

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ  
НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ  
ХАРЧОВИХ ТЕХНОЛОГІЙ**

**АНГЛІЙСЬКА МОВА**

**МЕТОДИЧНІ ВКАЗІВКИ**

до вивчення дисципліни та виконання контрольних  
робіт для студентів напряму 6.140.106 “Екологія  
та охорона навколишнього середовища та збалансоване  
природокористування” заочної форми навчання

**СХВАЛЕНО**  
на засіданні кафедри  
іноземних мов  
загальної підготовки  
Протокол № 3  
від 15.10.2008 р.

**Англійська мова.** Методичні вказівки до вивчення дисципліни та виконання контрольних робіт для студентів напрямку 6.140.106 “Екологія та охорона навколишнього середовища та збалансоване природокористування” заочної форми навчання / Уклад.: Н.Д.Ткаченко, Є.С.Смірнова, О.П.Авраменко — К.: НУХТ, 2009. — 131 с.

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## **Пояснювальна записка**

В умовах інтегрування України у європейський освітній та економічний простір вдосконалення заочної освіти набуває все більшого значення. Поширення міжнародного співробітництва в різних галузях економіки вимагає від сучасного випускника вищої школи практичного володіння іноземною мовою.

Методичні вказівки мають призначенням навчання та контроль знань студентів заочної форми навчання для формування вміння самостійно читати літературу англійською мовою із спеціальності з метою отримання інформації з іноземних джерел та комунікації.

Методичні вказівки складаються з чотирьох контрольних робіт, розрахованих на 4 семестри, і додатку з граматики. Кожна контрольна робота включає 10 варіантів контрольних завдань, які розподіляються викладачем.

Студенти заочного відділення виконують контрольну роботу в окремому зошиті. Контрольна робота повинна бути написана власноруч кульковою ручкою, охайно і чітко. Не дозволяється виконувати контрольну роботу на комп'ютері, друкарській машинці або з використанням копіювального паперу. При виконанні роботи слід залишати широкі поля для зауважень, пояснень та методичних вказівок викладача.

Усі завдання виконуються письмово, у тій послідовності, в якій вони розташовані у методичних вказівках. На титульному листі зошита слід вказати назву дисципліни, курс, номер академічної групи, прізвище, ім'я, по-батькові, адресу, телефон. У верхньому лівому кутку пишеться прізвище викладача.

На установчих заняттях викладач пояснює порядок виконання контрольної роботи і граматичний матеріал, пов'язаний з цією контрольною роботою. Вдома студент повинен проробити цей граматичний матеріал самостійно, використовуючи довідники, підручники, словники, вказані наприкінці Загальних відомостей. На залікових заняття студент також готує по три-чотири розмовні теми, конспект граматичного матеріалу, словник тематичної лексики, яку він вчить напам'ять.

## **Мета і завдання дисципліни**

Основною метою вивчення студентами іноземної мови в немовному вузі є досягнення ними практичного володіння цією мовою, що передбачає при заочній формі навчання формування вміння самостійно читати літературу за спеціальностями вузу з метою отримання інформації з іншомовних джерел, а також набуття професійних комунікативних навичок.

Студент повинен знати лексичний та граматичний матеріал, необхідний для:

- 1) читання літератури зі спеціальності для отримання інформації,
- 2) набуття професійних комунікативних навичок.

Студент повинен вміти:

- 1) читати тексти зі спеціальності; розуміти їх зміст і відбирати все необхідне для своєї роботи;

2) перекладати тексти рідною мовою, використовуючи словник, брати участь в усному спілкуванні іноземною мовою в обсязі матеріалу, передбаченого програмою.

Особливість вивчення іноземної мови при заочній формі навчання полягає в тому, що більша частина мовного матеріалу повинна пророблятися самостійно.

Кожному аудиторному заняттю у 2 години повинні відповідати 6 годин самостійної роботи.

## **Робоча програма з англійської мови**

### **Фонетика**

Особливості вимови, відкритий і закритий склади, наголос, розходження між написом і вимовою, особливості інтонації.

### **Лексичний мінімум**

За повний курс навчання студент повинен здобути лексичний запас:

1) 1000 лексичних одиниць (слів і словосполучень), найбільш вживаних в англійській мові і пов'язаних з майбутньою спеціальністю, які є основою для розширення потенційного словникового запасу студента.

2) 500 лексичних одиниць на основі наступної тематики:

#### **I семестр**

1. Про себе.
2. Мій робочий день.
3. Місто, в якому я живу.
4. Мій університет.

#### **II семестр**

5. Україна (видатні люди України).
6. Київ - столиця України.
7. Велика Британія.
8. США.

#### **III семестр**

9. Видатні люди Великобританії і США.
10. Я вивчаю англійську мову.

#### **IV семестр**

11. Вища освіта.
12. Моя майбутня спеціальність.

### **Граматичний мінімум.**

У процесі навчання студент повинен засвоїти основні граматичні форми і структури англійської мови, характерні для наукових текстів англійською мовою.

### **Морфологія**

I курс I семестр

- 1) іменник — артиклі, множина, присвійний відмінок;
- 2) прикметник, прислівник — ступені порівняння;

- 3) числівник — кількісні, порядкові, читання дат;
- 4) займенник — особові, присвійні, зворотні, питальні, неозначені;
- 5) дієслово — активні і пасивні форми;
- 6) безособові речення. Порядок слів у простому реченні.

#### I курс II семестр

Дієслово, модальні дієслова. Способи дієслова. Неособові форми дієслова.

#### II курс III семестр

Неособові форми дієслова. Інфінітивні, дієприкметникові та герундіальні звороти.

#### II курс IV семестр

Умовні речення. Головні та другорядні члени речення.

**Іспит.** До іспиту допускається студент, який виконав усі письмові завдання і склав заліки за попередні семестри.

**Екзаменаційний білет** складається з наступних питань:

а) прочитати і перекласти зі словником текст 1.600 друк. знаків зі спеціальності за 1 академічну годину.

б) прочитати без словника текст 600-800 друк. знаків, який містить вивчений граматичний матеріал і 5-8 незнайомих слів. Форма перевірки — передача змісту українською мовою. в) вміти вести бесіду за тематикою, передбаченою програмою.

### Рекомендована література

#### I, II курс

1. Авраменко О.П., Бузницька Р.О., ін. Методичні вказівки до розмовних тем з англійської мови для студентів I-II курсів усіх спеціальностей денної та заочної форми навчання. — К.: УДУХТ. — 2001. — № 5128.

2. Верба Г.Г., Верба Л.Г. Довідник з граматики англійської мови, 2007.

3. Англо-українські та українсько-англійські словники.

## TEST № 1

### Variant 1

#### I. Copy and translate the following text.

#### WHAT IS ECOLOGY?

Ecology is a study of the relationship of plants and animals to their physical and biological environment. Life involves all systems – living organisms (*biotic* factors) or nonliving variables (*abiotic* factors), such as water, soil, climate, light, and oxygen. All interacting biotic and abiotic factors make up an ecosystem. The physical environment includes light and heat or solar radiation, moisture, wind, oxygen, carbon dioxide, nutrients in soil, water, and atmosphere. The biological environment includes organisms of the same kind as well as other plants and animals.

Ecology originated from natural history in the end of the XIX century and was developing rapidly after the Second World War in connection with the growing rates of the population and negative results of the anthropogenic activity – irrationally high utilization of natural resources and accumulation of tremendous amounts of unutilized wastes polluting air, water and soil.

The present ecological situation has been predetermined by the entire earlier development of the civilization. Now in the whole world great attention is paid to the harmful effects of the human activity on natural environment which have an international importance. All the problems that appear at the age of scientific and technological revolution are ecological, because they are connected with environmental protection and with the future of civilization. For example: the problems of demography and energetics, economics and nutrition, legal, social, political, pedagogical, etc. Environment is all of the external factors affecting an organism.

Like all the other living beings, humans have clearly changed their environment, but they have done so generally on a grander scale than have other species. Some of these changes – such as the destruction of the world's tropical rain forests to create grazing land for cattle or the drying up of almost three-quarters of the Aral Sea, once the world's forth-largest freshwater lake, for irrigation purposes – have led to altered climate patterns, which in turn have changed the distribution of species of animals and plants.

#### Vocabulary

moisture	волога
nutrient	поживна речовина
predetermine	передвiщувати
to affect	впливати, уражати
variable	змiнний, мiнливiсть
on greater scale	у бiльшому масштабi
graze	пастися
irrigation	зрошення

## **II. Answer the following questions.**

1. What does the physical environment include? 2. What does the biological environment include? 3. What is attention of the whole world paid to now? 4. All the problems that appear at the age of scientific and technological revolution are ecological, aren't they? Why? 5. How have humans changed their environment?

## **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

взаємозв'язок рослин і тварин, так само, як і; зумовлений розвитком, стати свідомим чогось, шкідливий ефект, людська діяльність, пов'язаний з, природне середовище, міжнародне значення, захист оточуючого середовища, впливати на організм, неповага людини до, піклуватися про, складова частина, велика кількість, мати справу з, робити можливим, у певній місцевості, по відношенню до, концентруватися на, перемінна величина, взаємодія біотичних та абіотичних факторів, руйнування лісів, в більшому масштабі, кліматична модель.

## **IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s: as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. Ecology is a study of the relationship of plants and animals to their physical and biological environment. 2. Life involves all systems – living organisms (*biotic* factors) or nonliving variables (*abiotic* factors). 3. the Aral Sea was once the world's forth-largest freshwater lake. 4. The physical environment includes light and heat or solar radiation, moisture, wind, etc. 5. A laboratory assistant prepares the samples. 6. The students write their thesis for the conference. 7. The student's questions show their interest in the subject. 8. The Dnieper divides the city into two parts. 8. The citizen's rights are guaranteed by the Constitution.

## **V. Fill in the gaps with the verb to be.**

1. What \_\_\_\_ your name? 2. How old \_\_\_\_ you? 3. Where \_\_\_\_ you born? 4. \_\_\_\_ there many faculties in the NUFT? 4. I \_\_\_\_ a first-year student of the extramural department of the National University for Food Technologies. 5. I have \_\_\_\_ in Kyiv before. 7. Last year I \_\_\_\_ a pupil. 8. My father \_\_\_\_ an engineer, and so \_\_\_\_ my mother. 8. I \_\_\_\_ going to learn much interesting here. 10. I will \_\_\_\_ specialist in ecology.

## **VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. People have changed their environment on a grand scale . 2. By July next year they will graduate from the university. 3. The weather was fine during the last few days. 4. Environment is influencing the body. 5. The supplies of natural fuels are running out. 6. All last week he was preparing for the examinations. 7. The train had arrived a few minutes before. 8. Water will change into ice at the temperature below zero.

## **VII. Transform the verbs into the past tense.**

1. The biological environment includes organisms of the same kind as well as other plants and animals. 2. Ecological problems are appearing at the age of scientific and technological revolution. 3. Ecologists have always concentrated on particular taxonomic groups. 4. There are fields of plant ecology, insect ecology or the ecology of large mammals. 5. Humans have altered climate patterns. 6. People ruin their health in bad ecology. And so do animals. 7. We protect our environment. 8. The altered climate patterns have changed the distribution of species of animals and plants.

## **VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. Ecology was developing much (rapidly) after the Second World War. 2. She has made much (little) mistakes in her last dictation. 3. There are (many) high mountains in the Caucasus than in the Carpathians. 4. There is (little) truth in this statement than in that one. 5. People have changed their environment on a (grand) scale than have other species. 6. We received (much) valuable information with every passing year. 7. Niagara Falls is the (much) wonderful show. 8. The (bad) the life the (much) resistant we should be.

## **IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Ecology is a study of the relationship of plants and animals to (they) physical and biological environment. 2. I will answer the question (I). 3. (I) mother and father told me about the war. 4. Changed environment influences (we). 5. (We) group studies ecology. 6. She showed (she) copybooks to nobody. 7. The fault is (I) and I'll improve. 8. He is very busy. It's hard to find (he) in his office. 9. They make (they) preparations (they).

## **X. Translate the following sentences into English.**

1. Мене звуть Петро Стороженко. 2. Мені вісімнадцять років. 3. Я народився в Україні, в місті Полтаві. 4. Скільки осіб у вашій сім'ї? 5. В мене є старший брат. 6. Чому ви обрали цю спеціальність? 7. Після школи я вступив до Національного університету харчових технологій. 8. Я вірю, що буду добрим спеціалістом з екології після університету.

## **Variant 2**

### **I. Copy and translate the following text.**

#### **PRESENT TRENDS AND FUTURE NEEDS**

Scientists are working to understand the long-term consequences that human actions have on ecosystems, while environmentalists are struggling to lessen the impact of human activity on the natural world. New scientific methods allow us to understand deeply and



balance the normal existence of the whole nature.

Man dominates the world ecosystem in a very selfish manner by exploiting the resources of the earth and by abusing the air, water and soil. The man's economic activity seriously effects the climate. Exploiting new lands, cutting out forests, draining lakes and swamps, creating lakes where they have never been man changes the undersoil, disturbs the heat balance between the Earth and its atmosphere. Man has polluted the natural environment of all living beings with toxic substances endangering their health and life. It is because of man that many species of plants and animals have disappeared.

Yet eventually he will discover that he must live in a compatible manner with other organisms on earth. It is by means of ecology, knitting together sociology, demography, human geography, urban planning, landscape architecture, design, etc., that man gains a perspective concerning himself in the exotic world he has created. Concepts of energy flow, cycling the nutrients and materials, diversity and stability, monoculture and instability, and geometrical growth of populations are fundamental ecological principles by which man must live and by which he must manage the Earth. Recreation of the damaged ecosystems is closely connected with rehabilitation of natural landscape, preserving ethalon biosphere sites, utilization of the industrial and domestic urban wastes, introduction of effective technologies to save biosphere from pollution as a result of human activity. UNO ecological program includes solving such problems as: changing the atmosphere and climate, agricultural, demographical and food problems, urbanisation, industry, transport, education and wars.

### **Vocabulary**

consequences	наслідки
to lessen	зменшувати
impact	поштовх, вплив
threshold	пори́г, початок
to involve	включати, спричиняти
exploit	використовувати
to abuse	псувати, зловживати
compatible	сумісний
to regard	вважати
fragile	тендітний
to knit	зв'язувати, з'єднувати
manage	керувати, упоратися

### **II. Answer the following questions.**

1. What are scientists working at? 2. Are the citizens concerned with the ecological situation? 3. Does man dominate the world ecosystem in a clever manner? 4. How must we live in our environment? 5. What are the main ecological principles?

### **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

давні наслідки, різні галузі, стурбовані мешканці, послабити вплив, сучасні напрямки дослідження, на порозі нової ери, спектр знань, включати всі системи, за

визначенням, завершена наука, впливати на світову екосистему, зв'язувати разом, нерозумним способом, експлуатувати ресурси, скоро відкрити, псувати повітря, жити в єдності, тендітний світ, отримувати перспективу, створив світ, керувати планетою.

**IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s: as the ending of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. Scientists are working to understand the long-term consequences that human actions have on ecosystems. 2. New scientific methods allow us to understand deeply and balance the normal existence of the whole nature. 3. Man dominates the world ecosystem. 4. The man's economic activity seriously effects the climate. 5. The Earth's atmosphere must be recreated to save us all. 6. Ecological program includes solving such problems. 7. Man has polluted the natural environment of all living beings with toxic substances. 8. Knitting together sociology, demography, human geography, urban planning, landscape architecture, design, etc., man gains a perspective.

**V. Fill in the gaps with the verb to be.**

1. Recreation of the damaged ecosystems \_\_\_\_ closely connected with rehabilitation of natural landscape. 2. There \_\_\_\_ several solutions to this problem. 3. Everyone \_\_\_\_ happy to know about the end of the war. 4. There will \_\_\_\_ rain next night. 5. It \_\_\_\_ because of man that many species of plants and animals have disappeared. 6. They have \_\_\_\_ discussing the environmental problems for two days. 7. \_\_\_\_ you observing streets' pollution? So \_\_\_\_ I. 8. Environmentalists \_\_\_\_ going to lessen the impact of human activity on the natural world.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. I was born in Ukraine in the city of Kyiv. 2. Our family is not large. 3. My father works as an engineer and mother as a dentist. 4. I have only elder brother. 5. He has graduated from the university. 6. Now he is working in Kyiv technical school as a teacher of mathematics. 7. So having finished school I entered the National University for Food Technologies. 8. I am an extramural student of the Faculty of Biotechnology and Ecology.

