of Europe.	Римские акведуки - среди самых больших достижений в истории Европы.
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### Зразок виконання 4.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline them and define the tense form. Translate the sentences into your native language.**

1 The Roman technology of the capture of the waters \_\_\_\_\_ (*be*) almost a total mystery.

1. The Roman technology of the capture of the waters <u>is</u> almost a total mystery. <i>is – Present Indefinite (Active)</i>	Методы удерживания вод римлянами являются почти полной тайной.
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### Зразок виконання 5.

**Task 5. Write these figures out in full.**

29 p	- twenty nine pence
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3 /10/2012 (American)	- the 10th of March, (twenty twelve) 2012
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**Зразок виконання 6.**

**Task 6. Complete the paragraph using *a/an, the* and *zero* article and underline the options.**

In (1) the early second century, (2) the Emperor Trajan completed (3) a great restoration of (4) the existing Roman city aqueducts.

**Зразок виконання 7.**

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new form of the word. Translate the sentences into your native language.**

1 The major motive for water \_\_\_\_\_ was better tasting drinking water. (PURIFY)

1. The major motive for water <u>purification</u> was better tasting drinking water.	Главным основанием для очистки воды было улучшение ее вкуса.
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**Зразок виконання 8.**

**Task 10. Find the word in the text which means the following.**

1	the use of a chemical, physical, or biological agent to preserve or give particular properties to something	<i>treatment</i>
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**Варіант 1**

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of sentences A, B and C.**

- A. Government agencies carefully regulate the disposal of *toxic waste*.
- B. Non toxic wastes do not pose *a serious threat* to the environment or animals.
- C. Toxic waste is dangerous *to humans, animals and plant life*.

**Task 2. Arrange the words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

- 1 U.S. / Most/ have / cities / tap/ safe / water
- 2 moves/ The water / from / reservoir / one / to another
- 3 snow / Ice / and / directly / can sublimate/ water / vapour / into
- 4 is/ Industry / major/ a/ source/ water/ of/ pollution
- 5 a need / There is / on protecting / to focus / resources / water

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

- 1 Oxygen is \_\_\_\_\_ (*soluble*) in water than nitrogen is.
- 2 The \_\_\_\_\_ (*small*) the filter size the \_\_\_\_\_ (*good*) the chance of removing dissolved substance that cause taste and odor problems.
- 3 Chlorine is perhaps one of the \_\_\_\_\_ (*dangerous*) poisons in our drinking water

supply.

- 4 Air and water are the \_\_\_\_\_ (precious) gifts of the nature, are very essential not only to the man kind but flora and fauna also.
- 5 Theoretically reverse osmosis is so far the \_\_\_\_\_ (absolute) water purification technique.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline the chosen options and define the tense forms. Translate the sentences into your native language.**

- 1 In May 2010, a group of 20 students and two faculty members \_\_\_\_\_ (travel) on an Experiential Learning trip to Nicaragua to learn about health issues facing rural Nicaraguans.
- 2 Water filtration \_\_\_\_\_ (date) back circa 2000 B.C. in Egypt.
- 3 The purification process usually \_\_\_\_\_ (contain) many steps.
- 4 The shortage of drinking water \_\_\_\_\_ only \_\_\_\_\_ (keep increasing) as the population growth will not halt.
- 5 Water \_\_\_\_\_ (be) an important factor in the location of the earliest settled communities.
- 6 Within the next fifty years, the population growth - coupled with industrialization and urbanization – \_\_\_\_\_ (result) in an increasing demand for water.

**Task 5. Write these figures out in full.**

- |   |                 |    |                         |
|---|-----------------|----|-------------------------|
| 1 | £172.5          | 6  | early1980s              |
| 2 | \$62.94         | 7  | 1/2%                    |
| 3 | 50 <sup>o</sup> | 8  | 9.36 (time, informal)   |
| 4 | 2,000,000       | 9  | (number of years ) 2009 |
| 5 | 254th           | 10 | 10 /3/2012 (British)    |

**Task 6. Complete the paragraph using a/an, the or zero articles and underline the options.**

In (1)\_\_\_ ancient Greek and Sanskrit (India) (2)\_\_\_ writings dating back to (3)\_\_\_2000 BC, water treatment methods were recommended. People back than knew that heating (4)\_\_\_ water might purify it, and they were also educated in (5)\_\_\_ sand and gravel filtration, boiling, and straining. (6)\_\_\_ major motive for water purification was (7)\_\_\_ better tasting drinking water, because people could not yet distinguish between (8)\_\_\_ foul and clean water. Turbidity was (9)\_\_\_ main driving force between (10)\_\_\_ earliest water treatments. Not much was known about micro organisms, or chemical contaminants.

After 1500 BC, (11)\_\_\_ Egyptians first discovered (12)\_\_\_ principle of coagulation. They applied (13)\_\_\_ chemical alum for suspended particle settlement. Pictures of this purification technique were found on the wall of (14)\_\_\_ tomb of Amenophis II and Ramses II.

After 500 BC, Hippocrates discovered (15)\_\_\_ healing powers of water. He invented (16)\_\_\_ practice of sieving water, and obtained (17)\_\_\_ first bag filter, which was called (18)\_\_\_ 'Hippocratic sleeve'. (19)\_\_\_ main purpose of (20)\_\_\_ bag was to trap sediments that caused bad tastes or odours.

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new forms of the words. Translate the sentences into your native language.**

- 1 The \_\_\_\_\_ of waste water management becomes a critical part of our "green" philosophy. (IMPORTANT)
- 2 Water \_\_\_\_\_ and water quality are already an issue in many parts of the world. (SCARCE)
- 3 Plastic litter is also a major water pollutant, causing enormous \_\_\_\_\_ to marine life. (DISTRUST)
- 4 Do you know how much water you \_\_\_\_\_ consume every day? (ACTUAL)
- 5 Water is central to the \_\_\_\_\_ plans of the fastest growing economies of Asia, the Middle East and Latin America. (DEVELOP)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### ANCIENT ROME: WATER SUPPLY

Romans, at first, turned to the Tiber River, local springs, and shallow wells for their drinking water; but water obtained from these sources grew polluted and became inadequate for the city's growing population. It was this necessity that led to the development of aqueduct technology. The date of the first aqueduct is assigned to the year 312 B.C.

During the time of Frontinus, nine aqueducts conveyed water from distant springs and streams to Rome. The water in the aqueducts descended gently through concrete channels. Multi-tiered viaducts were used to cross low areas. Inverted siphons were employed (sparingly) when valleys were particularly deep. Tunnels, burrowed through hills too difficult to skirt, were equipped with vertical shafts for inspection and cleaning. Debris cleaned from the tunnels was dumped beside the openings to the vertical shafts. Modern archaeologists have been able to locate long abandoned conduits by finding the piles of debris.

Various vestiges of aqueduct bridges are still in evidence in and around modern Rome. The popular but inaccurate image is that Roman aqueducts were elevated throughout their entire length on lines of arches. Roman engineers were very practical; whenever possible the aqueducts followed a steady downhill course at or below ground level. Inverted siphons, viaducts, and tunnels were used sparingly, when difficult conditions could not be met by any other techniques. The system of aqueducts serving Rome had only 5 percent of its total distance supported by viaducts or bridges.

In the long run, the elevated sections were not an unqualified success. Both archaeological and written evidence indicate they required extensive and frequent repairs, which entailed lengthy interruptions in the flow of water.



The aqueduct channels were equipped with air vents or inspection holes. The channels were usually rectangular in the cross-section and varied from 0.5 to 2.0 meters in width and from 1.5 to 2.5 meters in depth. Sometimes two or three channels were superimposed, the upper ones being added to the original to accommodate increasing demand.

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*Sextus Julius Frontinus (ca. 40–103 AD) was one of the most distinguished Roman aristocrats of the late 1st century AD. He is best known as an author of technical treatises, especially one dealing with the aqueducts of Rome.*

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 Why was it necessary for Romans to develop the aqueduct technology?
- 2 What were the aqueduct channels made from?
- 3 What fact proves that Roman engineers were very practical?

**Task 10. Find the words in the text which mean the following.**

- 1 a shaft sunk into the ground to obtain water, oil, or gas \_\_\_\_\_
- 2 the application of scientific knowledge for practical purposes, especially in industry \_\_\_\_\_
- 3 a person who designs, builds, or maintains engines, machines, or structures \_\_\_\_\_
- 4 scattered pieces of rubbish or remains \_\_\_\_\_
- 5 a bridge or viaduct carrying a waterway over a valley or other gap \_\_\_\_\_

## Вариант 2

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of all the five the sentences.**

- A. The collected rain provides a useful source of *additional water*.
- B. Non toxic waste does not cause injury or harm to *living organisms*.
- C. Towns and municipalities are also major sources of *water pollution*.