**VII. Transform the verbs into the past tense.**

1. Ecology has joined sociology, demography, human geography, urban planning, etc. 2. Man is exploiting the resources of the earth. 3. Chemical formulas are on the blackboard. 4. Time goes on quickly. And so does life. 5. We become interested in sciences when at school. 6. People have abused the air, water and soil. 7. You can always do everything yourself. 8. Scientists are struggling against human impact on nature.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. Water is (much) important substance. 2. This laboratory is (small) than that one.

3. The (much) you read, the (much) you know. 4. He is the (good) student of our group. 5. Have some fresh air even in the (bad) weather. 6. Is the Arctic Ocean the (cold) in the world? 7. He is (little) helpful than he used to be. 8. Man's activity is (dangerous) to the natural environment than are storms and floods.

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Man's activity has great influence on (he) environment. 2. We love (we) Motherland and want to be happy in it. 3. Ask (I) what (you) don't understand. 4. Write down (you) name (you), please. 5. Tell (he) to come in time. 6. The mistake is (she). 7. (They) experiment was a success. 8. New scientific methods allow (we) to understand deeply and balance the normal existence of the whole nature.

**X. Translate the following sentences into English.**

1. Де ви навчалися до університету? 2. Зараз я студент першого курсу факультету біотехнології та екології. 3. Ви витратите багату часу на заняття? 4. Крім занять, я займаюся спортом для того, щоб бути у формі. 5. Я також люблю літературу та мистецтво. 6. Я просинаюся о сьомій годині ранку. 7. Мій день починається з ранкової гімнастики. 8. Де ви будете працювати після університету?

**Variant 3**

**I. Copy and translate the following text.**

**ECOLOGY AS A SCIENCE**

Ecology studies the relationships of plants and animals to their environment, the relationships of plants and animals to one another, and the influence of man on ecosystem. The word "ecology" comes from the Greek word "oikos", meaning house or place to live in, and from the word "logos", meaning science or study. The word was first used by the German naturalist Ernst Haeckel in 1869 and used by Charles Darwin shortly thereafter. In recent years many people have become aware of man's abuse of his environment, and the words "environment" and "ecology" become public.

Ecology was derived from natural history – mother of biological science before the 20th century, though it was not recognized as a distinct science. Charles Darwin, the Swiss-American naturalist Louis Agassiz, the American Henry Baldwin and many other great biologists contributed much to ecological knowledge in 1900's. By the beginning of the 20<sup>th</sup> century, plant ecology grew at a more rapid place than did animal ecology because plants do not migrate and move about. At the beginning of XX century the ecological branches were formed in botany, zoology, hydrobiology, and phytotechnology. At the III Botanical Congress the plant ecology was divided into the ecology of individual organism, autecology, and that of community organisms – synecology. During 1920's a number of important works in the field

of population ecology were published.

In 1935 the English scientist A. Tensli introduced the notion of ecosystem. The American scientist R. Lindeman suggested the main methods of ecological system energy balance. The teachings of V.I. Vernadsky about biosphere and noosphere laid the basis of quantitative analysis in substances turnover and evidence of close relations of a man and his natural environment.

After World War II ecology became very much more quantitative, Mechanisms of biological ecology were the focus. Principles of physics and chemistry were brought in as an integral part of ecology. The advent of the computer made possible the handling of large amount of data, and the quantitative aspects of ecology thought grew quickly.

### **Vocabulary**

to derive	походити
to be aware of	усвідомлювати
to appear	з'явитися
abundance	велика кількість
ripe	зрілий
distinct	визначений, окремий

### **II. Answer the following questions.**

1. What does ecology study? Who was the first to use the word "ecology"? 2. What science was the mother of biological science? 3. Who contributed much to ecological knowledge in 1900's? 5. What works on ecology were published during 1920's?

### **III. Find the English equivalents of the following Ukrainian word combinations.**

вивчення екології, взаємозв'язок рослин і тварин, відношення рослин і тварин, впливати на екосистему, походити від, використовуватися кимось, стати свідомим, шкода оточуючому середовищу, значна кількість, екологічне знання, з'явилося незважаючи на той факт, що; визнана як, певна наука, зробити внесок, визріли умови, визначилась як, рости більш швидкими темпами, рослинна екологія, тваринна екологія, стосовно біології, були опубліковані.

### **IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s: as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. Ecology studies the relationships of plants and animals to their environment, the relationships of plants and animals to one another, and the influence of man on ecosystem. 2. The word "ecology" means the science about the house or place to live in. 3. In recent years many people have become aware of man's abuse of his environment, and the words. 4. Computer makes possible the handling of large amount of data 5. The quantitative aspects of ecology thought grew quickly. 6. Biologist's contribution to ecology is great. 7. Nature's reserves are unlimited if used properly. 8. Scientists demand to save nature.

**V. Fill in the gaps with the verb to be.**

1. Our family \_\_\_\_\_ not large. 2. My parents \_\_\_\_\_ workers. 3. I \_\_\_\_\_ going to be a good technologist. 4. My native town \_\_\_\_\_ Kyiv. 5. It \_\_\_\_\_ built long ago. 6. I have \_\_\_\_\_ studying here. 7. There \_\_\_\_\_ many schools, cinemas, museums, parks and gardens. 8. I hope my town will \_\_\_\_\_ even more modern and beautiful in future.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. The course of study lasts five years. 2. Specialization will begin in the third year of studies. 3. During junior years our students are studying basic subjects such as mathematics, physics, chemistry, etc. 4. We have visited the water purification station. 5. When do they clean the streets? 6. Ecology had taken much from biology. 7. Did ecological knowledge appear long ago? 8. Ukraine will join the peace-loving countries.

**VII. Transform the verbs into the past tense.**

1. Ecology studies the relationships of plants and animals to their environment. 2. The word "ecology" comes from Greek. 3. Population is growing. 4. Many people have become aware of man's abuse of his environment. 5. Many animals feed on grass. 6. Animals are migrating. And so are people. 7. History knows outstanding discoveries. 8. Biologists have contributed much to ecological knowledge. And so have chemists.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

2. The word ecology was first used by the German naturalist Ernst Haeckel in 1869 and used by Charles Darwin (late). 2. Natural food is the (good) one. 3. People in clean zones are (healthy). 4. Our environment grew much (bad). 5. We need food (little) than water. 6. The (rich) green zones are destroyed by man. 7. By the beginning of the 20<sup>th</sup> century, plant ecology grew at a (much) rapid pace than did animal ecology. 8. Computeromania is (good) than narcomania.

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Man abuses (he) environment. 2. Improve (your) health (you) drinking pure water. 3. As Darwin was ill it was hard for (he) to work at his theory. 4. Ecology enriches (we) knowledge of (we) natural environment. 5. (I) students do research (they). 6. Many great biologists devoted (they) works to ecology. 7. Let (I) ask (you) some questions. 8. (She) profession is chemist.

**X. Translate the following sentences into English.**

1. Він вивчає екологію декілька років. 2. Існує багато галузей екології, чи не так? 3. Ви дуже полюбили хімію в школі? 4. Їхні оцінки будуть кращими. 5. Ви були коли небудь у Великобританії? 6. Вони чекали на нас багато часу. 7. Вони прибирають свою кімнату кожного дня. 8. Після університету ми будемо працювати на заводі.

## Variant 4

### I. Copy and translate the following text.

#### BRANCHES OF ECOLOGY

As with any science, ecology is divided into various subdivisions and fields. Ecological studies may focus on the relationships between individual organisms, on the physical and chemical features of their environment. This is *physiological ecology*.

*Synecology or biocenology* accounts on a community of organisms such as a forest; this subdivision is sometimes further divided into population ecology, community ecology, and ecosystem ecology. *Population ecology* is the study of the processes that affect the distribution and abundance of plants and animals populations. *Community ecology* embraces the organization and functioning of communities, which are interacting populations of the species living within a particular area or habitat.

*Autecology* observes an individual organism or species in relation to its environment and to other species. Its subdivision — *demectology* covers the structure and dynamics of the population quantities of separate species. Another branch — *ethology* is a science about animals behaviour.

The study of man in relation to his environment, including the relationships among men or groups of people is called *human ecology*. The ecological study of man can be divided into two fields: *human ecology proper*, which studies the relationships between human biological factors and the natural environment, and *social ecology* which studies the relationships among natural environment, population, technology, and society. The branch of science concerning socio-economic factors influencing environment is known as *socioecology* and deals with ecological law, education, demography, ecological management, etc. The study of the animal-borne diseases is the realm of *medical ecology* or public *health ecology*.

The further important area of ecology *paleoecology* includes the study of the ecology of fossil organisms. Other branches of ecology include *marine ecology*, *freshwater ecology*, and *terrestrial ecology*.

#### Vocabulary

emphasis	наголос, увага
advent	прогрес
hande	мати справу з
gene	ген
habitat	місце проживання
fossil	викопний
realm	галузь
terrestrial	земний

### II. Answer the following questions.

1. Ecology is built on some principles, isn't it? 2. What is population ecology? 3. What

does human ecology study? 4. Is the ecological study of man divided into subdivisions?  
5. Does social ecology deal with education?

**III. Find in the text the English equivalents of the following Ukrainian word combinations.**

стала більш статистична, стосовно механізму, більший наголос на, фізичні принципи привнесені, складова частина, прогрес комп'ютерів, обробляти велику кількість інформації, поділятися на галузі, взаємозв'язок між, риси оточуючого середовища, впливати на розподіл населення, кількість населення, важлива складова, мати справу з, громадська екологія, певні різновиди, місце проживання, відношення людини до оточення, викопні організми, хвороби тварин, галузь медицини, екологія охрони здоров'я.

**IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s: as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. Ecology includes various subdivisions and fields. 2. Autecology studies an individual organism or species in relation to its environment and to other species. 3. Other branches of ecology include marine ecology, freshwater ecology, and terrestrial ecology. 4. Principles of physics and chemistry were brought in ecology. 5. The chemist's achievements contributed to ecology. 6. The children's ailments are connected with environment. 7. Microorganisms multiply on wastes. 8. This dirty food has bitter taste.

**V. Fill in the gaps with the verb to be.**

1. Ecology \_\_\_\_ divided into various subdivisions and fields. 2. Communities \_\_\_\_ interacting populations of the species living within a particular area or habitat. 3. The ecological study of man can \_\_\_\_ divided into two fields. 4. There \_\_\_\_ *socioecology* dealing with socio-economic factors influencing environment. 5. Scientists have always \_\_\_\_ concerned with environment protection. 6. It \_\_\_\_ not so easy to solve ecological problems at that time. 7. We \_\_\_\_ developing contacts with many countries. 8. During our studies we \_\_\_\_ going to learn more about environment protection.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Cultured people don't leave wastes after themselves. 2. People have destroyed many natural preserves. 3. Acid rains are leaving yellow sulphur on the ground. 4. Will the weather improve? 5. For years toxic plant gases had been burning the tops of the trees. 6. Filters on the chimneys had helped to save the trees. 7. Do you like to give advice? 8. The quantitative aspects of ecological thought grew quickly.

**VII. Transform the verbs into the past tense.**

1. Fish dies in dirty lakes. And so do the birds feeding on the fish. 2. The scientists are developing new methods of water purification. 3. Time has come to think about our environment. 4. He is taking an active part in the conferences.

5. We have been watching the unusual phenomenon for a minute. 6. Will we take away extra transport from cities? 7. Do you try to improve the situation? 8. Ecological genetics deals with the behavior of genes in natural populations.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. Vegetarian food is the (good). 2. The (much) water we drink the (good). 3. *Synecology or biocenology* deals (much) with the community of organisms 4. There are no (little) important ecological problems. 5. It is hard to have a (good) health with the (bad) ecology. 6. Knowledge is (much) necessary. 7. (Few) experiments mean (few) discoveries. 8. We usually choose the (easy) task.

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Ecology is the study of man in relation to (he) environment. 2. Ecological studies may focus on the relationships between individual organisms, on the physical and chemical features of (they) environment. 3. *Autecology* observes an individual organism or species in relation to (it) environment and to other species. 4. A scientist give (we) (he) advice. 5. She submitted (she) essay on ecology to (she) professor. 6. Each of the students worked (he). 7. We are stronger in mathematics than (they). 8. We find (we) ways and means (we).

**X. Translate the following sentences into English.**

1. Хто найкращий студент у вашій групі? 2. Ви приготували домашнє завдання? 3. Не питайте всі разом. 4. Існують багато видів тварин і рослин. 5. Студенти старших курсів вивчають спеціальні дисципліни. 6. Екосистема включає живі і неживі компоненти. 7. Чи наша екологія буде кращою? 8. Протягом багатьох століть всі живі та неживі об'єкти на землі еволюціонували разом.

**Variant 5**

**I. Copy and translate the following text.**

**METHODS IN ECOLOGY**

Because ecologists work with living systems possessing numerous variables, the techniques used by physicists and chemists, mathematicians and engineers require modification; they are not easily applied as those obtained in other sciences. Ecological measurements probably never will be as precise or as subject to the same analysis as measurements in physics, chemistry, or the biological science. In spite of these problems, various aspects of the environment can be determined by physical and chemical means, ranging from simple chemical identifications and physical measurements to the use of sophisticated mechanical apparatus.



The development of the biostatistics and experimental design permit a statistical approach to the study of ecology. Ecosystemic analysis underlies the ecological approach to the study of biosphere. The use of statistical procedures and the application of the computer science are providing new insights into population interaction and ecosystem function. Mathematical programming is becoming increasingly important in applied ecology, especially in the management of natural resources and agricultural problems having an ecological basis.

Biotelemetry and other electronic equipment products of space age permit the rapid sampling of plant and animal populations. Such tools enable ecologists to follow from the distance the movements and behavior of a free-ranging animal by radio signals. Radioisotopes are used for tracking the pathways of nutrients through the different components of ecosystem and for the determination of food chains.

The use of laboratory microcosms are useful in examining rates of nutrient cycling, ecosystem development, and another functional aspects of ecosystems. Microcosms — are aquatic and soil microsystems, consisting of biotic and nonbiotic material from natural ecosystem. Microcosms enable the ecologists to duplicate experiments and to perform experimental manipulation on them.

### **Vocabulary**

variable	перемінна величина
require	вимагати
obtain, gain	отримувати
apply	застосовувати
measure	вимірювати
precise	точний
in spite of	незважаючи на
determine	визначати
design	конструювати
permit	дозволяти
provide	забезпечувати
increasingly	все більше
sample	зразок
follow, track	прослідити
nutrient	поживна речовина

### **II. Answer the following questions.**

1. Why do methods of other sciences in ecology need modification? 2. Will ecological methods be precise? 3. What does the development of the biostatistics and experimental design permit? 4. Where is mathematical programming becoming increasingly important? 5. What does electronic equipment enable?

### **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

працювати з живими системами, численні перемінні величини, вимагає

модифікації, легко застосовуватися, досить просто, отримання тепла, точні виміри, підлягати аналізу, незважаючи на проблеми, визначена фізичними засобами, починаючи з, використання складних апаратів, розвиток статистики, застосування комп'ютерів, забезпечення нових можливостей вивчення, все більш важливий, прикладна екологія, управління природними ресурсами, брати зразки рослин, поведінка тварини, прослідити шляхи.

**IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. Ecologists work with living systems. 2. Electronic equipment product permits the rapid sampling of plant and animal populations. 3. Man's progress must not abuse nature. 4. The plant's leaves produce oxygen. 5. Everyone understands the importance of park zones. 6. Electronics enables ecologists to follow animal's movements by radio signals. 7. Microcosms – are aquatic and soil microsystems. 8. Man receives everything necessary from the earth. And so does an animal.