**Task 2. Arrange the words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

- 1 have / Humans/ tremendous / a / impact / on /them
- 2 water/ The / cycle / involves / exchange / the / heat / of / energy
- 3 water/ Waste / encompass/ can/ a range/ potential / of / contaminants
- 4 is/ Water / essential/ human / for / survival/ well-being / and
- 5 many / There are / ways / different / to collect/ water / rain

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

- 1 In an emergency, boiling is the \_\_\_\_\_ (*good*) way to disinfect water.
- 2 Houses \_\_\_\_\_ (*old*) than 20 years and less than five years are most at risk.
- 3 Lead, asbestos and specific chemical contaminants are much \_\_\_\_\_ \_\_\_\_\_ (difficult) and therefore much \_\_\_\_\_ \_\_\_\_\_ (*expensive*) to test for.
- 4 Some of the \_\_\_\_\_ \_\_\_\_\_ (*dangerous*) chemicals are present only in trace amounts but are highly toxic even at these minute levels.
- 5 This report documents some of the \_\_\_\_\_ \_\_\_\_\_ (*effective*) strategies to control urban runoff pollution, which is among the top sources of water contamination today.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline the chosen options and define the tense forms. Translate the sentences into your native language.**

- 1 We often \_\_\_\_\_ different treatment techniques, called physical/ chemical treatment techniques. (*use*)
- 2 In the early 1960s developments in agricultural production, sponsored by international funding agencies, \_\_\_\_\_ to what came to be called the Green Revolution. (*lead*)
- 3 Within the next fifty years, the world population \_\_\_\_\_ by another 40 to 50 %. (*increase*)
- 4 The company authorities believe they \_\_\_\_\_ water from that source in a bottle for resale. (*place*)
- 5 We all know that life started from the water and water *is* one of the most important sustaining factors of life.
- 6 As recently as 1995, all of the factories in Hong Kong \_\_\_\_\_ their detergents, toxic chemicals, and waste water into the territory's harbor. (*dump*)

**Task 5. Write these figures out in full.**

- |   |           |    |                                 |
|---|-----------|----|---------------------------------|
| 1 | £183.4    | 6  | late 1990s                      |
| 2 | \$57.29   | 7  | 4 <sup>1</sup> / <sub>2</sub> % |
| 3 | 68°       | 8  | 7.19 ( <i>time, informal</i> )  |
| 4 | 5,000,000 | 9  | ( <i>number of years</i> ) 2003 |
| 5 | 378th     | 10 | 20 /5/2012 ( <i>British</i> )   |

**Task 6. Complete the paragraph using *a/an, the* or *zero* articles and underline the options.**

(1)\_\_\_ Irrigation was not (2)\_\_\_ major concern because of (3)\_\_\_ terrain and (4)\_\_\_ intermittent rivers. (5)\_\_\_ Romans did, however, drain marshes to obtain more farmland because they were concerned about (6)\_\_\_ bad air, or (7)\_\_\_ "harmful spirits," rising from (8)\_\_\_ marshes, which they thought caused (9)\_\_\_ disease. (10)\_\_\_ disease-carrying mechanism was not (11)\_\_\_ air but (12)\_\_\_ malaria-

carrying mosquito. (13)\_\_\_ Empedocles, (14)\_\_\_ leading statesman of Acragas in Sicily during (15)\_\_\_ Persian War (sixth century B.C.E. ), drained (16)\_\_\_ local marshes of Selinus to improve (17)\_\_\_ people's health. He also theorized that all matter is made of four elements: earth, air, fire, and water.

(18)\_\_\_ fall of the Roman Empire extended over (19)\_\_\_ 1,000-year transition period called (20)\_\_\_ Dark Ages. During this period, (21)\_\_\_ concepts of science related to water resources probably retrogressed.

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new forms of the words. Translate the sentences into your native language.**

- 1 The problem of water pollution by untreated sewage and waste water remains \_\_\_\_\_ today.(SIGNIFY)
- 2 Sewage treatment plants also \_\_\_\_\_ receive industrial and household toxic wastes. (INEVITABLE)
- 3 Water plays a fundamental role in the climate \_\_\_\_\_ cycle. (REGULATE)
- 4 Students investigate natural water \_\_\_\_\_ in their home watershed. (PURIFY)
- 5 Waste water \_\_\_\_\_ treatment cleans sewage and returns clean water into the environment. (MANAGE)

**Task 8. Read the text and give the written translation of the text into your native language.**

ANCIENT ROME: WATER QUALITY

As one might expect, Roman water quality standards were remedial, taking into consideration only such factors as taste, temperature, smell, and appearance. Since the quality of water from the nine aqueducts varied, the worst waters were used for artificial lakes and irrigation, and the best for drinking. The aqueducts carrying water to Rome were covered to prevent the water from being contaminated by dust, dirt, and other impurities and from being heated by the sun. The best quality waters came from the valley of the Anio River.

One source (Anio Novus) from that watershed, however, did have a water quality problem every time it rained. Roman engineers first tried mixing it with water from a nearby clear spring. Next they tried running it through a small settling basin. Because of design problems with the basin, this too was unsuccessful. Finally the condition of the water was improved by carrying the head of the aqueduct higher up the valley to a reservoir formed behind an immense dam near Subiaco. The artificial lake served efficiently as a settling basin and the quality of the water was improved.

The dam at Subiaco was built to form a pleasure lake for the Emperor Nero. It was a straight masonry dam and reached a maximum height of approximately 40 meters. The Subiaco Dam was the highest such structure built by the Romans and their only known use of dam technology in Italy. It failed in 1305 without leaving a trace.

It has been hypothesized that Rome's dependence on lead water pipes led to its decline. It has been suggested that the aristocracy died off from nothing more complicated than simple lead poisoning.

Since almost all of the lead absorbed by the human body is deposited in bones, investigators have studied the bones of ancient Romans. While some studies did indicate above normal concentrations of lead, it seems unlikely that water pipes were a contributing factor. As it was correctly pointed out by an expert lead pipes would not have caused contamination for two reasons: (1) because the Roman water contained high concentrations of calcium which formed deposits inside the pipes, insulating the lead and (2) because lead will never greatly affect running water.

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*Subiaco is a town and commune in the Province of Rome, in Lazio, Italy, 40 kilometres from Tivoli alongside the river Aniene.*

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What factors specify Roman drinking water as standard?
- 2 What factor influenced the quality of water?
- 3 What chemical element insulated the lead inside the Roman pipes?

**Task 10. Find the words in the text that mean the following.**

- 1 the state or quality of being impure \_\_\_\_\_
- 2 the degree or intensity of heat present in a substance or object, especially as expressed according to a comparative scale and shown by a thermometer or perceived by touch \_\_\_\_\_
- 3 a barrier constructed to hold back water and raise its level, forming a reservoir used to generate electricity or as a water supply \_\_\_\_\_
- 4 the act or process of contaminating or the state of being contaminated \_\_\_\_\_
- 5 a large area of water surrounded by land \_\_\_\_\_

### Вариант 3

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of the sentence.**

- A. Water occurs as a liquid *on the surface of the Earth* under normal conditions.
- B. *Non toxic* waste does not contaminate water bodies.
- C. I'm interested in *following an environmentally responsible lifestyle*.

**Task 2. Arrange the words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

- 1 earth / The / a / has / limited / amount/ water/ of
- 2 cycle / Water / exerts / influence / an/ climate/ on
- 3 can / Pollution / harm / resources / water / and / ecosystems/ aquatic
- 4 waste / Toxic / is / product / the / industry / of / or / commerce
- 5 information / There is / on / all / the / UK / companies/ water

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

- 1 Despite their size, more than 30 of the 47 \_\_\_\_\_ (large) rivers showed at least moderate threats to water security due to a range of human impacts such as pollution and irrigation.
- 2 Removal of contaminants can also be done through \_\_\_\_\_ (difficult) specific chemical processes.
- 3 Test water to know if water filtration will be \_\_\_\_\_ (good) than a distiller to remove problems.
- 4 The petition and report find major gaps in bottled water regulation and conclude that bottled water is not necessarily \_\_\_\_\_ (safe) than tap water.
- 5 \_\_\_\_\_ (easy) way to collect rain water is using a rain barrel or rain butt.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline the chosen options and define the tense forms. Translate the sentences into your native language.**

- 1 Next month water utilities \_\_\_\_\_ to reduce the pumping cost. ( need)
- 2 Pollution of surface and groundwater \_\_\_\_\_ (reduce) the supplies of readily available, clean water.
- 3 Sewage \_\_\_\_\_ (come) from water that collected on roofs and high-standing areas.
- 4 Bottled water \_\_\_\_\_ (be) simply water from some source.
- 5 According to a 2004 National Water Quality Inventory agriculture \_\_\_\_\_ (be) one of the leading sources of impairment in the rivers, lakes.
- 6 Climate change \_\_\_\_\_ (have) a significant impact on the sustainability of water supplies in the coming decades.

**Task 5. Write these figures out in full.**

- |   |                 |    |                                  |
|---|-----------------|----|----------------------------------|
| 1 | £122.70         | 6  | early 2010s                      |
| 2 | \$25.24         | 7  | 10 <sup>1</sup> / <sub>2</sub> % |
| 3 | 60 <sup>o</sup> | 8  | 2.48 (time, informal)            |
| 4 | 27,000,000      | 9  | (number of years ) 2007          |
| 5 | 135th           | 10 | 13 /4/2012 (British)             |

**Task 6. Complete the paragraph using a/an, the or zero articles and underline the options.**

(1)\_\_\_ aqueducts ended in Rome at distribution reservoirs, from which (2)\_\_\_ water was conveyed to public baths or fountains. (3)\_\_\_ few very wealthy or privileged citizens had water piped directly into their homes, but most of (4)\_\_\_ people carried water in containers from (5)\_\_\_ public fountain. Water was running constantly, (6)\_\_\_ excess being used to clean (7)\_\_\_ streets and flush (8)\_\_\_ sewers. Ancient aqueducts and pipelines were not capable of withstanding much pressure. Channels were constructed of ( 9)\_\_\_ cut stone, brick, rubble, or rough concrete. Pipes

were typically made of (10)\_\_\_ drilled stone or of hollowed wooden logs, although clay and lead pipes were also used. During (11)\_\_\_ Middle Ages there was no notable progress in (12)\_\_\_ methods or materials used to convey and distribute water.

Cast-iron pipes with joints capable of withstanding high pressures were not used very much until (13)\_\_\_ early 19th century. (14)\_\_\_ steam engine was first applied to water-pumping operations at about that time, making it possible for all but (15)\_\_\_ smallest communities to have (16)\_\_\_ drinking water supplied directly to individual homes. (17)\_\_\_ Asbestos cement, ductile iron, reinforced concrete, and steel came into (18)\_\_\_ use as (19)\_\_\_ materials for water supply pipelines in (20)\_\_\_ 20th century.

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new forms of the words. Translate the sentences into your native language.**

- 1 Water quality standards relating to wastewater are \_\_\_\_\_ set by national bodies. (USUAL)
- 2 Waste water management \_\_\_\_\_ cleans sewage and returns clean water into the environment. (TREAT)
- 3 Countries, industries and companies are critically \_\_\_\_\_ on water. (RELY)
- 4 Not many city \_\_\_\_\_ have a well in their backyards today. (DWEL)
- 5 Taps are an important micro-component of domestic water \_\_\_\_\_. (CONSUME)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### ANCIENT ROME: WATER USAGE

Water was provided for a variety of uses including fountains (which served as sources for culinary water) and latrines, and for more exotic activities such as public baths and sham naval battles. With few exceptions, the water from the aqueducts reached only the ground floor of apartment buildings. The tenants of the upper floors had to rely on slaves to carry water or go themselves and draw water from the nearest fountain. Because fire was a constant concern, Romans were encouraged to keep water stored in their rooms.

It is not difficult to imagine the problem sixth-floor residents, with no running water, had in dealing with fire and public sanitation. Residents of apartment buildings lived with a constant fear of fire. Many must also have lived in a constant state of squalor. In fact, fire probably served an important public sanitation function.

We know that Rome was struck by massive fires on several occasions. Most notable was the fire during the reign of the Emperor Nero which destroyed large sections of Rome because the city had no effective means of stopping the spread of the fire.

Besides private connections and fountains, the aqueducts supplied water to latrines. Many of Rome's were sumptuous. All around the circular or rectangular structure, water flowed continuously in small channels. One of the more elaborate establishments had 20 seats made of marble and each seat was framed by sculptured brackets in the form of dolphins. Occasionally the latrine was cheered by the sounds and sights of a fountain. Latrines were heated; nothing is colder than marble.

Two common forms of entertainment - baths and sham naval battles required large quantities of water. During the Roman Empire, baths became more and more elaborate, providing not only bathing facilities, but games, lectures, musical performances, calisthenics, and places to lounge and gossip. The baths had hot, warm, and cold water pools. The water in the pools was changed several times each day. The air and water were heated by a number of underground furnaces. These furnaces were like bakers' ovens. Water of two different temperatures - hot and warm - circulated automatically by thermo-siphon.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 Why was it necessary for Romans to develop the aqueduct technology?
- 2 What were the aqueduct channels made from?
- 3 What fact proves that Roman engineers were very practical?

**Task 10. Find the words in the text which mean the following.**

- 1 conditions relating to public health, especially the provision of clean drinking water and adequate sewage disposal \_\_\_\_\_
- 2 a person who lives somewhere permanently or on a long-term basis \_\_\_\_\_
- 3 a part or division of a building enclosed by walls, floor, and ceiling \_\_\_\_\_
- 4 a small area of still water, typically one formed naturally \_\_\_\_\_
- 5 an ornamental structure in a pool or lake from which one or more jets of water are pumped into the air \_\_\_\_\_

## Вариант 4

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of the sentence.**

- A. *In many public water systems*, pollution exceeds safe levels.
- B. Non toxic waste does not spread *easily*.
- C. It's important to educate oneself about *important water conservation* facts.

**Task 2. Arrange the words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

- 1 mole / Each / water / of / has / mole / one / of / oxygen
- 2 sun / The / heats / in / water/ and/ oceans / seas
- 3 water / Waste / come / can / storm / from / drains
- 4 is / Water / not evenly/ throughout / distributed / world/ the
- 5 many / There are / systems / different / rain / of / collection/ water

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

- 1 Bottled water is not necessarily \_\_\_\_\_ (*clean*) or \_\_\_\_\_ (*safe*) than most tap water, according to the study.
- 2 The \_\_\_\_\_ (*good*) way to protect our human right to water is to understand how water becomes scarce and how it is contaminated.
- 3 The \_\_\_\_\_ (*high*) the concentration of dissolved oxygen, the \_\_\_\_\_ (*good*) the water quality.
- 4 What could be \_\_\_\_\_ \_\_\_\_\_ (*convenient*) than having fresh 3 or 5-gallon water delivery brought to your door every two weeks?
- 5 Heavy metals are the \_\_\_\_\_ \_\_\_\_\_ (*dangerous*) metals.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline the chosen options and define the tense forms. Translate the sentences into your native language.**

- 1 Within the next fifty years, the population growth \_\_\_\_\_ (*have*) serious consequences on the environment.
- 2 A benefit of all home filtration systems \_\_\_\_\_ (*be*) that they are passive.
- 3 A group of students and faculty members regularly \_\_\_\_\_ (*travel*) on an experiential learning trip to the rural areas to learn about health issues facing the people there.
- 4 During the 20th century, the world population \_\_\_\_\_ (*triple*) , while water use per person \_\_\_\_\_ (*increase*) by six times.
- 5 They hope water utilities \_\_\_\_\_ to reduce the pumping cost soon. (*not/ need*)
- 6 In 2000, water pollution by agriculture activities \_\_\_\_\_ (*contribute*) to 48% of reported problems in water quality of the impaired rivers and streams.

**Task 5. Write these figures out in full.**

- |   |                 |    |                                 |
|---|-----------------|----|---------------------------------|
| 1 | £133.40         | 6  | late 1960s                      |
| 2 | \$54.84         | 7  | 8 <sup>1</sup> / <sub>2</sub> % |
| 3 | 60 <sup>o</sup> | 8  | 6.16 ( <i>time, informal</i> )  |
| 4 | 11,000,000      | 9  | ( <i>number of years</i> ) 2002 |
| 5 | 624th           | 10 | 8 /6/2012 ( <i>British</i> )    |

**Task 6. Complete the paragraph using *a/an, the* or *zero* articles and underline the options.**

(1)\_\_\_ early Romans devoted much of their time to useful public works projects. They built (2)\_\_\_ roads, harbor works, aqueducts, temples, forums, town halls, arenas, baths, and sewers. (3)\_\_\_ prosperous early Roman citizen typically had (4)\_\_\_ dozen-room house, with (5)\_\_\_ square hole in (6)\_\_\_ roof to let rain in and (7)\_\_\_ cistern beneath (8)\_\_\_ roof to store (9)\_\_\_ water. Many aqueducts were built by (10)\_\_\_ Romans, who, however, were not (11)\_\_\_ first to build these. King Sennacherio built aqueducts, as did both (12)\_\_\_ Phoenicians and (13)\_\_\_ Helenes.



(14)\_\_\_ Romans and (15)\_\_\_ Helenes needed extensive aqueduct systems for their fountains, baths, and gardens. They also realized that water transported from springs was better for their health than river water and did not require lifting (16)\_\_\_ water to street level as did river water. Roman aqueducts were built on elevated structures to provide (17)\_\_\_ needed slope for water flow. Knowledge of pipe making—using bronze, lead, wood, tile, and concrete—was in its infancy, and the difficulty of making large high-quality pipes was (18)\_\_\_ hindrance. Most Roman piping was made of lead, and even (19)\_\_\_ Romans recognized that water transported by lead pipes posed (20)\_\_\_ health hazard.

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new forms of the words. Translate the sentences into your native language.**

- 1 Effective waste water \_\_\_\_\_ returns clean water into the environment. (TREAT)
- 2 The facts about water \_\_\_\_\_ will make people realize the need to protect our water sources. (POLLUTE)
- 3 A number of private water companies operated \_\_\_\_\_ throughout England in local areas. (HISTORY)
- 4 \_\_\_\_\_ are very important to protect drinking water against germs. (DISINFECT)
- 5 Water \_\_\_\_\_ by customers and water leakage is significant. (USE)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### ANCIENT ROME: PER CAPITA WATER USEAGE

One unresolved historical problem regarding water use bears discussion: the quantity of water provided by the aqueducts. In general, data provided by archeological evidence and written accounts fall short of that required for the computation of either per capita supply or per capita use. The cross-sectional areas of the aqueducts are known, but one cannot be sure the conduits ever ran full. Sizing of the channels was probably determined as much by the need for work space. It was certainly a rare occasion when the aqueducts were all working at the same time. Another uncertainty is the population of Imperial Rome. No accurate estimate exists for any particular period. It is generally assumed that during Frontinus' era the population of Rome was approximately one million.

Early opinions on the amount of water delivered by the aqueducts varies from a low of 322,000 cubic meters per day to a high of 1,010,623. Later on there was made an estimate of the per capita useage of the middle and lower classes. That computed to a per capita water use of 67 liters per day. This quantity or water was satisfactory, but not lavish. Contemporary residential customers in the United States require approximately 250 liters per person per day.

But comparing Roman water supply and usage rates with contemporary needs is problematic. It is commonly felt that water to ancient Rome was delivered in a constant flow instead of on-demand (as with modern systems). For example, water flowed through a latrine in one continual stream, not just when flushed as is the case with the modern toilet. Fountains ran night and day. For this reason, to compare a per

capita water use figure for Rome with a twentieth-century figure is somewhat misleading.

The Romans also diverted water into storage tanks. Archaeologists have uncovered large cisterns in Rome, many received water from the aqueducts. It is safe to assume that Rome received the impressive supply of water, and that the rich and influential received a disproportionate amount. But the water supply for the common Roman was still sufficient. By historic standards, Roman's water supply was a very impressive accomplishment.

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*Sextus Julius Frontinus (ca. 40–103 AD) was one of the most distinguished Roman aristocrats of the late 1st century AD. He is best known as an author of technical treatises, especially one dealing with the aqueducts of Rome.*

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What does one of the unresolved historical problems concern?
- 2 What was the sizing of the channels determined by?
- 3 How much water did the Romans presumably received?