**V. Fill in the gaps with the verb to be.**

1. I \_\_\_\_ always in time for my classes. 2. When the lectures \_\_\_\_ over we go to the students' dining-room. 3. There \_\_\_\_ many laboratory tests last week. 4. When I \_\_\_\_ at school I didn't have so many friends. 5. My native town \_\_\_\_ an important industrial and trade centre. 6. I have always \_\_\_\_ proud of my native town. 7. I \_\_\_\_ going to work there. 8. I hope there will \_\_\_\_ work for me there after my graduation.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Ecologists have been working with living systems possessing numerous variables. 2. Ecological measurements probably will never be precise. 3. Ecologists used mathematical, physical, chemical and other methods. 4. Developing ecology, scientists have made many discoveries. 5. Mathematical programming is becoming increasingly important in applied ecology. 6. Microcosms enable the ecologists to duplicate experiments. 7. People saw changes in nature. 8. What did you do to save your green zone?

**VII. Transform the verbs into the past tense.**

1. Development of the biostatistics permits a statistical approach to the study of ecology. 2. New mountains will appear, islands disappear. 3. The weather has changed. 4. There are various aspects of the environment. 5. The Earth is constantly changing. 6. Nothing will restore the extinct species. 7. Cities have occupied the place of forests and meadows. 8. The aspects of the environment are ranging from simple chemical identifications to the use of mechanical apparatus.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. Mathematical programming is becoming (much) important in applied ecology.

2. The Earth is not the (old) of the planets in our Galaxy. 3. He doesn't work (hard) than I do. 4. What country has the (good) ecology? 5. The (bad) is the plants' toxicity. 6. Selected plants have (good) quality and quantity. 7. In (warm) zones the (great) varieties of plants still grow today. 8. The last is not always the (little).

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Biotelemetry and other electronic equipment permit (we) rapid sampling of plant and animal populations. 3. Let (we) discuss the ecosystems. 4. People should clean (they) cities. 5. I study this subject (I). 6. (They) gardens are known all over the world. 7. The money is (we), the product is (they). 8. Let (she) make (she) food (she).

**X. Translate the following sentences into English.**

1. Коли ви закінчили школу? 2. Вона вже зробила свою роботу. 3. Немає місця кращого за домівку. 4. Ви ще будете мене питати? 5. Вони зараз розмовляють із своїм секретарем. 6. Чим більше знань ви візьмете, тим краще. 7. Динаміка екосистеми включає потік живої матерії та енергії. 8. Існує дві категорії екосистеми на землі – наземна та водна..

**Variant 6**

**I. Copy and translate the following text.**

**OUR BIOSPHERE**

*Biosphere* is the world of living organisms, including *biotic* and *abiotic* matter – the organisms themselves and their physical environment. It includes the thin layer of soil and rocks in which living things are found; the streams, lakes and oceans inhabited by aquatic plants and animals; and the dense lower layer of the atmosphere.

Biotic matter plays an important role in gas maintaining, oxygen reducing, concentration, destructive, transportation, medium-forming, scattering, informational functions. For example, the principal reducers – destructors of organic matter are fungi and bacteria. All the organisms in the biosphere are interrelated both to each other and to their environment in the so-called balance of nature, which includes the food web and various cycles such as the nitrogen cycle and the carbon-hydrogen-oxygen cycle.

The biosphere is the system characterized by the continuous cycling of matter and solar energy in which certain large molecules and cells are self-reproducing. Water is major factor, for all life depends on it. The elements carbon, hydrogen, nitrogen, oxygen, phosphorus and sulfur, when combined as proteins, lipids, carbohydrates, and nucleic acids, provide the building blocks, the fuel, and the direction for the creation of life. Organisms are cellular in nature and always contain some sort of enclosing membrane structure, and all have nucleic acids that store and transmit genetic information.

All life on Earth depends upon green plants, as well as upon water. Plants utilize sunlight in a process called photosynthesis to produce the food upon which animals feed

and to provide as a by-product, oxygen, which most animals require for respiration. At first, the oceans and the lands were teeming with large numbers of a few kinds of simple single-celled organisms, but slowly plants and animals of increasing complexity evolved. Interrelationships developed so that certain plants grew in association with certain other to form communities including those of forests, grasslands, deserts, dunes; bogs, rivers, and lakes.

### **Vocabulary**

to inhabit	населяти
dense	густий
matter	речовина
fuel	паливо
cellular	клітинний
by-product	побічний продукт
to require	вимагати
to teem	об'єднуватися

### **II. Answer the following questions.**

1. What is biosphere? 2. What does biosphere include? 3. How does balance of nature take place? 4. Has biosphere a cycling character? 5. What does life on the Earth depend on?

### **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

фізичне оточення, шар землі, населений водолюбними рослинами, баланс природи, харчова сіть, цикл азоту, головний фактор, залежати від, забезпечувати будівельні блоки, відтворювати життя, оточуюча мембрана, нуклеїнова кислота, передавати інформацію, використовувати світло, названий фотосинтезом, вимагати для дихання, об'єднуватися з, рослини розвинулися, нерозривно взаємозв'язані, постійно взаємодіють.

### **IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. All life on Earth depends upon green plants as well as upon water. 2. Plants utilize sunlight in a process called photosynthesis. 3. Animal feeds on plants and on other animals. 4. The animal's life depends on oxygen. 5. Most animals require oxygen for respiration. 6. At first, the oceans and the lands were teeming with simple single-celled organisms. 7. The organism's cells store genetic information.. 8. Polluted foods may contain toxins.

### **V. Fill in the gaps with the verb to be.**

1. My breakfast \_\_\_\_ over at a quarter past seven. 2. At half past seven I \_\_\_\_ going to leave for my university. 3. I have always \_\_\_\_ in time for my classes. 4. The university buildings \_\_\_\_ situated in Volodymyrska Street. 5. There \_\_\_\_ many interesting books in the students' library. 6. At a quarter past eight I \_\_\_\_ sitting at my lessons.

7. There will \_\_\_\_\_ lectures, practical classes, and laboratory tests today. 8. My favourite subject at school \_\_\_\_\_ chemistry.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Electric transport will make the air cleaner. 2. Biosphere includes the organisms themselves and their physical environment. 3. Wild animals are living in the forest. 4. The aquatic plants and animals have always inhabited the streams, lakes and oceans. 5. There is continuous cycling of matter and solar energy. 6. We had passed our entrance examinations successfully. 7. They have already discussed their reports. 9. The farmers gathered crops earlier than usual last year. 8. The students saw the process of water cleaning.

**VII. Transform the verbs into the past tense.**

1. Biotic matter plays an important role in gas maintaining, oxygen reducing, concentration. 2. Interrelationships develop so that certain plants grow in association with certain other. 3. It is cold in winter. 4. Winter has brought snow and ice. 5. The temperature is rising in the day time. 6. There are many species of plants and animals. 7. We have laboratory work each week. 8. Certain plants grow in association with certain other.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. He is (much) helpful than he used to be. 2. In summer the sun is rising early and setting (late). 3. Which is the (bad) evil? 4. The (much) undesirable effect of modern food is loss of man's resistance to diseases. 5. Some countries have (good) soils than others. 6. The (little) is the country, the (good) is care of it. 7. (Many) animals require oxygen for respiration. 8. The weather is getting from bad to (bad).

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. All the organisms in the biosphere are interrelated both to each other and to (they) environment. 2. (She) mother is a director of the bread plant. 2. I think so (I). 3. (I) taste is quite different. 4. Tell (they) what to do. 5. Let (we) add some acid into the solution. 6. What is (you) future speciality? 7. Living organism is complex in nature, (it) structure is cellular. 8. Fruits are (you), vegetables are (I). 10. (We) lecturer spoke about species of microorganisms.

**X. Translate the following sentences into English.**

1. Я народився в Україні. 2. Моє рідне місто Житомир. 3. Ви колись бували у Житомирі? 4. Я зараз дуже скучаю за моїм містом. 5. Моє місто розташоване на річці Тетерів. 6. У місті є харчові заводи та багато цікавих місць. 7. У Житомирі я закінчив середню школу. 8. Після закінчення університету я буду працювати у своєму рідному місті.

## Variant 7

### I. Copy and translate the following text.

#### ECOSYSTEM TEXT 1

The ecologist views the Biosphere as broken down into a series of subunits that he terms ecosystem. For convenience, any segment of the landscape that includes the living (*biotic*) and nonliving (*abiotic*) components is called an ecosystem. The abiotic portion of each environment of the biosphere includes the flow of energy, nutrients, water and gases, and the concentrations of organic and inorganic substances in the environment. A community is a collection of species' populations. In a stand of pines there may be many species of insects, birds, of mammals, each a separate breeding but each dependent on the other for its continued existence. A species, furthermore, is composed of individuals, single functioning units as organisms. Beyond this level, the units of the biosphere are those of the organism: organ system composed of organs, organs of tissues, tissues of cells; cells of molecules, and molecules of atomic elements and energy. The progression, therefore, proceeding upwards from atoms and energy, is toward fewer units, layers and more complex in pattern, to each successive level.

The biotic and abiotic parts of an environment are inexorably intermixed and intertwined. Through nearly three billion years of evolution, the living and nonliving characteristics of the earth's surface have slowly evolved together. For example, oxygen in the earth's atmosphere is direct consequence of photosynthesis by the green plants of the world, and yet all animal life and plant decay requires oxygen. An ecosystem can be a pond, meadow, forest, sand dune, bog or even a small aquarium. In particular, it is a complex of the interactions of all organisms with their physical environment and with one another. We can speak of the entire planet earth as an ecosystem; it is the ultimate ecosystem with which we are primarily concerned. The dynamics of the ecosystem involve the flow of matter and energy and include the birth, growth, death, and decay of all organisms.

#### Vocabulary

subunit	підрозділ
landscape	ландшафт
environment	природне середовище
community	живе середовище
species	вид, види
depend on	залежати від
existence	існування
proceed	починати
tissue	тканина
layer	шар
pattern	модель
inexorably	невблаганно
interwine	переплітатися

evolve	розвиватися
consequence	наслідок
decay	розпад
pine	сосна
breeding	порода
tissues	тканини

## **II. Answer the following questions.**

1. What is ecosystem? 2. How is ecosystem arranged? 3. What does abiotic component include? 4. Is a stand of pines an ecosystem? 5. The biotic and abiotic parts of an environment are intermixed, aren't they?

## **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

розглядати як, розбити на підрозділи, називається як, для зручності, ландшафт включає, кожне середовище, потік енергії, неорганічні речовини, вид популяції, насадження сосен, залежати від, протягом існування, складається з, одиниці біосфери, тканина клітини, складна модель, послідовні рівні, обов'язково пов'язані, кінцева екосистема, окрема порода.

## **IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.**

1. The abiotic environment includes the flow of energy, nutrients, water and gases. 2. Oxygen in the earth's atmosphere is direct consequence of photosynthesis. 3. Animal develops resistance to diseases. 4. The researcher's mistake led to the discovery. 5. Any segment of the landscape includes the living (biotic) and nonliving (abiotic) components. 6. A community is a collection of species populations. 7. In a stand of pines there may be many species of insects, birds, mammals. 8. The ecologist's view of the Biosphere is broken down into a series of subunits.

## **V. Fill in the gaps with the verb to be.**

1. Simple organisms \_\_\_\_ the first on the Earth. 2. There \_\_\_\_ few theories on this subjects. 3. Nature on the Earth has \_\_\_\_ developing since long ago. 4. The progression \_\_\_\_ proceeding toward fewer units 5. You will \_\_\_\_ surprised to see the results. 6. Darwin \_\_\_\_ a prominent scientist. 7. The Biosphere \_\_\_\_ broken down into a series of subunits ? 8. In a stand of pines there \_\_\_\_ many species of insects, birds, of mammals.

## **VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Each species depends on the other for its continued existence. 2. I heard nothing from him up to yesterday. 3. He has been studying the phenomenon carefully for nearly a year. 4. The progression is proceeding toward fewer units and more complex in

pattern. 5. The living and nonliving characteristics of the earth's surface have slowly evolved together. 6. The students will have their professional training in the last year. 7. Did he say anything? 8. Will you be working at your project next month?

### **VII. Transform the verbs into the past tense.**

1. When the lectures are over I go to the students' canteen. 2. Usually I dine with my friends. 3. When I have many homeworks I go to the library. 4. In the reading hall I am preparing for my seminars and practical classes. 5. When I am tired I go back to the students' hostel. 6. Before going to bed I look through the newspapers. 7. It takes me little time. 8. Sometimes I play chess with my friends.

### **VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. The sun is the (bright) star. 2. Is the diameter of Jupiter (long) than that of the Earth? 3. The Roman roads weren't much (good). 4. Always do first the (much) important job of the day. 5. The last is not always (little). 6. Nobody chooses (bad). 7. There is much (little) water in this well. 8. There was (many) fruit last year than this one.

### **IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Ecosystem is a complex of the interactions of all organisms with (them) physical environment. 2. (We) all depend on (we) ecosystem. 3. She has shown (we) (she) collection. 4. Animals choose (they) food (they). 5. Tell (he) to make the experiment (he). 6. Do the job for (she). 7. Let (I) start (I) lesson. 8. Help (they) to survive.

### **X. Translate the following sentences into English.**

1. Зараз хіміки виробляють багато штучних речовин. 2. Всі зелені організми здатні до фотосинтезу. 3. Ви запросили його прийти на зустріч? 4. Ми листувалися з адміністрацією багато років. 5. Студенти зараз пишуть тест у класі. 6. Ви не приєднаєтеся до кампанії? 7. Діти не люблять багато думати. 8. Чи ваша освіта задовольняє вас?

## **Variant 8**

### **I. Copy and translate the following text.**

#### **ECOSYSTEM TEXT 2**

The term "ecosystem" is generally used to refer to parts of the biosphere such as forests. A forest considered as an ecosystem is not simply a stand of trees but is a complex of soil, air and water, climate and minerals, of bacteria, viruses, fungi, grasses, herbs and trees, of insects, reptiles, amphibians, birds and mammals.



An ecosystem is composed of four primary constituents: (1) the abiotic portion that includes the flow of energy through the system, the flow of nutrients, water and gases, and the concentration of organic and inorganic substances in the system; (2) the primary producers, largely green plants; (3) the consumers, which include the herbivores, carnivores, and omnivores; and (4) the decomposers, which include heterotrophic organisms, such as bacteria and fungi, that break down protoplasm into the simpler components.

Within the larger ecosystem of the planet Earth there are two broad categories of ecosystem – terrestrial and aquatic. Each of these is further divided into subunits. Hence within the aquatic ecosystem we have fresh water and marine, or salt water ecosystems.

The terrestrial ecosystems are classified accordingly to their dominant type of vegetation (grasses, shrubs, trees, and so on). The fundamental source of energy in almost all ecosystems is radiant energy from the sun. The energy from the sunlight is used by the ecosystem's autotrophic, or self-sustaining, organisms. Consisting largely of green vegetation, these organisms are capable of photosynthesis – i.e., they can use the energy of sunlight to convert carbon dioxide and water into simple, energy-rich carbohydrates. The autotrophs use the energy stored within the simple carbohydrates to produce more complex organic compounds, such as proteins, lipids, and starches, that maintain the organisms' life processes. The autotrophic segment of the ecosystem is commonly referred to as the producer level.

### **Vocabulary**

fungi	гриби
herbs	трави
terrestrial	земний
shrubs	кущі
self-sustaining	самозабезпечений
starch	крохмаль
to convert	перетворювати

### **II. Answer the following questions.**

What is an ecosystem? 2. An ecosystem is composed of four primary constituents. What are they? 3. What are two categories of ecosystem? 4. What is the fundamental source of energy in almost all ecosystems? 5. What is photosynthesis?

### **III. Find in the text the English equivalents of the following Ukrainian word combinations.**

як правило вживається, для назви, лісонасадження дерев, складатися з, первинні складові, потік енергії, біологічне середовище харчових речовин, споживачі включають, травоядні тварини, розщеплюють плазму, земна та водна екосистеми, класифікується згідно, більш численний тип, головне джерело енергії, самостійні організми, здатні до фотосинтезу, перетворювати двоокис вуглецю, накопичувати енергію, виробляти сполуки, підтримувати життя.

### **IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular,**

**possessive case or plural of a noun.**

1. A forest is a complex of soil, air and water, grasses, herbs and trees, animals.  
2. Green plants are capable of photosynthesis. 3. The plant's ability to use the sun light is called photosynthesis. 4. Parks please us with green vegetation. 5. An ecosystem is composed of four primary constituents. 6. The concentration of organic and inorganic substances in the system is important. 7. The sun's energy is the source of life. 8. The consumers are the herbivores, carnivores, and omnivores.

**V. Fill in the gaps with the verb to be.**

1. What \_\_\_\_ the name of your university? 2. Where \_\_\_\_ your university situated?  
3. What faculty \_\_\_\_ you a student at? 4. What will you \_\_\_\_ after the university?  
5. The night \_\_\_\_ coming. 6. We \_\_\_\_ going to prepare for the seminar.  
7. Terrestrial and aquatic ecosystems have \_\_\_\_ further divided into subunits. 8. According to the theory of academician Oparin the first organisms on the Earth \_\_\_\_ aquatic.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Have you ever been at our university? 2. Our university is situated in Volodymyrska street. 3. It was founded in 1930. 4. Our university occupies several buildings. 5. There are many lecture halls, laboratories and shops, programming classes, an experimental sugar plant, and a computer centre. 6. The university library provides the students with all necessary literature. 7. In the reading halls the students are preparing for the lectures, seminars, practical classes, examinations. 8. After graduating from the university we will work in various branches of the national economy.

**VII. Transform the verbs into the past tense.**

1. In the senior years the students study subjects connected with their future speciality. 2. You have written a nice composition. 3. I don't understand the task. Neither do they. 4. Does everyone study in high school? 5. Terrestrial and aquatic ecosystems are further divided into subunits. 6. Knowledge about ecosphere is developing. 7. Snow covers the earth in winter. 8. He has been working for nearly two hours.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. The (good) water is clean, fresh, and unboiled. 2. Which river is (long) — Dnieper or Volga ? 3. We don't want to make our ecology (bad) than before. 4. The autotrophs produce (much) complex organic compounds. 5. Bacteria and fungi break down protoplasm into the (simple) components. 6. Simple carbohydrates are (little) complex organic compounds 7. Venezuela is (young) socialist country. 8. The (bad) faults of capitalism are instability and economic crises.

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. People call (they) omnivorous animals. 2. You can check (you) knowledge on

computer. 3. The technologist wants to see (we) skills. 4. Allow (I) to introduce myself. 5. (He) profession is chemist. 6. It was (she) who helped (I) most. 7. He discovered it all (he). 8. They invited you and (we) to the party.

### **X. Translate the following sentences into English.**

1. Що означає термін „екосистема”? 2. Ми відносимо до екосистеми воду, землю, повітря та всіх живих істот. 3. Основним джерелом енергії для всіх екосистем є пряма енергія сонця. 2. Чи бачили ви історичні місця Києва? 3. Фільм розповів нам про досягнення науки. 4. Ви завжди думаєте про своїх батьків? 5. Коли ви читаете книгу, запам'ятовуйте слова. 6. Люди візьмуть добрий приклад. 7. Люди використовують ріки протягом сторіч. 8. Ми віддавали багато часу навчанню.

## **Variant 9**

### **I. Copy and translate the following text.**

#### **BIOME**

The major biomes, sometimes referred to as plant provinces of the world are the tundra, taiga, or northern coniferous forest, temperate deciduous and rain forests, temperate grassland, chaparral, desert, tropical rain forest, tropical grassland and savanna, and mountain vegetation.

Broadly speaking, these biomes are latitudinal zones that are encountered successively in moving from the poles to the equator, except for the mountain vegetation biome that changes its character according to the altitude of the mountain.

The animals associated with each biome are generally different, although there is considerable overlap of some animals from one biome to the next. Certain rodents, mammals, birds or insects inhabit both the desert and the chaparral or the taiga and the tundra, but in general, the animals of one biome are quite distinct from the animals of other biomes.

The habitat of an organism is a place where it lives – for example, the forest floor, a sand dune, a bog, a rock surface, or the stomach of the deer. The concept of the niche that a plant or animal occupies is more difficult to describe. The niche of the organism is its status or position within an ecosystem.

The ecological niche of an organism includes not only the place where it lives but also its complex relationship to all other organisms of the habitat. For example, a woodpecker occupies a hole in a tree, flies through the air and moves up and down tree trunks seeking for insects. The habitat of the woodpecker is a woodland. But, in addition the woodpecker occupies a particular positioning woodland community of plants and animals. This position is determined by the woodpecker's place in the food chain – that is, by its special food requirements (namely, beetles and grubs) and by the predators that attack and feed on it. Other organisms in the community, such as cottontail rabbits, squirrels, or snakes, occupy entirely different niches within the woodland.

## Vocabulary

coniferous	хвойний
temperate	помірний
deciduous	що скидає листя
encounter	зустрічати
successesively	послідовно
except for	крім
altitude	висота
mountain	гора
overlap	переплітатися
distinct	відмінний
habitat	місце проживання
stomach	шлунок
to describe	описати
woodland	ліс
requirements	потреби

### II. Answer the following questions.

1. What is biome? 2. Is desert an example of biome? 3. Animals of different biomes are distinct, aren't they? 3. Is there any difference between habitat and niche? 5. What interrelations does the notion of niche include?

### III. Find in the text the English equivalents of the following Ukrainian word combinations.

сукупність тварин та рослин, займати площину, кордони біома, визначаються головним чином, в широкому розумінні, зони широти, зустрічаються послідовно, рослинність гір, згідно висоти, значне переплетіння, але взагалі, відрізняються від, місце проживання, шлунок оленя, концепція ніши, займати нішу, складні відношення, визначатися чимось, харчовий ланцюг, харчові потреби.

### IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.

1. Put down every teacher's word. 2. Scientists receive degrees for their research work. 3. The student's knowledge depends much on his own self. 4. The concept of the niche that a plant or animal occupies is more difficult to subscribe. 5. The niche of the organism is its status or position within an ecosystem. 6. The major biomes are the tundra, taiga, etc. 7. The woodpecker occupies a particular positioning woodland community of plants and animals. 8. This position is determined by the woodpecker's place in the food chain.

### V. Fill in the gaps with the verb to be.

1. I \_\_\_\_ an early riser. 2. My favourite dishes \_\_\_\_ on the table. 3. I have always

\_\_\_\_\_ good at chemistry. 4. At school I \_\_\_\_\_ the best football player. 5. \_\_\_\_\_ you studying in the day time? 6. I \_\_\_\_\_ going to have a busy day. 7. A woodpecker \_\_\_\_\_ seeking for insects on tree trunks. 8. Beetles and grubs will \_\_\_\_\_ food for the predators.

**VI. Read and translate the sentences. Define the tense form of the predicate and give its infinitive.**

1. Biomes are extending from the poles to the equator. 2. A woodpecker occupies a hole in a tree. And so do some other birds. 3. Different organisms have been occupying their niches for ages. 4. There is considerable overlap of some animals from one biome to the next. 5. Certain rodents, mammals, birds or insects always inhabited both the desert and the chaparral or the taiga and the tundra. 6. The animals of one biome are quite distinct from the animals of other biomes. 7. Ancient animals had perished from cold. 8. Climate has changed much since old ages.

**VII. Transform the verbs into the past tense.**

1. After breakfast I go to the bathroom where I clean my teeth and wash myself. 2. Then I comb and brush my hair. 3. When I have dressed myself I am having my breakfast. 4. Usually I have two eggs and bread and butter and drink a cup of tea or coffee with milk. 5. Sometimes I eat porridge. 6. The road to the university takes half an hour. 7. Lectures start at a quarter past eight. 8. Every day we have 3-4 periods of lectures and practical classes.

**VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. People are (much) and (much) interfering with the laws of nature. 2. Forests are the (much) inhabited biomes. 3. Much (rich) crops were grown in Ukraine. 4. The animals of one biome are (little) distinct than the animals of different biomes. 5. At the exhibition you can see the (good) breeds of animals and species of plants. 6. Animals feel (good) in their biome than in some other. 7. One biome may be (large) than the other. 8. Even the (bad) climatic zones are occupied by living beings.

**IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. The niche of the organism is (it) status or position within an ecosystem. 2. Other organisms in the community occupy (their) niches within the woodland. 2. Tell (he) not to forget (he) ticket. 3. Each of us chooses (he or she) place of living (he or she). 4. She collected (she) herbs during the travel. 5. We have taken (we) dictionaries. 6. These are (I) duties. Which are (you)? 7. Help (I) to translate the article, please. 8. She wrote (they) regularly.

**X. Translate the following sentences into English.**

1. Біом включає різні живі організми. 3. Курси лекцій почнуться у вересні. 3. Чи він отримав тоді моє послання? 4. Коли рослини утворюють хлорофіл? 5. Чи будуть студенти вивчати фотосинтез? 6. Вони взяли нового лаборанта.

7. Рослини виробляють кисень протягом дня. 8. Вчені досліджують природні явища з давніх часів.

## Variant 10

### I. Copy and translate the following text.

#### BIODIVERSITY

The term *biodiversity* is used to encompass the variety of life on earth. Most of the time the word is used to describe diversity of species and subspecies, for example: the diversity of birds includes about 9,600 species. However, biodiversity can also apply to genetic variation within species or describe differences between populations of a species. It can also be applied to variations at higher levels of organization such as the community within a biome (major ecological region). Biological diversity has essentially existed since the beginning of life on earth. There has been a general tendency for biodiversity to increase, although there have been a few moments of crisis when biodiversity has been greatly reduced. Such instances would include periods such as the end of the Permian and Cretaceous periods. The Cretaceous period was the last period of the Mesozoic era and was marked by the disappearance of dinosaurs.

Originally biodiversity was viewed in terms of food, fiber, and materials for shelter only. Now, however, biodiversity has come to include a wide and growing set of resources such as paper, pulp and its derivatives, pharmaceuticals (drugs), latexes (plastic or rubber substances), resins, and essential oils. Currently biodiversity encompasses all of the biological resources on earth. Entire government departments and agencies are focused on various aspects of the biological resource base: agriculture, health, fisheries, forests, and so on.

Biodiversity in nature is responsible for many public services generally treated as free by economic systems all over the world. These services include the major global cycles of energy such as the fixing of solar energy through photosynthesis. It also includes the cycling of water and such elements as carbon, nitrogen, and phosphorus. Regional processes such as the hydrological (water) cycle in the Amazon River basin can also be considered a service of biodiversity. This water cycling extends to more local processes such as watershed function.

#### Vocabulary

diversity	різноманіття
apply to	застосовувати до
describe	описувати
species	вид, види
community	спільнота
exist	існувати
shelter	укриття
grow	збільшуватися

essential	значне
reduce	скорочувати
disappear	зникати
view	розглядати
encompas	включати
responsible	відповідальний
treat	тут вважати
consider	вважати
extend	протягати
watershed	водорозділ

## II. Answer the following questions.

1. What does the term biodiversity encompass? 2. Can it apply to the species of organisms, their populations, or higher organisms? 3. When had biodiversity increased? 4. How is biodiversity viewed today? 5. What public services is biodiversity responsible for?

## III. Find in the text the English equivalents of the following Ukrainian word combinations.

включати різноманіття, описати види, застосовувати до, таких як спільнота, існувало з, такі випадки, зникнення динозаврів, розглядати з точки зору, почало включати, набір ресурсів, на землі, урядові міністерства, зосереджуватися на, внесок у, відповідальні за, земний цикл, вважатися послугою, значна частина дощів, протягати до, функція водорозділу.

## IV. Write down and translate the sentences. Underline the predicates. Define the function of the ending –s : as the sign of the verb in the 3-d person singular, possessive case or plural of a noun.

1. The diversity of birds includes about 9,600 species. 2. Biodiversity can apply to genetic variation within species. 3. Currently biodiversity encompasses all of the biological resources on earth. 4. Mesozoic era was marked by the disappearance of dinosaurs. 5. Water cycling extends to more local processes such as watershed function. 6. Biodiversity in nature gives us knowledge and pleasure. 7. The expert's opinion gave us new ideas. 8. Scientists explain the man's ability to survive by his development.

## V. Fill in the gaps with the verb to be.

1. The term *biodiversity* \_\_\_\_\_ used to encompass the variety of life on earth. 2. There have \_\_\_\_\_ a few moments of crisis. 3. The Cretaceous period \_\_\_\_\_ the last period of the Mesozoic era. 4. There \_\_\_\_\_ various biological types. 5. I \_\_\_\_\_ a peace supporter. 6. They have seen the house where Shakespeare \_\_\_\_\_ born. 7. We \_\_\_\_\_ using artesian well last summer. 8. We \_\_\_\_\_ going to investigate the conditions of dinosaurs disappearing.

## VI. Read and translate the sentences. Define the tense form of the predicate

**and give its infinitive.**

1. Biological diversity has essentially existed since the beginning of life on earth.
2. Now, however, biodiversity has come to include a wide and growing set of resources.
3. There has been a general tendency for biodiversity to increase.
4. Currently biodiversity encompasses all of the biological resources on earth.
5. Such instances include periods such as the end of the Permian and Cretaceous periods.
6. The Cretaceous period was the last period of the Mesozoic era.
7. Animals are not ruining ecology.
8. Birds have not come from the South yet, have they?

### **VII. Transform the verbs into the past tense.**

1. Biodiversity was viewed in terms of food, fiber, and materials for shelter.
2. Now, however, biodiversity has come to include a wide and growing set of resources.
3. Do species differ much?
4. They are meeting with their foreign colleagues at the conference.
5. Different conditions have created different species of animals.
6. Diversity of birds includes about 9,600 species.
7. It has already been raining for three days.
8. Microorganisms study leads to new discoveries.

### **VIII. Copy and translate the following sentences, using different degrees of comparison of adjectives and adverbs.**

1. Water cycling in Amazon River basin extends to (many) local processes such as watershed function.
2. After Cretaceous period (little) species were left.
3. Kyiv is one of the (much) beautiful cities in the world.
4. The island of Great Britain is (small) than Greenland.
5. What is the name of the (high) mountain in Great Britain?
6. The English love even the (bad) weather.
7. It isn't (warm) to-day than it was yesterday, is it?
8. The (little) vegetation is found near deserts.

### **IX. Copy the sentences using personal, possessive, objective, and reflexive pronouns.**

1. Doctors recommend (he) travelling.
2. (You) body needs motion.
3. The zoo demonstrates (we) a variety of animals, birds, etc.
4. (She) has written about (she) research.
5. Tell (they) to prepare for the seminar.
6. (We) study to increase (we) knowledge of ecology.
7. It makes difference to neither John nor (you).
8. Very few could do it faster than (I).

### **X. Translate the following sentences into English.**

1. Наш університет став національним учбовим закладом.
2. Більше, ніж 8000 студентів навчаються сьогодні на 8 факультетах.
3. Є факультет ферментації та технології хлібопекарства; технології цукру, молока та м'яса; автоматизації та комп'ютерних систем; біотехнології та екології; готельно-ресторанного господарства; економічний, енергетичний, механічний факультети.
4. Чи проводять студенти науково-дослідницьку роботу?
5. Випускники мають виробничу практику на харчових підприємствах України.
6. Кожний студент має можливість отримати знання зі своєї спеціальності.
7. Ви знаєте, що нашому університету скоро буде 80 років?
8. Ви регулярно відвідуєте лекції?



## TEST № 2

### Variant 1

#### I. Copy and translate the following text.

#### RELATIONSHIP BETWEEN ORGANISMS

Ecologists are interested not only in the flow of energy through an ecosystem but also in the complex interrelationships of all organisms within a community. One of the easiest ways to understand the interrelationships of organisms in a community is to study which organisms eat which other organisms. The simplest direct-line relationships from the primary producer – a green plant – to a herbivore to a carnivore is the *food chain*. There are many food chains within any single ecosystem, and there are many cross linkages from one food chain to another, so that the entire food web for a community of organism results.