**Task 10. Find the words in the text which mean the following.**

- 1 a person who buys goods or services from a shop or business \_\_\_\_\_
- 2 a channel for conveying water or other fluid \_\_\_\_\_
- 3 the action or fact of moving along in a steady, continuous stream \_\_\_\_\_
- 4 a tank for the storage of water, esp on or within the roof of a house or connected to a WC \_\_\_\_\_
- 5 a quantity of something, especially the total of a thing or things in number, size, value, or extent \_\_\_\_\_

## **Вариант 5**

**Task 1. Make up a a) general question, b) alternative question, c) tail-question, d) a question to the subject and e) a special question to the italicized part of the sentence.**

- A. Many different industries recycle *their toxic waste*.
- B. Non toxic waste does not kill *you* or mutate *you*.
- C. Wasting water is a *significant environmental* problem.

**Task 2. Arrange the words in the right order. Use a capital letter to begin each sentence. Translate the sentences into your native language.**

- 1 ozone / The/ has / strong/ very / characteristics/ oxidation
- 2 currents / Air / move / vapor / water / the globe/ around
- 3 can / Sewage / come / industrial / waste/ from

- 4 water/ A / body / is / significant / any / accumulation / water/ of  
 5 commercially / There are / available / filters/ distillation

**Task 3. Fill in the gaps with the correct adjectives in comparative and superlative form and underline them. Translate the sentences into your native language.**

- 1 The oxygen content in the body of a living organism is usually the \_\_\_\_\_ (*high*) in the respiratory system.
- 2 Is bottled water \_\_\_\_\_ (*safe*) than tap water?
- 3 The world became \_\_\_\_\_ (*industrial*) and \_\_\_\_\_ (*small*) due to communications and trade.
- 4 The \_\_\_\_\_ (*great*) contributors to toxic pollution are herbicides, pesticides and industrial compounds.
- 5 Consequently, the \_\_\_\_\_ (*deep*) a well is drilled in a recharge area, the \_\_\_\_\_ (*low*) the water level is in the well stands below land surface.

**Task 4. Put the verbs in brackets into the correct tense form (Present Indefinite, Past Indefinite, Future Indefinite), underline the chosen options and define the tense forms. Translate the sentences into your native language.**

- 1 The term *water crisis* \_\_\_\_\_ (*be*) a general term used to describe a situation where the available water within a region is less than the region's demand
- 2 Within the next 15 years, India's demand for water \_\_\_\_\_ (*exceed*) all its sources of supply
- 3 All home filtration systems \_\_\_\_\_ (*require*) no electricity to filter the water.
- 4 The dumping of radioactive waste into the seas and oceans \_\_\_\_\_ (*be*) a common occurrence in the later parts of the 20th century.
- 5 The government guarantees this July issue paper \_\_\_\_\_ (*examine*) the operation of water management projects in the state as one of the most significant.
- 6 Historically until the 20th century, rainwater \_\_\_\_\_ (*be*) one of the main supplies used domestically especially in developing countries.

**Task 5. Write these figures out in full.**

- |                   |                                   |
|-------------------|-----------------------------------|
| 1 £163.80         | 6 early 2000s                     |
| 2 \$58.14         | 7 4 <sup>1</sup> / <sub>2</sub> % |
| 3 60 <sup>o</sup> | 8 4.27 ( <i>time, informal</i> )  |
| 4 13,000,000      | 9 ( <i>number of years</i> ) 2005 |
| 5 109th           | 10 5 /8/2012 ( <i>British</i> )   |

**Task 6. Complete the paragraph using *a/an, the* or *zero* articles and underline the options.**

After (1)\_\_\_ fall of (2)\_\_\_ Roman empire, (3)\_\_\_ aquaducts were no longer used. From 500 to 1500 A.D. there was little development in (4)\_\_\_ water treatment area. In (5)\_\_\_ Middle Ages countless cities were manifested. In these cities (6)\_\_\_ wooden plumbing was used. (7)\_\_\_ water was extracted from (8)\_\_\_ rivers or wells,

or from outside (9)\_\_\_ city. Soon, circumstances became highly unhygienic, because (10)\_\_\_ waste and excrements were discharged into(11)\_\_\_ water. (12)\_\_\_ People that drank this water fell ill and often died. To solve (13)\_\_\_ problem people started drinking water from outside (14)\_\_\_ city, where rivers were unpolluted. This water was carried to(15)\_\_\_ city by so-called water-bearers.

(16)\_\_\_ first drinking water supply that supplied (17)\_\_\_ entire city was built in Paisley, Scotland in 1804 by John Gibb, in order to supply his bleachery and(18)\_\_\_ entire city with (19)\_\_\_ water. Within three years, filtered water was transported to Glasgow.

In 1806 Paris operated (20)\_\_\_ large water treatment plant. (21)\_\_\_ water settled for 12 hours, before it was filtered. Filters consisted of sand and charcoal and were replaced every six hours.

In 1827, (22)\_\_\_ Englishman James Simpson built (24)\_\_\_ sand filter for drinking water purification. Today, we still call this (23)\_\_\_ number one tribute to public health.

**Task 7. Fill in the gaps with the derivatives of the words in brackets. Underline the new forms of the words. Translate the sentences into your native language.**

- 1 People realize the need to protect our water sources and the \_\_\_\_\_ towards the nature. (RESPONSE)
- 2 This study deal with the drinking water \_\_\_\_\_ methods used in the 20th century. (DISINFECT)
- 3 There are many \_\_\_\_\_ facilities for industrial effluents. (TREAT)
- 4 Water pollution is a huge \_\_\_\_\_ and a health problem. (ECOLOGY)
- 5 \_\_\_\_\_ ago the water industry in England was fully privatized by the government. (APPROXIMATE)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### ANCIENT ROME: WASTEWATER SYSTEMS

Water from the baths, latrines, palaces, fountains, etc., as well as other urban runoff was discharged into Rome's drainage and wastewater collection system. Several centuries before the birth of Christ, Etruscan engineers built the initial drainage system whose main outlet into the Tiber River still exists 28 centuries later. The covered drains were designed on such a large scale that in certain sections wagons loaded with hay could drive through with ease. Rome's sewers and drains emptied directly into the Tiber, whose polluted state must have been a constant problem for the Roman populace.

The Roman sewers have been overpraised. Despite their longevity, they ignored basic sanitary principles. They carried sewage, urban runoff, and drainage water together. This multiple employment made it necessary to have large openings along the streets. These openings exposed Rome's populace to the effluvia of the sewers. To mitigate this danger to public health, Romans had only two protections:

(1) the masses of water from infiltration and the aqueducts which constantly flushed the drains, and (2) the hilly nature of the city which gave the drains a steep slope.

The Roman sewer system probably carried off at least as much water as the aqueducts provided. Consumptive use in Rome was not high and there was a lot of infiltration into the drains from groundwater (parts of Rome are constructed over swamps). The flow of the Tiber River was greatly increased by discharges from Rome's sewers.

Although the ancient sewers were very skillfully constructed, they were not used to their full potential. There were few private connections to the sewers. Even with the wastewater system's shortcoming, it is astonishing to note the absence of significant improvements in collection systems until the 1840's, some 17 centuries later.

Romans without indoor facilities were forced into one of two options. For a relatively small charge they could enter one of the city's public latrines or they could use chamber pots. (The Roman latrine system must represent one of history's earliest employments of the pay toilet, or more correctly, pay latrine, since the modern toilet was not invented until the sixteenth century.)

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*Etruscan civilization is the modern English name given to a civilization of ancient Italy in the area corresponding roughly to Tuscany.*

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 How old is the drainage system built in the times of Etruscan civilization?
- 2 What was the constant problem for the Roman populace ?
- 3 How could Romans do without indoor facilities?

**Task 10. Find the words in the text which mean the following.**

- 1 the action or process of draining something \_\_\_\_\_
- 2 a pipe or hole through which water or gas may escape \_\_\_\_\_
- 3 an underground conduit for carrying off drainage water and waste matter \_\_\_\_\_
- 4 the action of discharging a liquid, gas, or other substance \_\_\_\_\_
- 5 a place, amenity, or piece of equipment provided for a particular purpose \_\_\_\_\_

## Контрольне завдання 2

Для того, щоб виконати контрольне завдання 2, необхідно повторити наступні розділи курсу англійської мови:

1. Часи дієслова:
  - а) активний стан – форми Indefinite (Present, Past, Future), форми Continuous (Present, Past, Future), форми Perfect (Present, Past, Future);
  - б) пасивний стан – форми Indefinite (Present, Past, Future). Особливості

перекладу пасивних конструкцій на рідну мову.

- Прості неособові форми дієслова: Participle I (Present Participle), Participle II (Past Participle), у функціях означення та обставини, Gerund – герундій, прості форми.
- Модальні дієслова *can, must, may, should* та еквівалентні їм конструкції *to be able, to have to*.
- Неозначені займенники.