Food chains are usually quite short, seldom exceeding four or five consumers. Organisms at all levels of food web die and decay. The bodies of all dead plants and animals are returned to the soil through the action of decomposers, mainly bacteria, fungi, and microorganisms. Man is in a unique place in the earth's world web. He is omnivorous and operates on several trophic levels, eating plants, insects, mammals, birds, fish and other organisms. Man also often shortens the food chain and reduces the number of organisms in the system in order to achieve increased productivity of a certain organism. One important ecological principle man violates in order to produce food for himself is the principle that diversity in nature appears to produce stability of an ecosystem. The close cooperative interacting structure of the many kinds of plants and animals in an ecosystem produces an inherent stability and inertia to catastrophic change. Neither climate fluctuation, insects invasion, nor virus infection itself will be able to destroy the ecosystem.

Violating this principle, man plants large field of corn and only corn. The virus, fungus, or insect may attack the corn crop. A monoculture is highly unstable to damage by climate, insects, or disease. Man must have monoculture for food, but the cost of maintenance for stability and productivity is very high indeed.

#### Vocabulary

herbivore	травоїдний
carnivore	м'ясоїдний
chain	ланцюг
cross linkages	пересічні зв'язки
exceed	перевищувати
consumer	споживач
decomposer	розкладач
fungi	грибки
omnivorous	всеїдний
mammal	ссавець
reduce	скорочувати

increase	збільшувати
violate	порушувати
diversity	різноманіття
inherent	притаманний
com (community)	спільнота
disease	хвороба

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

relation, produce, exceed, consume, die, active, decomposed, main, bacterial, operator.

**III. Fill in the gaps. Copy and translate the sentences.**

violates, diversity, interrelationships, reduces, omnivorous, community, decomposers, web.

Ecologists are interested also in the complex \_\_\_\_ of all organisms within a community. The entire food web for a \_\_\_\_ of organism results. Organisms at all levels of food \_\_\_\_ die and decay. The bodies of all dead plants and animals are returned to the soil through the action of \_\_\_\_\_. Man is \_\_\_\_\_. Man often shortens the food chain and \_\_\_\_ the number of organisms in the system. Man \_\_\_\_ one important ecological principle in order to produce food for himself. \_\_\_\_ in nature appears to produce stability of an ecosystem.

**IV. Transform the verbs into Passive Voice.**

1. They were in good relations. 2. The dean is holding a meeting. 4. We had given test to the students. 5. He will take their example. 6. We will meet delegation at the station. 7. They are building many new schools in this district. 8. Who discovered the South Pole?

**V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. (Understand) the interrelationships of organisms we study organisms (eat) by other organisms. 2. (Die) and (decay) organisms are returned to the soil through the action of decomposers. 3. Man is in a unique place in the earth's world web (be) omnivorous. 4. Man operates on several trophic levels (eat) plants, insects, mammals, birds, fish and other organisms. 5. Man achieves (increase) productivity of a certain organisms. 6. One important ecological principle (violate) by man is the principle of an ecosystem stability in its diversity. 7. (Violate) this principle, man damaged his ecosystem. 8. Nature (destroy) by man constantly can not be restored.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. Neither climate fluctuation, insects invasion, or virus infection itself \_\_\_\_ to destroy the ecosystem. 2. The virus, fungus, or insect \_\_\_\_ eat up the corn crop. 3. Man

\_\_\_\_\_ have monoculture for food. 4. We \_\_\_\_\_ to learn to love nature in deed, not in word. 5. Many animals \_\_\_\_\_ not feed on meat. 6. One \_\_\_\_\_ know the interrelations between organisms. 7. Man \_\_\_\_\_ to use natural resources economically. 8. Scientists \_\_\_\_\_ pay attention to saving biodiversity.

**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. Many people have \_\_\_\_\_ idea of how to save rare species. 2. Had you \_\_\_\_\_ chance to succeed? 3. \_\_\_\_\_ told there would be a seminar tomorrow. 4. \_\_\_\_\_ is wrong in the sentence. 5. \_\_\_\_\_ will trouble you at home. 6. \_\_\_\_\_ people still think that they can rule by force. 7. \_\_\_\_\_ loves his freedom. 8. \_\_\_\_\_ good word and deed will pay.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. They \_\_\_\_\_ to stop their work for an hour. 2. \_\_\_\_\_ n't talk so loudly. 3. Nick \_\_\_\_\_ ill last week. 4. The exam \_\_\_\_\_ to start in the morning. 5. He \_\_\_\_\_ bought butter of a good quality. 6. They \_\_\_\_\_ many friends. 7. She \_\_\_\_\_ her homework every day. 8. Mobile \_\_\_\_\_ used to contact people.

**IX. Use indirect speech.**

1. "I heard that there are many mineral resources in Ukraine," said the tourist. 2. "Iron ore, coal, natural gas, oil have been developed here since long ago," answered the guide. 3. "Ukraine has built mighty metallurgic, machine-building and power industries," continued he. 4. "Now Ukraine is producing tractors and locomotives, excavators and cars, TV sets and computers," went on the guide. 5. "Ukrainian scientists have made many important discoveries," added he. 6. "The Ukraine's population is 48 millions and its territory is 603,700 square kilometres," mentioned a tourist." 7. "The Dnieper, the Dniester, the Southern Bug were always known as the largest rivers in Ukraine," said another tourist. 8. "There are no high mountains in Ukraine. You will find the highest mountain – the Goverla in the Carpathian Mountains," finished the guide.

**X. Translate the following sentences into English.**

1. Якщо ми можемо щось зробити, то ми мусимо. 2. Організми взаємодіють, поїдаючи один одного. 3. Лектора запитали, як отримані результати застосовуються на практиці. 4. Нам було цікаво, чи будуть деякі нові досягнення продемонстровані на конференції? 5. Виставку відвідали декілька директорів підприємств. 6. Чи допомагає людина підтримувати рівновагу в природі? 7. Люди мають оберігати рослини і тварин. 8. Промовець казав, що людина скорочує харчовий ланцюг у природі.

## Variant 2

### I. Copy and translate the following text.

#### TYPES OF SPECIES INTERRELATIONS. TEXT 1

The interaction of species within an ecosystem is a necessary and essential property of the plant and animal community. There are several different basic types of interaction: neutralism, competition, mutualism, protocoperation, commensalisms, amensalism, parasitism, symbiosis.

*Neutralism* is a type of interaction in which neither species affects the other. In competition the two species are fighting for the same place, water, air, sunshine, nutrients, etc. Mutualistic relations are observed when the two species need each other for survival. Protocoperation – is a type of interaction in which both species benefit but neither is necessary to the other.

*Symbiosis* is any close association of two dissimilar types of organisms. There are three broad categories of symbiosis based on whether the individual organisms are benefited or harmed by the association: *commensalism*, *parasitism*, and *mutualism*. Close mutualistic relations have involved many different kinds of organisms. One of the first such relationships recognized was the partnership between the algae and the fungi that form a lichen. The fungi maintain the water supply and provides support for the system, and the algae manufacture food through the process of photosynthesis.

An interesting and widespread mutualistic association is that of the microorganisms, such as bacteria and protozoa, that live in the digestive tracts of large animals. The host has typically all enzymes necessary to digest certain complex molecules in their food, and the microorganisms function to break down the food and synthesize vitamins and other compounds needed by the host, at the same time receiving from the host food and a suitable environment in which to live. For example, flagellate protozoa live in the gut cavity of wood-eating termites, breaking down the cellulose in the wood.

#### Vocabulary

interaction	взаємодія
property	властивість
competition	змагання
dissimilar	несхожий
benefit	вигода
harm	шкода
involve	включати
recognize	опізнавати
algae	простіші організми
fungi	гриби
lichen	лишай
maintain	підтримувати
widespread	широко розповсюджений
digestive tract	травний шлях

host	хазяїн
gut cavity	черевина
deleterious	погіршений
supply	постачання, запас

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

essence, compete, mutualism, associate, differ, relation, interest, associate, digest, synthesis.

**III. Fill in the gaps. Copy and translate the sentences.**

symbiosis, receiving, involved, host, maintains, interaction, partnership, benefited.

There are several different basic types of \_\_\_\_\_. \_\_\_\_\_ – is any close association of two dissimilar types of organisms. There are three broad categories of symbiosis based on whether the individual organisms are \_\_\_\_\_ or harmed by the association. Close mutualistic relations have \_\_\_\_\_ many different kinds of organisms. One of the first such relationships recognized was the \_\_\_\_\_ between the algae and the fungi that form a lichen. The fungi \_\_\_\_\_ the water supply and provides support for the system. The \_\_\_\_\_ has typically each enzyme necessary to digest certain complex molecules in their food. The microorganisms are \_\_\_\_\_ from the host food and a suitable environment.

**IV. Transform the verbs into Passive Voice.**

1. We will carry out our production plan. 2. They offered her some interesting work. 3. They have repeated their address to us. 4. She will have given us the details on the topic. 5. We were observing mutualistic relations between two species. 6. Some species affects the other. 7. Protocooperation – is a type of interaction in which both species benefit. 8. The fungi maintain the water supply.

**V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. Of the first such relationships (recognize) was the partnership. 2. (Eat) by herbivorous animals vegetation is a necessary part of ecosystem. 3. (Tell) of his arrival, I went to see him. 4. The leaves (lie) on the ground reminded us of autumn. 5. Books (read) in childhood are like old friends. 6. Think what you are (say). 7. (Know) nothing of the danger we continued our way. 8. Interaction in which neither species affects the other is (call) neutralism.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. He \_\_\_\_\_ be at the institute now. 2. He \_\_\_\_\_ take the books before. 3. I \_\_\_\_\_ to go to the seaside this summer. 4. I \_\_\_\_\_ to put off the meeting. 5. He \_\_\_\_\_ n't have done it, for he was not at home at the time. 6. \_\_\_\_\_ I send the letter just now? 7. She \_\_\_\_\_ to prepare better not to fail at her exam. 8. \_\_\_\_\_

me to tell you the truth.

**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. Have you got \_\_\_\_\_ to tell me? 2. Why is there \_\_\_\_\_ at the lesson? 3. Can \_\_\_\_\_ explain the reaction? 4. Do you want \_\_\_\_\_ tea? 5. You can get these books at \_\_\_\_\_ library. 6. I have \_\_\_\_\_ dictionary today. 7. He said \_\_\_\_\_, but I don't remember. 8. I will go \_\_\_\_\_ else.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. They \_\_\_\_\_ to stay at home last night. 2. He \_\_\_\_\_ a well known scientist. 3. They \_\_\_\_\_ to leave Moscow to-night. 4. The children \_\_\_\_\_ walking down the street. 5. She \_\_\_\_\_ known as an experienced teacher. 6. \_\_\_\_\_ she still play tennis? 7. He \_\_\_\_\_ much to keep fit. 8. They \_\_\_\_\_ got problems with their adopted child.

**IX. Use indirect speech.**

1. "Can you, please tell us how old Kyiv is?" asked a tourist. 2. The guide said, "Kyiv is more than 1500 years old." 3. "Who built Kyiv?" demanded the guest. 4. "Kyiv was built by princes Kyi, Schekh, and Khoriv," answered the guide. 5. "We will see many ancient buildings in Kyiv: the Sofievsky Cathedral, the Golden Gate, the Kyiv-Pechersk Monastery," continued the guide. 6. The tourists asked us, "Is Ukraine a highly-developed industrial country?" 7. We answered, "Yes, it is. All branches of industry were developed here." 8. My friend added, "There are many educational establishments, theatres, museums, libraries in Ukrainian towns and cities."

**X. Translate the following sentences into English.**

1. Тільки подолавши багато труднощів, можна зробити добру справу. 2. Вам було вам дане якесь завдання? 3. Доповідач відмітив, що цей метод давно застосовувався в науці. 4. Мікроорганізми синтезують вітаміни, потрібні хазяїну. 5. Нам сказали, що ми маємо піти на екскурсію на хлібний завод. 6. Які висновки ви можете зробити з побаченого? 7. Нікому не дозволено знущатися над природою. 8. Давно було відомо, що люди розвиваються у праці.

**Variant 3**

**I. Copy and translate the following text.**

**TYPES OF SPECIES INTERRELATIONS. TEXT 2**

*Commensalism* is a type of interaction in which one species is affected but the other is not.

*Symbiosis* on the population level. An association may be deleterious on an individual

level but beneficial at the population level. For example, the wolves, in an area were killed off, the local moose population grew explosively, overate their food supply, and began to fail in reproduction. Individual moose became weak and infested with parasites. When the wolves were allowed to reestablish new populations, the weak and sick moose were preferentially taken and the total number of moose decreased, but the moose herd again became well fed and healthy. On a population level, such a system results in a mutualistic symbiosis. In commensalisms, one member of this association is benefited while the other is apparently unaffected. Most cases of commensalisms involve small parts of animals living in or on larger ones, perhaps receiving protection or sharing food but in no way interfering with the host's physiological processes. If the symbiotic relationship is in any way detrimental to the host, the associations are called parasitism. If both members of the association are benefited by their living together, the relationship is often called mutualism, and many biologists apply the term symbiosis only to this type of cooperative partnership.

*Parasitic* interactions. Parasites are organisms that get part or all of their body by feeding on other organisms. Parasites typically feed on other, larger organisms without killing them immediately, if at all, and they usually live in or on the host organisms. In particularly every community, plant and animal populations are full of parasites, which include viruses, fungi, protozoans, nematodes, many marine, and freshwater coelenterates, flukes and tapeworms, leeches, some insects, certain birds and higher plants such as dodder, etc.

### Vocabulary

deleterious	шкідливий
moose	лось
herd	отара
detrimental	шкідливий, збитковий
immediately	одразу
fresh water	прісна вода
fluke	овечий глист
tape worm	стрічковий глист
leeches	пиявки
share	ділити

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

benefit, explosive, reproduce, health, protect, physiology, parasite, biology, cooperative, usual.

**III. Fill in the missing words. Copy and translate the sentences.**

decreased, protection, feeding, involve, level, benefited, apply, insects.

When the wolves were allowed to reestablish new populations the total number of moose \_\_\_\_\_. On a population \_\_\_\_\_ such a system results in a mutualistic symbiosis. In commensalisms, one member of this association is \_\_\_\_\_ while the other is apparently unaffected. Most cases of commensalisms \_\_\_\_\_ small parts or animal living in or on larger

ones, perhaps receiving \_\_\_\_\_ or sharing food. Many biologists \_\_\_\_\_ the term symbiosis only to this type of cooperative partnership. Parasites – are organisms that get part or all of their body by \_\_\_\_\_ on other organisms. Parasites include viruses, fungi, some \_\_\_\_\_, certain birds and higher plants such as dodder, etc.

#### **IV. Transform the verbs into Passive Voice.**

1. You cannot rely upon my watch. 2. Families take care of children. 3. Why did they laugh at him? 4. They had always listened to him with great interest. 5. People have never spoken to me like that before. 6. People speak very well of her. 7. They sent for the doctor immediately. 8. We call relations detrimental to the host parasitic.

#### **V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. The (run) water carried the boat away. 2. (Shake) my hands, he greeted me. 3. Parasites are (reproduce) on other (live) beings. 4. I want it (do) before to-morrow. 5. He was (hear) delivering the lecture. 6. (Reduce) the mooses herd became well fed and healthy. 7. Parasites – are organisms that get part or all of their body (feed) on other organisms. 8. Most cases of commensalisms involve small parts or animal (live) in or on larger ones.

#### **VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. \_\_\_\_\_ me to do it for you. 3. You \_\_\_\_\_ write your test better. 2. People \_\_\_\_\_ reduce their population by social factors. 3. What \_\_\_\_\_ we do if the train is late? 4. Are you \_\_\_\_\_ to walk after the accident? 5. Many animals \_\_\_\_\_ be saved. 6. You \_\_\_\_\_ be more attentive! 7. I \_\_\_\_\_ to answer many letters. 8. We \_\_\_\_\_ to meet at the railway station yesterday.

#### **VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. I had absolutely \_\_\_\_\_ time to go there. 2. You can find him there \_\_\_\_\_ day between five and six. 3. Have you \_\_\_\_\_ opportunity to travel? 4. Have \_\_\_\_\_ more cakes, please. 5. \_\_\_\_\_ is known about it yet. 6. \_\_\_\_\_ left the door open. 7. If you find \_\_\_\_\_ interesting in this magazine, send it to me, please. 8. \_\_\_\_\_ will forgive terrorism.

#### **VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. I \_\_\_\_\_ done this work myself. 2. She \_\_\_\_\_ to translate the article into Russian. 3. I The dictionaries \_\_\_\_\_ bought at the exhibition. 4. He \_\_\_\_\_ to go to the library with you. 5. How \_\_\_\_\_ you learn your English? 6. They \_\_\_\_\_ looking through their notes. 7. When he \_\_\_\_\_ young he could run faster. 8. Now he is \_\_\_\_\_ his gymnastics.



### **IX. Use indirect speech.**

1. "Will you tell us about the Kyiv industry?" wondered a tourist. 2. "There are many food, machine-building, light industry plants and factories in Kyiv," answered the guide. 3. A tourist asked, "Was Kyiv destroyed much during the Great Patriotic War?" 4. "Yes, it was, but it has been restored and rebuilt since that time," replied the guide. 5. I was surprised, "Somebody is waiting for me." 6. Something familiar in the man's face told me, "I saw him before." 7. I thought, "Now I can have a little rest." 8. He declared, "I did not like the story."

### **X. Translate the following sentences into English.**

1. Історію не можна фальсифікувати на чийсь користь. 2. Люди цікавилися, коли ця наукова книга була перекладена на українську мову. 3. Вид тварин, зменшений іншим видом, має більше їжі. 4. Розвиваючи науку, ми боремося з темрявою. 5. Вони казали, що вони щасливі. 6. Прочитавши текст, треба переказати його. 7. Вчені встановили, які відношення завжди існували у природі. 8. Нікому не дозволяється паразитувати на інших.

## **Variant 4**

### **I. Copy and translate the following text.**

#### **TYPES OF SPECIES INTERRELATIONS.TEXT 3**

Amensalism is a type of interaction in which one species is inhibited by the other but the reverse is not true. Parasitism is a type of interaction in which one species lives on or within the other and benefits at the expense of the other. Predation is an interaction, in which one species attacks the other and needs it for food. A parasite usually reduces growth rate, survival ability, and reproductive capacity of the host. From the ecological standpoint, therefore, parasitism does not constitute a considerable burden on a host population. Parasites that live on the body surface of the host are called ectoparasites. They do not commonly cause disease in their hosts but rather suck blood or create superficial damage to the skin, examples include leaches, fleas, lice, and ticks. Other parasites live inside the host's body – either in cells or in spaces lined by cells (e.g. intestine, blood vessels; mouth, etc.). Parasites that live within host cells – such as many bacteria and viruses – are called intercellular endoparasites.

Many disease-causing organisms, or pathogens, are endoparasites carried from host to host by some other organism; malaria, for example, is caused by protozoan endoparasites, transmitted by mosquitoes. In such situation, the biotic interaction involves three necessarily coexisting species: the pathogen, the carrier and the host. For example, a number of plant diseases is transmitted by insects – *Geratocysts Ulmi*, *Castanea dentat*, *Endothia parasitica*.

An intermediate host – interposed between the target host and parasite – adds

complications to the host – parasite interactions; the parasite, host, and intermediate host must all be present in the same community in suitable numbers at the same time (e.g. malaria, sleeping sickness, and wheat stem rust).

### **Vocabulary**

standpoint	точка зору
burden	обуза
superficial	поверхневий, неглибокий
flea	блоха
lice	гніда
tick	кліщ
coexisting	співіснуючі
carrier	носій

### **II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

crow, survive, common, constitution, ecology, reproduction, cell, interact, coexist, carry.

### **III. Fill in the missing words. Copy and translate the sentences.**

coexisting, surface, transmitted, host, interactions, disease, reduces, causing.

A parasite usually \_\_\_\_ growth rate, survival ability, and reproductive capacity of the host. Parasites that live on the body \_\_\_\_ of the host are called ectoparasites. They do not commonly cause \_\_\_\_ in their hosts but rather suck blood. Many disease-\_\_\_\_ organisms, or pathogens, are endoparasites carried from host to host by some other organism. Malaria is caused by protozoan endoparasites, \_\_\_\_ by mosquitoes. The biotic interaction involves three necessarily \_\_\_\_ species: the pathogen, the carrier and the host. An intermediate host adds complications to the host – parasite \_\_\_\_\_. The parasite, \_\_\_\_\_, and intermediate host must all be present in the same community in suitable numbers at the same time.

### **IV. Transform the verbs into Passive Voice.**

1. He doesn't visit restaurants. 2. We have touched upon only a few points. 3. They gave us a room in a students' hostel. 4. They will prepare the media for the bacteria. 5. The microscope was showing us the viruses of the diseases. 6. They will have published all discoveries and inventions. 7. Calculations had helped to solve different problems. 8. In amensalism one species inhibits the other.

### **V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. One can see people (gather) herbs. 2. Nature is (recover) slowly after the man's abuse. 3. (Obtain) by man new species of plants and animals are used in food production. 4. (Read) the Darwin's theory of evolution, many children take interest in biology. 5. The letter (type) it could not be sent at once. 6. Parasite benefits at the

expense of the other (live) on or within the other. 7. Predators attack the other species (need) by them for food. 8. Many disease-causing organisms are endoparasites (carry) by some other organism.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. You \_\_\_\_\_ to be in time for tea to meet them. 2. \_\_\_\_\_ you come to the office yesterday? 3. \_\_\_\_\_ me to introduce you to our prominent scientist. 4. We \_\_\_\_\_ to scan the whole text last time. 5. You will \_\_\_\_\_ to receive the second education at our university. 6. We \_\_\_\_\_ follow the instructions. 7. \_\_\_\_\_ I ask you for a favour, please? 8. What \_\_\_\_\_ I do for you?

**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. Are there \_\_\_\_\_ English magazines in your library? 2. \_\_\_\_\_ of the books that you gave me are very interesting. 3. Blood suckers will always find \_\_\_\_\_. 4. \_\_\_\_\_ time was left, so they stopped their work. 5. Does \_\_\_\_\_ asked you about it? 6. There was \_\_\_\_\_ at the chemistry chair after the classes. 7. He wrote \_\_\_\_\_ at all to me about it. 8. She worked \_\_\_\_\_ else at that time.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. I imagine what you \_\_\_\_\_ thinking about. 2. They \_\_\_\_\_ their car repaired for much money. 3. \_\_\_\_\_ you find your job interesting? 4. You \_\_\_\_\_ to be very intelligent to help people. 5. The job done we can \_\_\_\_\_ a rest. 6. The participants \_\_\_\_\_ received at the hotel. 7. There will \_\_\_\_\_ a concert after the presentation. 8. People \_\_\_\_\_ always wanted peace.

**IX. Use indirect speech.**

1. We were explained, "The director will receive you later." 2. The experiment proved, "The species consumed each other." 3. You could see, "The chief was speaking with his colleagues." 4. The announcemen read, "Everyone is allowed to take part in the competition". 5. The assistant repeated, "The product was polluted." 6. The students insisted, "We have not seen the results." 7. The speaker asked, "What do you try to prove?" 8. The article wrote, "The discovery was made by a doctor."

**X. Translate the following sentences into English.**

1. Інженер сказав, що треба закінчити експеримент. 2. Вчені довели, що один вид живих істот пригнічується іншим. 3. Ми відповіли, що деяке обладнання отримане. 4. Хвороби, викликані ендопаразитами, переносяться посередниками. 5. Годуючись за рахунок хазяїна, паразити можуть не впливати на його здоров'я. 6. "Ви знаєте що-небудь про Т.Г.Шевченка?" запитав гід. 7. "Т.Г. Шевченко народився 9 березня 1814 в селі Моринці біля Києва в сім'ї кріпака," відповів турист. 8. Ви знаєте, що Т.Г.Шевченко закінчив академію мистецтв у Петербурзі?

## Variant 5

### I. Copy and translate the following text.

#### USE OF SOLAR RADIATION

A great deal of sunlight – about  $35.6 \times 10^{20}$  calories – is incident on the earth's surface each day. Of this amount, only about  $19.0 \times 10^{20}$  calories per day is incident on the ground. This is a tremendous amount of energy. However, the distribution of this energy over the globe is very uneven, with the greatest amount reaching the ground in desert regions and the least amount in polar regions.

The quantity of solar radiation incident in tropical regions varies only a little from January to June, but in polar regions there is darkness much of the winter and sunlight nearly twenty four hours a day during the summer. Temperate regions of the world, where much of the food is grown, receive from 100 to 140 kcal per cm per year, and a substantial fraction of this is received during the winter when temperatures are too low for much plant growth. Moreover, of the solar radiation reaching the ground, only about 25% is contained in the wavelength span of photosynthetic activity. The solar energy consumed is used to provide living processes in plants and animals by biochemical transformations. 40% of solar energy is reflected into cosmos, 15% absorbed by the atmosphere, 20% is used on maintaining the geological cycle, 0.06% on the photosynthesis.

Estimates made of the gross production of one acre of corn field during one growing season of 100 days show that of the total incident solar radiation, 44.4% was consumed by the evaporation of water and 54.4% was reflected or dissipated as heat, leaving only 1.2% for net primary plant production. The exact percentage varies within the region, of course, with the desert having low net primary production efficiency, and coniferous forests and tropical rain forests having higher production efficiency. Vast numbers of animals derive energy from plants and build some of the plant biomass into their own bodies.

#### Vocabulary

deal with	мати справу з
quantity, amount	кількість
average	середній
be incident	випадати
uneaven	нерівний
temperate, mild	помірний
substantial	значний
gross production	валове виробництво
consume	споживати
dissipate	розсіюватися

coniferous	хвойні
medium	середній
earth, land	земля

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

distribute, variation, pole, dark, grow, radiate, photosynthesis, act, biochemistry, produce.

**III. Fill in the missing words. Copy and translate the sentences.**

incident, estimates, consumed, derive, reaching, received, amount, uneven.

Only about  $19.0 \times 10^{20}$  calories per day is \_\_\_\_ on the ground. This is a tremendous \_\_\_\_ of energy. However, the distribution of this energy over the globe is very \_\_\_\_\_. The greatest amount is \_\_\_\_\_ the ground in desert regions and the least amount in polar regions. A substantial fraction of the solar radiation is \_\_\_\_\_ during the winter. \_\_\_\_\_ show the distribution of the solar radiation. Most of it was \_\_\_\_\_ by the evaporation of water, was reflected or dissipated. Vast numbers of animals \_\_\_\_\_ energy from plants and build some of the plant biomass into their own bodies.

**IV. Transform the verbs into Passive Voice.**

1. We met the delegation at the station. 2. We are building gigantic markets. 3. Because of pollution much heat has accumulated on the Earth's surface. 4. The Earth's atmosphere is absorbing the energy of the sun. 5. You will repeat these rules once more. 6. Plants and animals exchange energy with their environment. 7. Did they answer your question? 8. The sun radiates much energy.

**V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. I have looked through the list of prices (send) 2. (Visit) the plant the delegates saw new types of equipment 3. (Choose) the seaside for summer, don't forget about the danger of overheating. 4. (Rise) prices may be the sign of inflation. 5. A person (bring) good news is always welcome. 6. While (skate) yesterday he fell and hurt himself. 7. (Arrange) everything, he went home by train. 8. The air (pollute) people may have chronic respiratory diseases.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. \_\_\_\_\_ I go and fetch my book? 2. \_\_\_\_\_ you speak to me yesterday? 3. The teacher said that I \_\_\_\_\_ to go home because of illness. 4. You \_\_\_\_\_ to drive a motor-car? 5. He \_\_\_\_\_ n't attend lectures as he was at work.. 6. We \_\_\_\_\_ to plan everything in advance. 7. You \_\_\_\_\_ not touch this instrument without permission. 8. You \_\_\_\_\_ keep your word.

**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. I went to the post-office and bought \_\_\_\_ stamps and envelopes. 2. Are there \_\_\_\_ illustrations in this magazine? 3. Have you \_\_\_\_ been to Paris? 4. Do you go \_\_\_\_ today? 5. I didn't see \_\_\_\_ in the library. 6. There has been \_\_\_\_ to ask the direction from. 7. I didn't see him and he sent \_\_\_\_ letters. 8. He has received \_\_\_\_ for his job, but too little.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. \_\_\_\_ you much time for reading now? 2. What do you \_\_\_\_ in the evening? 3. \_\_\_\_ you spent much time on your translation? 4. \_\_\_\_ there many students present? 5. \_\_\_\_ you to read many English books this term? 6. \_\_\_\_ he got many spelling mistakes in his composition? 7. \_\_\_\_ the place changing much? 8. Will they \_\_\_\_ on diet again?

**IX. Use indirect speech.**

1. "Do you know that Great Britain consists of England, Scotland, Wales and Northern Ireland?" asked the guide. 2. "London, the capital of Great Britain was built on the river Thames," said the guide. 3. "The longest rivers are the Thames, the Trent and the Severn; and the highest mountain is Ben Nevis in the mountains Grampians," continued the guide. 4. "Great Britain has been a highly-developed industrial country since middle ages," said the guide. 5. "Coal-mining, machinery, textile, ship-building, electronics and other industries were developed in Great Britain, especially in London, Glasgow, Birmingham, Manchester, and other big towns," continued he. 6. "Great Britain was developing as a monarchy, wasn't it?" asked a tourist. 7. "It was, Parliament – the legislative body – consists of two Houses: the House of Lords and the House of Commons," answered the guide. 8. "The queen does not rule the country officially as she did before," added he.

**X. Translate the following sentences into English.**

1. Побудувавши сонячні електростанції, люди не будуть використовувати інші джерела енергії. 2. Вони хотіли знати, чи їм дозволять працювати за кордоном. 3. Лектор доповів, що немає прикладів цього явища. 4. Декан запитав його, чого він був відсутній на заняттях. 5. Чи треба давати свій номер телефона незнайомій людині? 6. Сонячна енергія, попадаючи на землю, розподіляється на ній нерівномірно. 7. Сонячна енергія використовується для життєвих процесів у тваринах і рослинах. 8. Деяка кількість сонячної енергії поглинається атмосферою.

## Variant 6

### I. Copy and translate the following text.

#### ENERGY EXCHANGE. TEXT 1

The thing that makes all living organisms “go” is the flow of energy from and back to their physical environment. The sun radiation is the only source of energy which maintains life in biosphere of our planet. All surfaces radiate energy in relation to the temperature of the surface, and all organisms live in a complex radiation environment. A plant or animal out of doors during daylight may receive many streams of incident radiation, including direct sunlight, scattered skylight, light reflected off the ground and nearby objects, and radiant heat emitted by the soil surface, by rocks and plants, by the water vapor and carbon dioxide of the atmosphere, and by the bases of clouds. Each plant or animal absorbs a certain fraction of the incident radiation, reflects some of it, and in some cases, such as tree leaves, transmits some.

Air blowing over the surface of a plant or animal will cool or warm it by convection. A boundary layer of air, across which there are temperature and moisture gradients, adheres to all surfaces. In the region that lies beyond the boundary layer the air moves freely and carries whatever heat is conducted to or from the animal surface. Hence, convection is a combination of heat conduction across the stationary boundary layer and mass transport of heat by air movement beyond the boundary layer. When wind blows across the organism, it reduces the thickness of the boundary layer, and there is an increase in the rate of heat exchange or moisture loss. The thickness of the boundary layer is related to the diameter or width of the plant or animal surface and to the wind speed. If a plant or animal is resting on a rock or on soil that is colder than it is, heat is conducted from the plant or animal into the rock or soil; if, on the other hand, the organism is colder than the surface upon which it rests, energy is conducted to the organism.