### Зразок виконання 1

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

1 Water supply shortages are becoming a problem of global proportion.

1	Water supply shortages <u>are becoming</u> a problem of global proportion. <i>are becoming</i> -Present Continuous Active	Проблема недостатка водних ресурсів становить глобальною проблемою.
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### Зразок виконання 2

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

1 I have been a constant bottled water buyer for many years

1	I <u>have been</u> a constant bottled water buyer for many years. <i>have been</i> -Present Perfect Active	Я был постоянным покупателем воды в бутылках на протяжении многих лет.
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### Зразок виконання 3

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

1 Although an overwhelming majority of the planet is composed of water, 97% of this water is constituted of saltwater.

1	Although an overwhelming majority of the planet <u>is composed</u> of water, 97% of this water <u>is constituted</u> of saltwater. <i>is composed, is constituted</i> - Present Indefinite Passive	Хотя подавляющее большинство планеты состоит из воды, 97% этой воды составляет соленая вода.
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### Зразок виконання 4

**Task 4. Translate the following sentences into your native language. Underline the Participle forms and define their functions.**

1 Drinking water contaminated with chemicals or bacteria can make people sick.

1	Drinking water <u>contaminated</u> with chemicals or bacteria can make people	Питьевая вода, загрязненная химическими веществами или
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sick. <i>contaminated</i> – Past Participle, the function of an adjective	бактериями, может быть причиной заболевания людей.
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### Зразок виконання 5

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

1	I have <u>stopped buying</u> bottled distilled water in supermarkets. <i>stopped buying</i> - the function of the part of compound verbal predicate	Я прекратил покупать в супермаркетах разлитую в бутылки дистиллированную воду.
2	<u>Drinking</u> distilled water is both advocated and discouraged for health reasons. <i>drinking</i> - the function of the subject	Пить дистиллированную воду как поощряется, так и не одобряется по медицинским причинам.
3	Most of the extra cost of bottled water is driven <u>by</u> transportation and <u>packaging</u> . <i>by packaging</i> - the function of an adverbial modifier	Большую часть добавочной стоимости воды в бутылках составляет транспортировка и упаковка.
4	Water for <u>drinking</u> and household use, especially water from a surface water supply, must be treated before it is used. <i>drinking</i> - the function of an attribute	Вода для питья и домашнего использования, особенно вода от источника поверхностных вод, должна подвергаться обработке, прежде чем ее использовать.
5	Municipal water supplies succeeded in <u>regulating</u> trace components at levels which are safe for consumption. <i>in regulating</i> - the function of a prepositional object	Муниципальное водоснабжение преуспело в регулировании микрокомпонентов на уровнях, безопасных для потребления.
6	Publicly held companies like <i>Groupe Danone</i> of France began <u>deploying</u> advanced wastewater treatment processes a few years ago. <i>deploying</i> - the function of a direct object	Государственные компании, такие как <i>Groupe Danone</i> во Франции, несколько лет назад стали использовать передовые технологии очистки сточных вод.

### Зразок виконання 6

**Task 6. Put questions to the italicized parts of the statements.**

1 Pollution of water bodies *intensifies* the situation.

What does pollution of water bodies do?

### Зразок виконання 7

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Simple (Active or Passive). Underline the option, define the tense and voice forms and the functions of modal verbs. Translate the sentences into your native language.**

- 1 People in rural areas \_\_\_\_\_ find ways to supply their own water.
- 2 Local water resource policy decisions \_\_\_\_\_ be based on hydrological facts and economic realities and not on conjecture and anecdote.

1	People in rural areas <u>must find</u> ways to supply their own water. <i>must find</i> – obligation; Present Indefinite Active	Люди в сельской местности должны найти свои способы водообеспечения.
2	Local water resource policy decisions <u>should be based</u> on hydrological facts and economic realities and not on conjecture and anecdote. <i>should be based</i> -advice; Present Indefinite Passive	Решения относительно местных водных ресурсов должны основываться на фактах гидрологических и экономических реалий, а не на предположения и частных подробностях.

**Зразок виконання 8**

**Task 10. Find the words in the text that mean the following.**

1	waste water and excrement conveyed in sewers	a	sewage
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**Варіант 1**

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- We tend to imagine that ancient people \_\_\_\_\_ (*not/ destroy*) the environment as
- 1 they lived in harmony with nature.
  - 2 What \_\_\_\_\_ (*currently /happen*) on the beaches of the United States is representative of what happens all over the world.
  - 3 Consumers \_\_\_\_\_ (*maintain*) the sustainability of rivers and streams, lakes and oceans in many years' time.
  - 4 They \_\_\_\_\_ (*replace*) a 6,000 linear feet domestic water line in the city central area in the summer of 2010.
  - 5 Many U.S. citizens \_\_\_\_\_ (*become*) more concerned about potential health risks and nuisance problems associated with their drinking water.
  - 6 *Domestic Water Solution* \_\_\_\_\_ (*provide*) water dispensers in 2011.

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 Sales of bottled water \_\_\_\_\_ (*explode*) in recent years, largely because of a public perception of purity.



- 2 Humanity came into being after most ecosystem services \_\_\_\_\_ (*be*) in operation for hundreds of millions of years.
- 3 Consumers \_\_\_\_\_ (*maintain*) the sustainability of rivers and streams, lakes and oceans when they ensure a less negative impact on water bodies.
- 4 For centuries up until the 1970s, rubbish dumping in the ocean \_\_\_\_\_ (*always/be*) an accepted practice.
- 5 Water rates \_\_\_\_\_ (*grow*) quickly by the time the population grow.
- 6 Water filtration dates back circa 2000 B.C. in Egypt, but \_\_\_\_\_ (*gain*) popularity in Greece.

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

- 1 The fast rising water industry in the country is expected to attract big investments.
- 2 Last month the program was designed to serve those individuals employed or interested in employment in the water and/or wastewater fields.
- 3 As far as water fees are directly linked to the actual costs of the components, it will be discussed with (and approved by) the community organisations at the coming meeting.
- 4 A new sensor to find holes in water supply lines was developed by Scientists at the Fraunhofer Institute for Silicon Technology ISIT in Itzehoe, Germany.
- 5 In a few days, a sample of the disinfected water will be will be send to the Health Service Executive (HSE) to test whether it is up to drinking standards.
- 6 Water is supplied from an abundant source - river, lake, sea, or ocean - to a storage basin which, in turn, supplies the large pumps

**Task 4. Translate the following sentences into your native language. Underline the Participle forms and define their functions.**

- 1 A mechanical filter may become clogged if not cleaned or replaced periodically, resulting in loss of water pressure and a reduction in flow.
- 2 Ecosystem services are valuable for many reasons, including economic benefits.
- 3 There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- 4 The Earth has a limited supply of fresh water, stored in aquifers, surface waters and the atmosphere.
- 5 Even people living in damp areas can benefit from collecting rain water.
- 6 An estimated 10 trillion gallons a year of untreated storm water runs off roofs, roads, parking lots, and other paved surfaces.

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

- 1 Replacing these services is often completely beyond current technology.
- 2 I don't like drinking tap water.
- 3 It's not encouraged drinking distilled water.

- 4 The earliest known evidence of drain tile being used for *plumbing* was found in Mesopotamia.
- 5 Water purification is a very important process of keeping the water that we drink or use in each day of our lives to be safe and free from contaminants.
- 6 One of the simplest water purification techniques is by boiling.

**Task 6. Put questions to the italicized parts of the statements.**

- 1 *Many people in the developed world* take access to tap water for granted.
- 2 An extremely important element *in a water distribution system* is water storage.
- 3 All human being require *at list 3-6 liters* of water per day to survive.
- 4 The most effective approach in deciding *local water supply* issues includes citizen involvement.
- 5 *Most private wells in the U.S.* provide safe water for home uses.

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Indefinite (Active or Passive). Underline the option, define the tense and voice forms of the predicate. Translate the sentences into your native language.**

- 1 Ozone treatment \_\_\_\_\_ create undesirable byproducts. (*ability*)
- 2 The use of other treatment methods \_\_\_\_\_ be necessary to reduce levels of other contaminants of health concern. (*prediction*)
- 3 Boiling \_\_\_\_\_ not be used when toxic metals, chemicals (lead, mercury, asbestos, pesticides, solvents, etc.), or nitrates have contaminated the water. (*advice*)
- 4 Knowledge of local ground water movement and proper monitoring \_\_\_\_\_ still allow the safe use of ground water in the surrounding area. (*possibility*)
- 5 A supply of water for domestic purposes \_\_\_\_\_ be supplied at an adequate pressure (*obligation*)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### WATER SUPPLY

The efficient supply of water to homes and industry is the responsibility of the local authorities.

This water is supplied to homes and businesses in urban areas. At present, charges are only levied on water supplied to commercial premises. The provision and upgrading of capital projects in water and wastewater services are funded by the Department of the Environment, Community and Local Government. The local authority administers the actual building of approved water supply projects. Stringent water testing is carried out on all public waters by local authorities and the Health Service Executive (HSE).

It is expected that a new system of water metering for homes will be introduced shortly, and that water charges will be based on the amount consumed above a free allocation.

Many households that are not connected to a public water supply are served by group water schemes. These schemes are formed by two or more households coming together to provide their own common water supply. The group elects trustees to act on behalf of its members in all dealings with the local authority.

Usually, group schemes are established in areas where the local authority does not intend to install a water supply system in the near future, or at all. Group water schemes can get water supplies from the public mains, if possible, or a private source such as a well or lake. National reports on the quality of drinking water indicate that poorly treated or untreated private group water supplies are most at risk from pollution.

You still have to pay for your water if you belong to a private group water scheme, that is, if your water comes from a private source. However, local authorities do provide subsidies for each house in a group scheme. Local authorities have the remit to test the water supply and ensure it is safe to drink but they are not responsible for maintaining group scheme pipes and filtration systems.

If the members of a group water scheme want the local authority to take over the running of the scheme, they must sign a waiver saying that they allow local authority personnel on their land to maintain pipes, etc. The group must also provide a map of the pipe system to the local authority. They must allow the local authority access to test pipes for leakage. If the local authority takes over the scheme, it is then responsible for maintaining the water system. However, if a group water scheme remains fully private, technical and grant assistance are available from the local authority for any upgrading works that may be needed.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What is the role of the Department of the Environment, Community and Local Government in the process of efficient water supply?
- 2 How are the households that are not connected to a public water supply served?
- 3 What is the local authority responsible for if it runs the group water scheme?

**Task 10. Find the words in the text that mean the following.**

- |   |                                                                                                             |   |       |
|---|-------------------------------------------------------------------------------------------------------------|---|-------|
| 1 | all the people who live together in one house                                                               | a | _____ |
| 2 | someone who is considered an expert in a particular subject                                                 | b | _____ |
| 3 | the process of leaking a liquid or gas                                                                      | c | _____ |
| 4 | the process of removing solid parts that are not wanted from a liquid or gas by passing it through a filter | d | _____ |
| 5 | someone who has control of money or property that is in a trust for someone else                            | e | _____ |

## Вариант 2

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 Around the world, temperatures \_\_\_\_\_ (*rise*) and sources of freshwater are becoming increasingly unpredictable.
- 2 Many industries \_\_\_\_\_ (*implement*) new water dispensers with countless applications this month.
- 3 Increasing pollution of surface and groundwater \_\_\_\_\_ (*further/reduce*) the supplies of readily available, clean water.
- 4 I \_\_\_\_\_ (*now/boiling*) water for more than three minutes to remove all pathogens from it.
- 5 Water rates \_\_\_\_\_ (*grow*) when the population had grown.
- 6 Our modern lifestyle \_\_\_\_\_ (*destroy*) the fragile environment when we were not "environmentally friendly".

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 While the world's population tripled in the 20th century, the use of renewable water resources \_\_\_\_\_ (*grown*) six-fold.
- 2 Our modern lifestyle \_\_\_\_\_ (*destroy*) the fragile environment if we are not "environmentally friendly".
- 3 By the time people started destroying tiny corners of the earth humankind \_\_\_\_\_ (*invent*) powerful technology.
- 4 The company \_\_\_\_\_ (*provide*) access to a reliable, clean source of drinking water by the end of the year.
- 5 The United States \_\_\_\_\_ (*made*) significant progress cleaning up the nation's waterways since Congress passed the Clean Water Act in 1972, but much more remains to be done.
- 6 Water rates \_\_\_\_\_ (*grow*) when the population grows.

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

- 1 In a typical community water supply system, water is transported under pressure through a distribution network of buried pipes.
- 2 The 7th International Symposium on Water Supply Technology was held in November 12 (Wed.) through 24 (Thurs.), 2006 in Yokohama for the first time with support from the International Water Association (IWA).
- 3 It is expected that a new system of water metering for homes will be introduced shortly.
- 4 When the well is drilled, you should seal it against pollution and make sure it is disinfected.
- 5 It is planned that *Journal of Water Supply and Technology* will be published as an adjunct to *Water Science and Technology*, in 6 issues per year, covering new developments in water supply.
- 6 The participants were engaged in active discussions throughout the symposium.

**Task 4. Translate the following sentences into your native language. Underline the Participle forms and define their functions.**

- 1 A required process intended to reduce the level of a contaminant in drinking water.
- 2 The waste produced by shops, offices, restaurants and schools do not pose a serious threat to the animals, plants or to the environment.
- 3 Growing competition for scarce water resources is a growing business risk.
- 4 Secondary treatment removes dissolved and suspended biological matter.
- 5 Accelerating demand will put an already limited water supply under extreme pressure.
- 6 Or mineral scale buildup may cause you to invest in early replacement of plumbing fixtures and water-using appliances.

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

- 1 Boiling is one of the simplest water purification techniques.
- 2 They have stopped testing water whether it is up to drinking standards.
- 3 Water purification generally means freeing water from any kind of impurity it contains, such as contaminants or micro organisms.
- 4 The application of technologies involved in providing clean (potable) water to homes, businesses and public buildings is a major subfield of sanitary engineering. )
- 5 Nowadays the importance of protecting our water resource cannot be overstated.
- 6 If rain water is not collected, it drains into the waste water system, whereas by collecting the rain water it can be used at a later time.

**Task 6. Put questions to the italicized parts of the statements.**

- 1 The natural chemical quality of ground water *varies* from region to region.
- 2 All drinking water is obtained *from some part of the hydrological system*: either rivers, lakes or ground water.
- 3 By definition, a community system serves *more than 25 people* or has more than 15 piped connections.
- 4 Public water supply systems maintain water supply *through extended periods of dry weather* without excessive cost or environmental damage.
- 5 *Most domestic wells* use a very small amount of water in relation to the amount of ground water stored in the surrounding area.
- 6 Rainwater harvesting can ensure an independent water supply *during water restrictions*.

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Indefinite (Active or Passive). Underline the option, define the tense and voice forms of the predicate. Translate the sentences into your native language.**

- 1 Undesirable byproducts \_\_\_\_\_ be harmful to health. (*ability*)
- 2 The competition for water in an overpopulated world \_\_\_\_\_ pose a major threat to human stability. (*prediction*)
- 3 In order to minimize water disinfectant byproducts, precursors \_\_\_\_\_ be removed from waters to be treated with a disinfectant. (*advice*)
- 4 These substances \_\_\_\_\_ include pesticides, insecticides, and other toxins. (*possibility*)
- 5 Mesh screens of a large size \_\_\_\_\_ be used here to optimize solids removal. (*obligation*)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### WATER DISTRIBUTION NETWORK

The product, delivered to the point of consumption, is called fresh water if it receives little or no treatment, or drinking water if the treatment achieves the water quality standards required for human consumption.

Once treated, chlorine is added to the water and it is distributed by the local supply network. Today, water supply systems are typically constructed of plastic, ferrous, or concrete circular pipe. However, other "pipe" shapes and material may be used, such as square or rectangular concrete boxes, arched brick pipe, or wood. Near the end point, the network of pipes through which the water is delivered is often referred to as the water mains.

The water is often transferred from a water reserve such as a large communal reservoir before being transported to a more pressurized reserve as a water-tower. In small domestic systems, the water may be pressurized by a pressure vessel or even by an underground cistern (the latter however does need additional pressurizing). This eliminates the need of a water-tower or any other heightened water reserve to supply the water pressure.

These systems are usually owned and maintained by local governments, such as cities, or other public entities, but are occasionally operated by a commercial enterprise. Water supply networks are part of the master planning of communities, counties, and municipalities. Their planning and design requires the expertise of city planners and civil engineers, who must consider many factors, such as location, current demand, future growth, leakage, pressure, pipe size, pressure loss, fire fighting flows, etc. — using pipe network analysis and other tools. Construction comparable sewage systems, was one of the great engineering advances that made urbanization possible. Improvement in the quality of the water has been one of the great advances in public health.

As water passes through the distribution system, the water quality can degrade by chemical reactions and biological processes. Corrosion of metal pipe materials in the distribution system can cause the release of metals into the water with undesirable aesthetic and health effects. Release of iron from unlined iron pipes can result in customer reports of "red water" at the tap. Release of copper from copper pipes can result in customer reports of "blue water" and/or a metallic taste. Release of lead can

occur from the solder used to join copper pipe together or from brass fixtures. Copper and lead levels at the consumer's tap are regulated to protect consumer health.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What part of water supply network is called the water mains?
- 2 How can be water pressure supplied in the water distribution system?
- 3 What does the quality of water in the distribution system depend on?

**Task 10. Find the words in the text that mean the following.**

- |   |                                                                                                                                               |   |       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------|---|-------|
| 1 | an arrangement of intersecting horizontal and vertical lines                                                                                  | a | _____ |
| 2 | the matter from which a thing is or can be made                                                                                               | b | _____ |
| 3 | the chemical composition and properties of a substance or body                                                                                | c | _____ |
| 4 | the state of being free from illness or injury                                                                                                | d | _____ |
| 5 | a soft reddish-brown metal that allows electricity and heat to pass through it easily, and is used to make electrical wires, water pipes etc. | e | _____ |

### Вариант 3

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 New filters \_\_\_\_\_ (*remove*) 98% to 99% of all contaminating organisms during their active exploitation.
- 2 Many cities in Australia \_\_\_\_\_ (*experience*) the effects of the current drought.
- 3 Water rates \_\_\_\_\_ (*grow*) quickly when the water was used excessively.
- 4 The world \_\_\_\_\_ (*facing*) a water crisis, and Australia is no exception.
- 5 An estimated 780 million \_\_\_\_\_ (*lacking*) safe drinking water in 2010.
- 6 This experienced team of industry professionals \_\_\_\_\_ (*design*) special iron removal filters anyway.

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 Environmentalists \_\_\_\_\_ (*solve*) the problem of salinization when they stop excessive irrigation.
- 2 By the end of 2011 WHO Programme activities \_\_\_\_\_ (*develop*) technical guidance materials for assessing the quantities and types of waste produced in different facilities.
- 3 Water rates \_\_\_\_\_ (*grow*) quickly by the time the water is used excessively.
- 4 For over 17 years, APEC \_\_\_\_\_ (*be*) an industry leading manufacturer.
- 5 The team of experts \_\_\_\_\_ (*gain*) detailed insights into the water consumption by the community when they started to explore the impact of cultural background on

the development of (un)sustainable routines.

- 6 The green revolution \_\_\_\_\_ (*already/benefit*) the most prosperous farmers in the most prosperous areas.

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

- 1 Water meters are usually installed by users in the communities.
- 2 Studies revealed that much of the country's groundwater and surface water was contaminated or severely compromised.
- 3 Water is considered a renewable resource.
- 4 The adsorption capacity will be required if the water contains the continuous or episodic presence of micropollutants.
- 5 It is supposed that the microorganisms' reactions to the water will be continuously recorded and analyzed by a sensitive camera system.
- 6 After a few days, a sample of the disinfected water was sent to the Health Service Executive (HSE) to test whether it was up to drinking standards.

**Task 4. Translate the following sentences into your native language. Underline the Participle forms and define their functions.**

- 1 Naturally occurring oxygen is composed of three stable isotopes.
- 2 Tap water is drinking water which comes from an indoor tap or spigot.
- 3 Improved water management can make a significant contribution to achieving the Millennium Development Goals.
- 4 Environmental balances are disturbed and cannot play their regulating role anymore.
- 5 The collected water gives a ready supply for a number of activities where drinking water would otherwise be used. *This includes car and vehicle washing.*
- 6 Water delivered to homes is called "public-supplied deliveries" and water that people supply themselves is called "self-supplied", and is almost always from groundwater.