#### Vocabulary

flow, stream	потік
surface	поверхня
radiate, emit	випромінювати
receive	отримувати
direct sunlight	пряме сонячне світло
scattered skylight	розсіяне небесне світло
reflect	відбивати
transmit	передавати
blow	дути
thickness	товщина
the boundary layer	пограничний шар
warm	теплий
moisture loss	втрата вологи

conduct	проводити
increase	збільшувати
rate	швидкість, рівень

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

physics, radiate, bound, lay, moist, combine, conduct, thick, wide, free.

**III. Fill in the missing words. Copy and translate the sentences.**

flow, transmits, conducted, absorbs, blows, surface, moisture, reflected.

The thing that makes all living organisms “go” is the \_\_\_\_ of energy from and back to their physical environment. A plant or animal out of doors during daylight may receive many streams of incident radiation, including light \_\_\_\_ off the ground and nearby objects. There is also radiant heat emitted by the soil \_\_\_\_, by rocks and plants. Each plant or animal \_\_\_\_ a certain fraction of the incident radiation, reflects some of it, and in some cases, such as tree leaves, \_\_\_\_ some. A boundary layer of air, across which there are temperature and \_\_\_\_ gradients, adheres to all surfaces. In the region that lies beyond the boundary layer the air moves freely and carries whatever heat is \_\_\_\_ to or from the animal surface. When wind \_\_\_\_ across the organism, it reduces the thickness of the boundary layer.

**IV. Transform the verbs into Passive Voice.**

1. Kyi, Schek, and Khoriv founded Kyiv more than 500 years ago. 2. They build Kyiv on the right bank of the river Dnieper. 3. German fascists ruined Kyiv, but people had restored their city. 4. They are rebuilding Kyiv after the European standards. 5. They will build many new offices. 6. Does Kyiv attract many tourists? 7. You will see much interesting in Kyiv. 8. Did you read books about the history of Kyiv?

**V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. (Be) tired we refused to go for a walk. 2. (Climb) the mountain the boys installed the monument there. 3. Heat (conduct) from the plant or animal heats the rock. 4. At the conference (hold) in Moscow important scientific problems were discussed. 5. (Cross) the street he got into his car. 6. All (live) organisms exchange heat with their environment. 7. Air (blow) over the surface of a plant or animal will cool or warm it by convection. 8. Heat (absorb) by the body, its functions are stimulated.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. Output of fuel and metals \_\_\_\_ increased. 2. We \_\_\_\_ to start at seven o'clock. 3. You \_\_\_\_ be very nice. 4. She \_\_\_\_ help her mother with cooking when she was at home. 5. He \_\_\_\_ be at the institute at 9 o'clock. 6. Journalists \_\_\_\_ to be present at the talks. 7. You'll \_\_\_\_ to do everything yourself. 8. We \_\_\_\_ be friends if you wished.



**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. \_\_\_\_ more animals will be extinct. 2. He may turn up at \_\_\_\_ moment. 3. "Have you ever heard \_\_\_\_ about him since that time?" she inquired. 4. Has \_\_\_\_ seen my book? 5. Why did you bring \_\_\_\_ flowers? 6. If \_\_\_\_ calls, tell him I am busy. 7. Do \_\_\_\_ useful to give yourself pleasure. 8. Let's go \_\_\_\_ to dine.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. \_\_\_\_ you seen our new printer yet? 2. I \_\_\_\_ to call an electrician. 3. He \_\_\_\_ to have a family. 4. The scientists \_\_\_\_ been trying to intensify the food processing. 5. I have never \_\_\_\_ to English speaking countries. 6. I \_\_\_\_ at work yesterday. 7. Where will you \_\_\_\_ on your next vacation? 8. \_\_\_\_ you have any relatives abroad?

**IX. Use indirect speech.**

1. "Do you know that the official name of Great Britain is the United Kingdom of Great Britain and Northern Ireland?" asked the guide. 2. "It is situated on the islands and its population has reached 56 million people," added a tourist. 3. "There were two royal families fighting for power in Great Britain – The Stuarts and the Tudors," continued the guide. 4. "The Stuarts won," concluded a tourist. 5. "The British Isles were conquered by Romans, then by Germanic tribes, and at last by Normans," added the guide. 6. "So, the English language was developed from the Germanic – the Anglo-Saxon language and is enriched by French lexics," finished the guide. 7. "If you master English you will find out its multinational origin," said the guide. 8. "English is a native or the second language for many nations in the world," added one of the tourists.

**X. Translate the following sentences into English.**

1. По радіо передавали, що завтра буде сонячно. 2. Всутуючи сонячну радіацію, рослина чи тварина використовує її для свого функціонування. 3. 40 процентів отриманої радіації відбивається у космос. 4. Доповідали, що сонячні батареї вже використовували. 5. Поверхня рослини чи тварини може охолоджуватися чи нагріватися конвекцією. 6. Люди здатні випромінювати інфрачервоне проміння. 7. Треба знати закони теплового обміну. 8. Приклавши багато зусиль для добування енергії тепла та світла, люди змушені економити енергію.

## Variant 7

### I. Copy and translate the following text.

#### ENERGY EXCHANGE. TEXT 2

Many animals can sweat, all plants transpire, and all animals lose moisture by breathing. Moisture loss provides effective evaporative cooling that helps an organism avoid overheating. An active adult man has a metabolic (functional) rate of about 263 watts. In addition he receives from the surfaces about 720 watts which makes the total of 1,000 watts. Nearly 46% or 460 watts dissipate with evaporation of water, mainly in the lungs. The remaining 54%, or 540 watts, is lost by radiation emitted by the skin or clothing surface, and by convection to the cooler air near the body.

Over extended periods of time all plants and animals must receive neither more or less energy than they lose; otherwise, they will all get hotter and hotter and perish by heat, or colder and colder and perish by cold. This fact demands that a plant or animal have a balanced energy budget, expressed by the following equation: Energy In = Energy Out. In other words, Metabolism + Radiation Absorbed = Radiation Emitted + Convection + Conduction + Evaporation.

When this expression is written out in mathematical form, it shows explicitly how each of the environmental factors – radiation, air temperature, wind, and humidity – enters into the exchange of energy between the organism and its environment. At any moment, the surface temperature of a plant or animal must assume a value that balances the energy budget so that as much energy is coming in as is going out. If any single factor changes, then a new value of surface temperature is necessary for a balanced energy budget. This equation provides the only way of understanding the intricate interactions between the climatic factors of the environment and the organism, because a change in any one factor necessitates a readjustment of all terms in the system to a new equilibrium.

#### Vocabulary

sweat, transpire	потіти
vapour	пара
breathing	дихання
convert	перетворювати
perish by cold	гинути від холоду
expressed by equation	відображений рівнянням
show explicitly	ясно показувати
assume a value	прийняти величину
provide	забезпечувати
intricate	складний
interaction	взаємодія
readjustment	перестановка
equilibrium	рівновага

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

moist, evaporate, metabolism, express, mathematics, explicit, environment, humid, interact, climate.

**III. Fill in the missing words. Copy and translate the sentences.**

sweat, lose, overheating, evaporation, exchange, perish, moisture, receive.

Many animals can \_\_\_\_\_. All plants transpire; and all animals \_\_\_\_\_ moisture by breathing. The \_\_\_\_\_ loss provide effective evaporative cooling. Nearly 46% or 460 watts dissipate with \_\_\_\_\_ of water. An effective evaporative cooling helps an organism avoid \_\_\_\_\_. Over extended periods of time all plants and animals must \_\_\_\_\_ neither more or less energy than they lose. Otherwise plants and animals will perish either by heat or cold. Each of the environmental factors enters into the \_\_\_\_\_ of energy between the organism and its environment.

**IV. Transform the verbs into Passive Voice.**

1. All animals are losing moisture by breathing. 2. Moisture loss provides effective evaporative cooling. 3. Who discovered the South Pole? 3. A militiaman showed me the way. 4. Organism loses 54%, or 540 watts by radiation. 6. We will overheat ourselves if we don't take care. 7. Our skin and clothing surface emits radiation. 8. We may express balanced energy budget by the equation.

**V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. (Receive) more or less energy than they lose animals will perish by heat or cold. 2. 54%, or 540 watts is (lose) by radiation (emit) by the skin or clothing surface. 3. As much energy is coming in as is going out. 4. (Balance) energy budget is (express) by the following equation. 5. This expression is (write) out in mathematical form. 6. A plant or animal must have a balanced energy budget, expressed by the following equation. 7. (Lose) by the body the energy must be restored. 8. (Use) by the body, water evaporates with sweat.

**VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. You \_\_\_\_\_ tell me everything before you left. Why didn't you? 2. \_\_\_\_\_ I speak to your parents? 3. Plants and animals \_\_\_\_\_ receive neither more or less energy than they lose 4. Many animals \_\_\_\_\_ sweat. 5. I \_\_\_\_\_ to attend the reception yesterday but I didn't. 6. I not \_\_\_\_\_ to lie in the sun. 7. People are \_\_\_\_\_ to restore their energy balance with food. 8. They \_\_\_\_\_ to borrow money last month.

**VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. If you are thirsty it is better to drink \_\_\_\_\_ water. 2. \_\_\_\_\_ can live without water. 3. You may send a telegram at \_\_\_\_\_ time of the day. 4. He had \_\_\_\_\_ key to open the

front door with. 5. Does \_\_\_\_\_ know the formula? 6. People also need \_\_\_\_\_ to wear to keep their body warm. 7. He is always \_\_\_\_\_ at the conference. 8. They had \_\_\_\_\_ against him.

**VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

I. She \_\_\_\_\_ already come home. 2. He \_\_\_\_\_ a large family. 3. We \_\_\_\_\_ to leave home early yesterday. 5. He will \_\_\_\_\_ at home in an hour. 6. \_\_\_\_\_ you have central heating at home? 7. \_\_\_\_\_ he stay at work last night? 8. They \_\_\_\_\_ to complete their work next Monday.

**IX. Use indirect speech.**

1. "We know, that the United States of America is situated in the central part of the North American Continen," said the tourist. 2. "It was divided into 50 states and has a population of 230 mln people," added the guide. 3. "The capital of the USA Washington is built on the Potomac River," continued he. 4. "Was it given the name after the USA first President?" asked one of the tourists. 5. "All industries were developed in the USA, especially engineering, electroengineering, electronic, machine-building," went on the guide. 6. "The largerst cities: Boston, Chicago, San Francisco, Los Angeles and others contributed to the development of the USA economy," continued he. 7. "We know the USA as a democratic country," said a tourist. 8. "The USA government is federal. The executive power belongs to the President, the legislative power to the Congress, and the judicial power belongs to the Supreme Court," said the guide.

**X. Translate the following sentences into English.**

1. Тварини мають здатність потіти. 2. Втрачаючи вологу, тварини не перегріваються. 3. Вчені довели, що кількість втраченої енергії повинна дорівнювати кількості отриманої енергії. 4. Людина повинна мати сбалансований бюджет енергії. 5. Втративши більше енергії, ніж потрібно, людина може загинути від холоду. 6. Викладач сказав, що вже перевірів письмові тести. 7. Нас запитали, ким перекладена стаття. 4. Я запитала, коли може бути надрукована її книга.

**Variant 8**

**I. Copy and translate the following text.**

**BIOENERGY USE AND PRODUCTION. TEXT 1**

Bioenergy is energy derived from plant matter – what is known as biomass. Green plants capture solar energy and store it as chemical energy. The energy is stored in the form of cell walls in the plants' stalks, stems, and leaves and as oils or starch in the seeds, fruits, or roots. Both plants and the waste materials derived from them – such as sawdust, wood wastes, and agricultural wastes – are referred to as biomass.

Biomass can be used directly as a solid fuel to produce heat. It can also be converted to other energy carriers such as liquid and gaseous fuels, as well as electrical energy. For example, biomass from distilleries in Brasil produces such an excess electrical energy that its realization makes spirit cheaper than oil. Sugar cane alone can produce 50% energy in the cane-growing countries. Biomass utilization may economize annually 6 mln tones of organic fuel. Bioenergy encompasses a variety of renewable energy technologies that are locally available and used the world over. Wood and dung have been burned for thousands of years in fireplaces and stoves for heating and cooking. In several industrialized countries some cities burn trash to generate electricity.

Industries around the globe burn wood wastes – bark and branches – to generate heat and electricity for running mills. Charcoal provides the energy for steelmaking in Brazil. In that particular country 50 percent of the transportation fuel is ethanol derived from the fermentation and distillation of sugar from sugar cane. Biogas digesters use bacteria to decompose (break down) biomass. These devices are widely used in China and India to convert animal and plant wastes into the gas methane, which can be used for heating, cooking, and electricity. Biomass used in these and other ways currently accounts for about 38 percent of the energy used in developing countries. Bioenergy contributes substantially to meeting global energy requirements.

### Vocabulary

capture	захоплювати
stalk , stem	стебло
starch	крохмаль
seed	насіння
sawdust	опилки
wood wastes	відходи деревини
solid fuel	тверде паливо
encompas	включати
dung	навоз
fireplace	камін
stove	піч
burn trash	палити відходи, мусор
bark and branches	кора та віти
run a mill	керувати заводом
charcoal	деревинне вугілля
sugar cane	цукрова тростина
digester	герметична судина для варіння
meet global requirements	задовольняти світові потреби

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

chemistry, agriculture, direct, gas, distill, realize., technologist, economy, ferment, digest.

### **III. Fill in the missing words. Copy and translate the sentences.**

provides, used, store, converted, burned, produce, fuel, derived.

Bioenergy is energy \_\_\_\_ from plant matter what is known as biomass. Green plants capture solar energy and \_\_\_\_ it as chemical energy. Biomass can be used directly as a solid fuel to \_\_\_\_ heat. It can also be \_\_\_\_ to other energy carriers such as liquid and gaseous fuels. Wood and dung have been \_\_\_\_ for thousands of years. Charcoal \_\_\_\_ the energy for steelmaking in Brazil. In that particular country, 50 percent of the transportation \_\_\_\_ is ethanol. Gas methane can be \_\_\_\_ for heating, cooking, and electricity.

### **IV. Transform the verbs into Passive Voice.**

1. In some countries people derived energy from plant matter long ago. 2. We call plant matter biomass. 3. Green plants capture solar energy and store it as chemical energy. 4. All living things consume energy. 5. Until recently people have used petrol as fuel. 6. They have burned wood and dung for thousands of years in fireplaces and stoves for heating and cooking. 7. They will produce spirit from biomass. 8. Civilized people are not wasting energy.

### **V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. Bioenergy is energy (derive) from plant matter. 2. Plant matter is (know) as biomass. 3. Green plants are (capture) solar energy. 4. Biomass (used) directly as a solid fuel produces heat. 5. Renewable energy technologies (be) locally available are used the world over. 6. (Burn) wood wastes industries generate heat and electricity for running mills. 7. Bacteria (decompose, break down) biomass convert animal and plant wastes into the gas methane. 8. (Smoke) we poison ourselves.

### **VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. Biomass \_\_\_\_ be used directly as a solid fuel to produce heat. 2. It \_\_\_\_ also be converted to other energy carriers. 3. People \_\_\_\_ need less fuel if they economized energy. 4. Children not \_\_\_\_ to buy toxic drugs. 5. People \_\_\_\_ not use sun energy to meet all their needs. 6. To intensify production much fuel \_\_\_\_ be used. 7. We \_\_\_\_ to arrange a discussion on the topic. 8. You will \_\_\_\_ to do wonders if you take interest in research.

### **VII. Fill in the indefinite and negative pronouns and adverbs. Recopy and translate the sentences.**

1. \_\_\_\_ energy technologies are used the world over. 2. Do you burn \_\_\_\_ wood in your stove? 3. \_\_\_\_ can economise on electricity. 4. \_\_\_\_ is important in production. 5. There is \_\_\_\_ new in each day. 6. One cannot create something out of \_\_\_\_\_. 7. Biogas digesters are widely used in China and India. 8. \_\_\_\_ attempt has ever been made to use sun energy for heating houses and driving cars.

### **VIII. Copy the following sentences using the verbs to be, to have, to do and**

**translate them into Ukrainian.**

1. The energy is stored in the form of cell walls in the plants. 2. We \_\_\_\_\_ to use everything for fuel. 3. \_\_\_\_\_ you have central heating at home? 4. The fuels \_\_\_\_\_ to be safe. 5. Working people must \_\_\_\_\_ all opportunities to live well. 6. If you \_\_\_\_\_ travelling in a car think about refuelling. 7. You \_\_\_\_\_ repeated your grammar, haven't you?. 8. Always \_\_\_\_\_ good to yourself and others.