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

- 1 Freezing water does not affect the concentration of fluoride.
- 2 I prefer buying bottled distilled water in or pharmacies.
- 3 Rain water is used for car and vehicle washing.
- 4 Indoor plumbing makes water readily accessible for cooking, washing, cleaning, and drinking.
- 5 The process of water purification comes in different number of ways to the level conducive to the purpose of purifying.
- 6 Primary standards protect public health by limiting the levels of contaminants in drinking water.



**Task 6. Put questions to the underlined parts of the statements and translate them into your native language.**

- 1 The lack of practical or comprehensive studies on rainwater harvesting systems in these regions *hinders* the promotion of the system.
- 2 Demand for water continues to escalate *at unsustainable rates*.
- 3 By definition, a community system serves more than 25 people or has *more than 15* piped connections.
- 4 The safety of the water supply system depends on the council *enforcing water laws*.
- 5 *Plans to provide a public water supply in a rural area* often cause local controversy.
- 6 The study projects that sea levels could rise as much as an additional eight inches *by 2030*.

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Indefinite (Active or Passive). Underline the option, define the tense and voice forms of the predicate. Translate the sentences into your native language.**

- 1 Sewage \_\_\_\_\_ be treated close to where it is created. (*ability*)
- 2 Household water use structure \_\_\_\_\_ depend significantly on personal habits, socio-economic, cultural and climatic conditions in the area. (*prediction*)
- 3 A professional sewage removal and water damage restoration company \_\_\_\_\_ be called immediately to help minimize the possibility of nearby soil or ground water becoming contaminated. (*advice*)
- 4 Boiling \_\_\_\_\_ concentrate any harmful contaminants that do not vaporize as the relatively pure water vapor boils off. (*possibility*)  
*Disinfecting the well may restore safe water.*
- 5 This rural supply system \_\_\_\_\_ bring improvements to rural infrastructure, the local economy and public health safety. (*obligation*)

**Task 8. Read the text and give the written translation of paragraphs 1, 2 and 3 into your native language.**

#### SOURCES OF DRINKING WATER

Drinking water comes from surface water and ground water. Large-scale water supply systems tend to rely on surface water resources, and smaller water systems tend to use ground water. Including the approximately 23 million Americans who use ground water as a private drinking water source, slightly more than half of the population receives its drinking water from ground water sources.

Surface water includes rivers, lakes, and reservoirs. Ground water is pumped from wells that are drilled into aquifers. Aquifers are geologic formations that contain water. The quantity of water in an aquifer and the water produced by a well depend on the nature of the rock, sand, or soil in the aquifer where the well withdraws water. Drinking water wells may be shallow (50 feet or less) or deep (more than 1,000 feet).

Your water utility or your public works department can tell you the source of your public drinking water supply.

In a typical community water supply system, water is transported under pressure through a distribution network of buried pipes. Smaller pipes, called house service lines, are attached to the main water lines to bring water from the distribution network to your house. In many community water supply systems, water pressure is provided by pumping water up into storage tanks that store water at higher elevations than the houses they serve. The force of gravity then "pushes" the water into your home when you open your tap. Houses on a private supply usually get their water from a private well. A pump brings the water out of the ground and into a small tank within the home, where the water is stored under pressure.

Water suppliers use a variety of treatment processes to remove contaminants from drinking water. These individual processes may be arranged in a "treatment train" to remove undesirable contaminants from the water. The most commonly used processes include filtration, flocculation and sedimentation, and disinfection. Some treatment trains also include ion exchange and adsorption. A typical water treatment plant would have only the combination of processes needed to treat the contaminants in the source water used by the facility.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What types of water are mentioned in the text?
- 2 What types of water supply systems are mentioned in the text?
- 3 What processes are used to treat water?

**Task 10. Match the following explanations with the appropriate words.**

- |   |                                                                     |   |       |
|---|---------------------------------------------------------------------|---|-------|
| 1 | the solid surface of the earth                                      | a | _____ |
| 2 | a body of permeable rock which can contain or transmit groundwater  | b | _____ |
| 3 | a shaft sunk into the ground to obtain water, oil, or gas           | c | _____ |
| 4 | a large receptacle or storage chamber, especially for liquid or gas | d | _____ |
| 5 | a machine for forcing liquid or gas into or out of something        | e | _____ |

### Вариант 4

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 Many companies \_\_\_\_\_ (*now/ invest*) in safe drinking water and sanitation to contribute to economic growth.
- 2 People \_\_\_\_\_ (*use*) water as surely as they use oxygen: without it life could not exist.
- 3 The reporter emphasized the symptoms of water overuse which were disturbingly clear: rivers \_\_\_\_\_ (*dry up*), groundwater tables \_\_\_\_\_ (*fall*) and water-based

ecosystems \_\_\_\_\_ ( *rapidly/ degrade*).

- 4 The water was not good in that pond, but they \_\_\_\_\_ ( *collect* ) it because they had no alternative.
- 5 They \_\_\_\_\_ ( *replace* ) a 4,000 linear feet domestic water line in the city central area this summer.
- 6 Water resource policy issues \_\_\_\_\_ ( *receive* ) increasing attention.

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 Interest in domestic solar water heating \_\_\_\_\_ ( *expand* ) when a comprehensive introduction to all aspects of the system is available.
- 2 The water damage experts \_\_\_\_\_ ( *test* ) methods for proper sewage removal and treatment.
- 3 They \_\_\_\_\_ ( *replace* ) the aging water distribution system by the end of July.
- 4 The company announced last week that it \_\_\_\_\_ ( *win* ) a \$500 million reverse osmosis seawater desalination project in Algeria.
- 5 The water in your glass may have fallen from the sky as rain just last week, but the water itself \_\_\_\_\_ ( *be* ) around pretty much as long as the earth has!
- 6 Stored water was emptied from the containers as we \_\_\_\_\_ ( *not /use* ) it after six months.

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

- 1 It is planned that a utility commission will be governed by a policy-making body such as an appointed or elected commission or board of directors.
- 2 To accommodate the need for clean water for industrial, agricultural and domestic uses, many methods were developed in order to reclaim, treat and purify water and its sources.
- 3 Stringent water testing is carried out on all public waters by local authorities and the Health Service Executive (HSE).
- 4 The threats of diseases were quickly diminished when municipal water systems began chlorinating water in order to kill or inactivate disease-causing pathogens.
- 5 Traditional wells are dug deeper and wider, then sealed and protected to prevent contamination.
- 6 Water Distribution Systems Symposium and Exposition 2012 will be held next month.

**Task 4. Translate the following sentences into your native language. Underline the Participle forms and define their functions.**

- 1 The intended use of the water (whether for drinking, laundry, or all household uses) determine the extent of treatment required.
- 2 With one out of six people lacking adequate access to clean drinking water, the necessity to find renewable and sustainable sources for drinking water has become

more and more urgent over the years.

- 3 The system was designed to operate continuously, providing high quality non-potable water to the entire household by filtering particulate matter and biodegrading dissolved organic matter.
- 4 A final polishing step using filtration, ozonation, activated carbon or chemical treatment may also be required.
- 5 Some municipalities in the United States are making an effort to use tap water over bottled water on government properties and events.
- 6 Potable water is called drinking water, in a reference to its intended use.

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

- 1 Providing tap water to large urban or suburban populations requires a complex and carefully designed system of collection, storage, treatment and distribution.
- 2 This company keeps on removing fluoride and other ions through conventional water treatment.
- 3 It is important to supplement distilled water when using it for fishkeeping.
- 4 Water safety can be controlled at a source like a reservoir or well, at a water treatment plant along the way, or at the house, depending on the type of plumbing system involved.
- 5 Every class of pollutants has its own specific ways of entering the environment and its own specific dangers.
- 6 Metals are natural substances that have consisted through weathering of ore bodies.

**Task 6. Put questions to the underlined parts of the statements.**

- 1 *Good quality drinking* water is vital for the health of the whole community.
- 2 *People* need enough safe water to wash regularly.
- 3 We can trust *the design and installation of water supply system of the building* to the engineering company with many years of experience in this area.
- 4 While the world's population tripled in the 20th century, the use of renewable water resources has grown *six-fold*.
- 5 *Water rates* are growing quickly due to the growing population and the excessive use of water.
- 6 Lead can cause a variety of adverse health effects *when people are exposed to it at levels above the action level for relatively short periods of time*.

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Indefinite (Active or Passive). Underline the option, define the tense and voice forms of the predicate. Translate the sentences into your native language.**

- 1 Viruses \_\_\_\_\_ not be effectively removed by any filtration method. (*ability*)
- 2 The most obvious path out of the water crisis \_\_\_\_\_ involve massive investments in infrastructure to store, transform, and transport blue water. (*prediction*)

- 3 They \_\_\_\_\_ use gray water to flush toilets which saves a large amount of water. (*advice*)
- 4 This rain water \_\_\_\_\_ be used to water the garden and clean your car. (*possibility*)
- 5 Water companies \_\_\_\_\_ treat their users as valued individuals. (*obligation*)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### NEW WATER-SUPPLY TECHNOLOGY

A water-supply system is more complex than most others if it includes an indoor-sprinkler system for fire protection. Supplying residential homes with this type of system is fairly new.

When a water supply system in a home includes a sprinkler system, there's a lot more for the plumber to do than running pipes on the inside of the house. Getting the water service from the street to the house is also his job.

The system designer comes to the site to work with the plumbers, and with this particular system will put somewhere between 12 and 18 gallons per minute on a fire. This is a single head in a single location. In comparison, when a fire department has to be called to a resident, their hoses will put anywhere from 150 to 200 gallons per minute on the fire, but you must consider the fact that the firemen and women must break out windows, create vents, etc. With this system the venting is there and the fire will have already had some water do used on it by the time the fire department arrives.

Another example of new technology is the use of flexible tubing, called "Pex", instead of copper tubing for the water-supply line. By using flexible tubing as the plumbing material it brings down the cost due to the lack of labor needed to install the system.

Water coming into the house goes through the meter and pressure regulator and is then distributed throughout the house with a manifold that leads to the sprinkler heads via the flexible tubing.

Each port on the manifold leads to a particular sprinkler head. The sprinkler heads are installed in each room, and next the tubing is strung along from one head to the other and is eventually branched off to a fixture, such as a toilet, sink or bathtub.

The plumbing system is incorporated into one system from both the potable water (suitable for drinking) and the fire-protection sprinkler system. It's all used in the same network of tubing that makes up the water-supply system. Connecting the water from the sprinkler system directly with the water in the rest of the house serves an important purpose – it prevents the water in the sprinkler system from becoming stagnant by sitting still for long periods.

Once the fixtures are hooked up it's time to test the system, which means the water is turned "on" to remove the air from the lines. First there's a pressure test and then a leak test, which is done by checking each connection to make sure that it's dry and that there are no drips.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What is fairly new in supplying residential homes with water?
- 2 How much water will the fire have had with the indoor-sprinkler system by the time the fire department arrives
- 3 Why is water from the sprinkler system directly connected with the water in the rest of the house?

**Task 10. Find the words in the text that mean the following.**

- 1 a piece of equipment on a ceiling that scatters water if there is a fire    **a** \_\_\_\_\_
- 2 a particular place, especially in relation to other areas, buildings etc.    **b** \_\_\_\_\_
- 3 tubes in general, especially when connected together into a system    **c** \_\_\_\_\_
- 4 a process used to discover whether equipment or a product works correctly, or to discover more about it    **d** \_\_\_\_\_
- 5 the pipes that water flows through in a building    **e** \_\_\_\_\_

## Вариант 5

**Task 1. Put the verbs in brackets into the correct tense form (Present, Past, Future Continuous Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 While listening to the report the committee realized that the analysis and policy recommendations \_\_\_\_\_ (*not/reflect*) the views of the United Nations Development Programme.
- 2 Private companies \_\_\_\_\_ (*take*) part in public-private partnerships as well as \_\_\_\_\_ (*operate*) entirely commercial water-related services.
- 3 The world **will be** increasingly **turning** its attention to the issue of water scarcity in many years' time.
- 4 The agency **will be looking** at standards that must be met before wastewater is sent to a facility for treatment.
- 5 It was proved that in a global economy, the people of one country **were** actually **consuming** water resources across the world because of water consumption/pollution as a direct result of manufactured imports into the country.
- 6 The water industry **is facing** huge challenges right now.

**Task 2. Put the verbs in brackets into the correct tense form (Present, Past, Future Perfect Active). Underline and define the tense form of the predicate and translate the sentences into your native language.**

- 1 The population growth - coupled with industrialization and urbanization \_\_\_\_\_ (*result*) in an increasing demand for water and serious consequences on the environment.
- 2 They \_\_\_\_\_ (*detect*) the contamination of water by the time the contamination warning systems are implemented in water utilities and supplies

- 3 It was stated that the reports\_\_\_\_\_ (*have*) little influence on individual life styles.
- 4 Every person \_\_\_\_\_ (*deserve*) the cleanest air, the safest water, and unpolluted land when each person takes steps to protect those precious resources.
- 5 Bottled water **is** simply water from some source that a company (or in the case of water vending machines, the consumer) \_\_\_\_\_ (*place*) in a bottle for resale.
- 6 Many companies \_\_\_\_\_ (*invest*) in safe drinking water and sanitation by the end of 2011.

**Task 3. Underline the passive form of the predicate in the sentences. Define the tense forms and translate the sentences into your native language.**

- 1 Later on in history, the irrigation structures were renovated and innovated and greatly stretched in very large projects by Abbasid engineers.
- 2 For efficient water supply of commercial establishments and industries rivers and lakes are utilized.
- 3 In the Roman water supply system the aqueduct channels were equipped with air vents or inspection holes.
- 4 Scientists warn that atmospheric circulation and the movement of moisture locally will be changed due to changes in land use and land cover.
- 5 The statistics on energy consumption, on air and soil and water pollution, on the increase of greenhouse gases in the atmosphere, on ozone depletion in the upper part of the atmosphere and ozone accumulation in the lower part is seen by every scientist.
- 6 Utilities guarantee that annual "Water Quality Reports" - also called "Consumer Confidence Reports" --identifying the source of the water and contaminants found in it will be issued.

**Task 4. Translate the sentences into your native language. Underline the Participle forms and define their functions.**

- 1 The evidence concerning the impact of water utilities privatization is mixed.
- 2 Rainwater utilization is generally recognized as an advanced, ecological and permanently safe operating system.
- 3 In a typical town or community water system the water is pressurized and distributed to a network of buried pipes.
- 4 March 22, is World Water Day, which was established by the United Nations in 1993 to highlight the challenges associated with this precious resource.
- 5 When looking at bottled water, keep in mind that 'distilled water' does not imply that a product is suitable for drinking water and other undesirable impurities may be present.
- 6 The increasing deterioration of water quality and the growing demand for water due to population growth may poke conflicts between riparian states or states that share water basins.

**Task 5. Underline the Gerund in the sentences and define its functions. Translate the sentences into your native language.**

- 1 In an emergency, boiling is the best way to disinfect water.
- 2 Stop drinking distilled water as it lacks fluoride.
- 3 Water management includes monitoring the amount of water in the environment, seasonal and annual changes in water levels and other characteristics, and keeping an eye on the cleanliness of water supplies.
- 4 There are a number of ways to force water to the tap, including using a water pump to push water through the plumbing.
- 5 Water purification is the process of eliminating unwanted matters, chemicals, and biological elements.
- 6 Chemical or biological contamination can be removed by boiling, disinfection or chemical treatment.

**Task 6. Put questions to the underlined parts of the statements.**

- 1 *Water mains, wells, filters, storage tanks, and other components of a water-supply system* become contaminated during installation and repair.
- 2 Many people receive their water *from water treatment facilities and water towers*
- 3 Many popular news and media sources provided ways to reduce one's environmental impact *by bringing attention to water.*
- 4 Generally *ground* water is the source for housing needs.
- 5 *Throughout our daily routines* we waste an astonishing amount of water.

**Task 7. Complete the following sentences with modals (*can, must, may, should, would*) in Present Indefinite (Active or Passive). Underline the option, define the tense and voice forms of the predicate. Translate the sentences into your native language.**

- 1 Pre-treatment removes materials that \_\_\_\_\_ (*be*) easily **collected** from the raw waste water. (*ability*)
- 2 Rural water service delivery \_\_\_\_\_ (*shift*) towards piped water schemes to improve standards of living. (*prediction*)
- 3 This rain water \_\_\_\_\_ (*be used*) as gray water inside the home. (*advice*)
- 4 In modern water distribution systems, pumping \_\_\_\_\_ (*account*) for a large portion of the costs; (*possibility*)
- 5 Water treatment \_\_\_\_\_ (*occur*) before the product reaches the consumer (*obligation*)

**Task 8. Read the text and give the written translation of the text into your native language.**

#### WATER SUPPLY SYSTEM

Water supply system comes along with the innovations of civilization. It is generally defined as a system of engineered hydraulic components which provide water supply. From the past, men are in continuous pursuit of inventing strategies in this field. Water resources are of utmost necessary especially in developing countries for the domestic and industrial demands. And in recent times water resources and



their requirements have risen to meet agricultural needs. All these factors combining together pose higher challenges for this department in Civil Engineering.

Companies have different plans to attract the clients in term of the plumbing strategies. For developing cities today water supply system is the most tedious when compared to other development programs. Yet companies are trying to prove their mettle and are proud of innovating and adapting different distribution system. Water supply is a system of pipes and designing fixtures in a construction and for the use of filtered water. This system will also take care of the waterborne wastes and plan sewage system. On larger basis depending upon the requirements engineering departments are involved in constructing wells, dams and reservoirs. This task is generally not easy especially in the regions where water resources are at dearth. Several projects have begun and they are still in progress. However there are many companies who have succeeded in what they have undertaken. This is a system of infrastructure which includes collection of water, treatment, storage and distribution. The distribution is for various sectors like homes, commercial establishments, for irrigation, fire fighting and the list go on.

Of the major services, potable water becomes most essential duties of the government. People at home use water for various purposes such as drinking, cooking, cleaning and washing. Earlier ground water from the hillsides was brought to the cities in “Qantas”. Still in some of the places this type of Qantas are used for irrigation and in certain places used for the town. So from the times of old civil engineering departments, strategies have been developed to suit various geographical locations and to fulfill their varied demands. Water supply is not the only concern of these departments, but they also try for the better treatment of water resources. So both quantity and quality are necessary. A number of innovative approaches are considered to meet the entire demands of water supply.

**Task 9. Answer the questions on the text in writing. Be ready to discuss them.**

- 1 What field poses higher challenges in Civil Engineering?
- 2 What problems do companies and engineering departments solve while supplying clients with water?
- 3 What strategies have been developed to supply clients with water?

**Task 10. Find the words in the text that mean the following.**

- 1 the work involved in designing and building roads, bridges, machines etc a \_\_\_\_\_
- 2 something such as useful land, or minerals such as oil or coal, that exists in a country and can be used to increase its wealth: b \_\_\_\_\_
- 3 a particular type of help or work that is provided by a business to customers, but not one that involves producing goods c \_\_\_\_\_
- 4 unwanted materials or substances that are left after you have used something d \_\_\_\_\_

5 the clear liquid without colour, smell, or taste that falls as e \_\_\_\_\_  
rain and that is used for drinking, washing etc

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