**IX. Use indirect speech.**

1. They promised, "Ukraine will be provided with gas." 2. They agreed, "The negotiations are to take place in November." 3. We knew, "Wood was used as fuel for ages." 4. "We are preparing for the conference," assured the student. 5. The article wrote, "Biomass from distilleries in Brasil produces excess electrical energy." 6. "Contracts are concluded," hoped the consumers. 7. The sellers asked, "Have you payed for the gas supplies?" 8. "Everything was ready," answered the manager.

**X. Translate the following sentences into English.**

1. Ми вивчали, що сонячна енергія накопичується в рослині як хімічна. 2. Чи використовують перероблену біомасу як паливо? 3. На яку енергію може перетворюватися біомаса? 4. Всі знали, що деревина завжди спалювалася у печах. 5. Працюючі студенти мають навчатися на заочному відділенні. 6. Склавши сесію, студент переходить на наступний курс. 7. Чи дозволяється студентам – заочникам мати сплачену відпустку на сесію? 8. Нас всіх цікавить, яка енергія буде використовуватися в майбутньому.

**Variant 9**

**I. Copy and translate the following text.**

**BIOENERGY USE AND PRODUCTION. TEXT 2**

The traditional bioenergy systems do have some economic and environmental disadvantages. First, solid biomass fuels – wood, straw, trash – as energy carriers of plant origin have a fairly low energy content per unit of weight, compared with that of fossil fuels. Second, biomass fuels often must be collected over a wide area to obtain sufficient amounts to fill the demand. These characteristics make transportation and handling expenses high. A further disadvantage of some biomass conversion systems is their low efficiency in changing biomass into usable energy. Inefficient bioenergy systems require more fuel than fossil systems. They also produce more waste products such as particulates (damaging airborne particles).

Agricultural development is overcoming some of the disadvantages of bioenergy systems, however. One important development is the design and use of feedstock supply

systems to furnish the biomass fuel. These systems consist of energy crops such as fast-growing trees and grasses. They are developed to produce high yields on a limited land area. Specialized harvest and transportation methods used with these systems reduce biomass fuel costs. Their presence could add to the landscape diversity and beauty of a region. Research indicates that it would not be economically or environmentally beneficial to replace natural forest systems with energy crops. Because feedstock supply systems must be adapted to local conditions, they will differ among regions and countries. When fossil fuel prices are low, however, biomass fuels are economically competitive at only a few locations.

Today an increasing use of biomass to produce electrical and thermal energy is observed. Turbogenerators working on the biomass gasification products can successfully compete with traditional thermal, nuclear, and hydraulic energy resources.

### Vocabulary

disadvantage	недолік
content per unit of weight	вміст на одиницю ваги
compared with	порівняно з
obtain sufficient amount	отримувати достатню кількість
fill the demand	задовольняти потреби
handle expenses	мати справу з витратами
reduce cost / price	зменшити ціну
low efficiency	низька ефективність
particulates	руйнівні літучі речовини
development	розвиток
overcome	подолати
feedstock supply	постачання харчування
crop	врожай зернових культур
fast-growing	що швидко зростають
high yield, harvest	високий врожай
research indicates	дослідження вказують
beneficial to replace	вигідно замінювати
local conditions	місцеві умови
implement	втілювати
competitive	конкурентноздатний

### II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.

tradition, characterize, convert, agriculture, develop, special, diverse, economical, nature, generate.

### III. Fill in the missing words. Copy and translate the sentences.

harvest, waste, development, consist, fossil, research, damaging, to obtain.

Biomass fuels have a fairly low energy content compared with that of \_\_\_\_ fuels. Second, biomass fuels often must be collected over a wide area \_\_\_\_ sufficient amounts. Biomass conversion systems have low efficiency in changing biomass into usable energy.



They also produce more \_\_\_\_ products such as particulates. Particulates are \_\_\_\_ airborne particles. Agricultural \_\_\_\_ is overcoming some of the disadvantages of bioenergy systems, however. Feedstock supply systems \_\_\_\_ of energy crops such as fast-growing trees and grasses. Specialized \_\_\_\_ and transportation methods used with these systems reduce biomass fuel costs. \_\_\_\_ indicates that it would not be economically or environmentally beneficial to replace natural forest systems with energy crops.

#### **IV. Transform the verbs into Passive Voice.**

1. We write our home address in the left top corner of the envelope. 2. They have been changing biomass into usable energy. 3. Agricultural development is overcoming some of the disadvantages. 4. All people sow crops for food. 5. They opened the university in 1930. 6. The sponsors have given new computers to the university. 7. The tutors will take the students to the food plant. 8. All countries were fighting with pollution in the past century.

#### **V. Open the brackets using Participle I and Participle II. Define their forms and functions. Copy and translate the sentences.**

1. Plants are (use) sunlight to synthesize organic compounds. 2. Bioenergy systems consist of energy crops such as (fast-grow) trees and grasses. 3. They are developed to produce high yields, land area (limit). 4. (Specialize) harvest and transportation methods (use) with these systems, biomass fuel costs were reduced. 5. Fossil fuel prices (be) low, biomass fuels are economically competitive at only a few locations. 6. Today an (increase) use of biomass to produce electrical and thermal energy is observed. 7. Not (create) efficient bioenergy systems people can not economize on fuel. 8. (Develop) chemistry people obtained new substances.

#### **VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. I will \_\_\_\_ to finish my work in a month. 2. We were \_\_\_\_ to take part in the competition. 3. All your dreams \_\_\_\_ come true. 4. Feedstock supply systems \_\_\_\_ probably be implemented. 5. Biomass fuels often \_\_\_\_ be collected over a wide area. 6. We \_\_\_\_ to take care of our health. 7. The exam \_\_\_\_ to start in the morning. 8. Turbo-generators \_\_\_\_ successfully compete with traditional energy resources.

#### **VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. The traditional bioenergy systems do have \_\_\_\_ economic and environmental disadvantages. 2. \_\_\_\_ must be used for fuel. 3. Purer kind of fuel is used \_\_\_\_\_. 4. Have you \_\_\_\_ gasoline left? 4. \_\_\_\_ bad will happen if we use sun energy. 5. Use waste basket if there is \_\_\_\_\_. 6. Using sun energy requires \_\_\_\_ biomass. 7. Is there enough transport for \_\_\_\_? 8. You can find \_\_\_\_ necessary at the supermarket.

#### **VIII. Copy the following sentences using the verbs to be, to have, to do and**

**translate them into Ukrainian.**

1. Biomass fuel \_\_\_\_\_ the cheapest fuel in some countries.. 2. They \_\_\_\_\_n't have chemistry yesterday. 3. I \_\_\_\_\_ to translate this report as soon as possible. 4. \_\_\_\_\_ everything in time. 5. Biomass fuels \_\_\_\_\_ competing economically at only a few locations. 6. You \_\_\_\_\_ done everything possible. 7. The students \_\_\_\_\_ to submit their thesis in December. 8. \_\_\_\_\_ all people need cars?

**IX. Use indirect speech.**

1. We were told, "America was discovered by Columbus." 2. It was known, "The first inhabitants of America were Indians." 3. "Today Indians are inhabiting mostly the Southern America," read the book. 4. He questioned, "How much will it cost?" 5. The announcement went, "The participant gets a present." 6. The newspaper went, "The costs of fuel are not rising." 7. Scientists asked, "What kind of fuel is more harmful for health?" 8. The technologists argued, "We have never had so much biomass in our country."

**X. Translate the following sentences into English.**

1. Його запитали, які види пального використовувалися раніше. 2. Ми мусимо обирати дешевше та ефективніше паливо. 3. Вони відповіли, що робота буде зроблена кимось іншим. 4. Вирощуючи енергетичні врожаї, можна виробляти пальне з біомаси. 5. Використана біомаса може забезпечити нас чистим паливом. 6. Ви читали статтю, опубліковану в університетській газеті "Промінь?" 7. Ви зможете отримати інформацію в деканаті. 8. Декільком студентам дали місця на заводі.

**Variant 10**

**I. Copy and translate the following text.**

**DEPLETION OF THE OZONE LAYER**

The ozone layer, a thin band in the stratosphere, the upper part of the atmosphere, services to shield the Earth from the sun's harmful ultraviolet rays. In the 1970's, scientists discovered that the layer was being attacked by chlorofluorocarbons (CFCs), chemicals used in refrigeration, air-conditioning systems, cleaning solvents, and aerosol sprays. CFCs release chlorine into the atmosphere; chlorine, in turn, breaks ozone down into its constituent parts of oxygen. Because chlorine is not affected by its interaction with ozone, each chlorine molecule has the ability to destroy a large amount of ozone for an extended period of time.

As a result of the ozone layer depletion the ozone concentration became to reduce in some places, in particular, over Antarctic continent, where a pulsing hole often appears with ozone content less by 40-50%. At present the ozone hole reaches the area of Antarctic continent. The ozone hole is found also in the Southern hemisphere over Antarctic continent. The process of the ozone diminishing is constantly going on.

The consequences of the depletion of the ozone layer are dramatic. Satellites register high rates of ultraviolet radiation growth. Due to the ozone hole the high ultraviolet radiation is observed in the countries of the Southern hemisphere of the Earth. Increased ultraviolet radiation will lead to growing number of skin cancers and cataracts and also reduce the ability of people's immune system to respond to infection. Additionally, the growth rates of the world's oceanic plankton, the base of all marine food chain will be negatively affected, perhaps leading to increased atmospheric carbon dioxide and thus to global warming. Even if the use of CFCs was immediately banned, the chlorine already released into the atmosphere would continue to destroy the ozone layer for many decades. Additionally the latest studies suggested that global warming may increase the amount of ozone destroyed.

### Vocabulary

depletion	витощення
ozone layer	озоновий шар
thin band	тонка стрічка
upper part	верхня частина
services to shield	служує для захисту
harmful rays	шкідливі промені
discover	відкривати
refrigeration	заморожування
cleaning solvent	очищуючий розчинник
in turn	в свою чергу
break down	розщеплювати
affected by its interaction	під впливом взаємодії
amount	кількість
consequences	наслідки
skin cancer	рак шкіри
respond to infection	реагувати на інфекцію
additionally	в додаток
the growth rates	швидкість росту
immediately ban	негайно заборонити
release	вивільняти
suggest	вважати

**II. Find in the text the derivatives of the following words. Define these parts of speech and translate them into Ukrainian.**

harm, refrigerate, dissolve, constant, grow, radiate, able, negative, atmosphere, globe.

**III. Fill in the missing words. Copy and translate the sentences.**

depletion, layer, hole, affected, to prevent, harmful, discovered, release.

The ozone \_\_\_\_\_ services to shield the Earth from the sun's rays. The sun's ultraviolet radiation is \_\_\_\_\_ to people. Scientists \_\_\_\_\_ that the layer was being attacked by chloroflu-

orocarbons. CFCs \_\_\_\_ chlorine into the atmosphere. Chlorine is not \_\_\_\_ by its interaction with ozone. The ozone layer \_\_\_\_ is observed. Over Antharctide continent a pulsing ozone \_\_\_\_ often appears. It is necessary \_\_\_\_ the further depletion of the ozone layer.

#### **IV. Transform the verbs into Passive Voice.**

1. Scientists have discovered the depletion of the ozone layer. 2. Chlorofluorocarbons (CFCs) are attacking the ozone layer. 3. They used chemicals in refrigeration. 4. CFCs release chlorine into the atmosphere. 5. Chlorine, in turn, will break ozone down into its constituent parts of oxygen. 6. The students didn't waste time 7. They speak many languages. 8. The chlorine already released into the atmosphere has destroyed much ozone.

#### **V. Open the brackets using Participle I and Participle II. Define their forms and functions. Recopy and translate the sentences.**

1. Chemicals (use) in refrigeration, air-conditioning systems, cleaning solvents, and aerosol sprays contain CFCs. 2. CFCs (release) chlorine into the atmosphere, chlorine breaks ozone down into its constituent parts of oxygen. 3. The ozone layer (deplete), the ozone concentration became to reduce in some places. 4. Over Antharctide continent a (pulse) hole often appears with ozone content less by 40-50%. 5. The ozone hole is (find) also in the Southern hemisphere over Antharctic continent. 6. (Increase) ultraviolet radiation will lead to (grow) number of skin cancers and cataracts. 7. The growth rates of the world's oceanic plankton will be negatively (affect). 8. (Observe) the phenomenon of the ozone hole the scientists studied its ozone content..

#### **VI. Fill in the missing modal verbs and their equivalents. Copy and translate the sentences.**

1. Each chlorine molecule \_\_\_\_ to destroy a large amount of ozone. 2. Global warming \_\_\_\_ increase the amount of ozone destroyed. 3. What \_\_\_\_ we do to protect the ozone layer? 4. People \_\_\_\_ to use less harmful substances in refrigerators. 5. Otherwise we \_\_\_\_ to suffer the effect of the global warming. 6. They \_\_\_\_ finish the work long ago if they worked together. 7. Protecting air we will \_\_\_\_ to save our lives. 8. Using safer cooling agents earlier we \_\_\_\_ prevent the depletion of the ozone layer.

#### **VII. Fill in the indefinite and negative pronouns and adverbs. Copy and translate the sentences.**

1. \_\_\_\_ knows how much waste our industry produces. 2. \_\_\_\_ could observe the increasing radiation in spring. 3. There are \_\_\_\_ problems in using chemicals. 4. Has \_\_\_\_ been to the North Pole? 5. You can see refrigerators \_\_\_\_ in the homes. 6. Do you use \_\_\_\_ chemicals in your washing machine 7. 8. Natural substances make \_\_\_\_ harm to man.

#### **VIII. Copy the following sentences using the verbs to be, to have, to do and translate them into Ukrainian.**

1. \_\_\_\_n't use much chemicals in the kitchen. 2. People already \_\_\_\_ poisoned

their air with car fuels and plant smoke. 3. We \_\_\_\_\_ enough choice in how to keep our food cool. 4. We \_\_\_\_\_ masters of our planet and we \_\_\_\_\_ to make it safe. 5. How \_\_\_\_\_ they cool food without fridges in the past? 6. Ammoniac has \_\_\_\_\_ used in fridges for many years. 7. We will \_\_\_\_\_ making our life better with safer production. 8. There \_\_\_\_\_ less carbon dioxide in the air in the past centuries.

### **IX. Use indirect speech.**

1. Scientists discovered, "The ozone layer is being destroyed by chlorofluorocarbons used in refrigeration. 2.. The research proved, "They have already released much chlorine into the atmosphere." 3. They predicted, "Chlorine will continue to destroy the ozone layer for many decades." 4. They agreed, "Something can be done to save our air." 5. All are afraid, "We will suffer from the ozone deficit in future." 6. We thought, "The danger concerns all of us." 7. We asked the professor, " Did you write anything about the global warming.?" 8. The postgraduate told us, "Now I am preparing my abstract."

### **X. Translate the following sentences into English.**

1. Вчений сказав, що супутники реєструють зростаючий рівень ультрафіолетової радіації. 2. Хтось може щось зробити для збереження озону в атмосфері? 3. Створивши багато хімічних речовин, люди не подумали про своє здоров'я. 4. Стало відомим, що озоновий шар потоншав. 5. Всі мусять оберегати природу як себе самих. 6. Зменшуючи концентрацію озону, люди скорочують своє життя. 7. Вченими доведено, що фреон, застосований у холодильниках, руйнує озон. 8. Нам слід вживати якісь природні речовини у домашньому господарстві (at home).

## TEST N 3

### Variant 1

#### I. Copy and translate the following text.

#### HELL AND HIGH WATER

The last few years have been the worst period for environmental disasters and experts are predicting far worse to come.

Here is how to become a disaster statistic. Poor people live in a shanty town on an unstable hillside near a tropical coast, crowding together. The world is getting warmer. More evaporation means more rain, which means the slopes will get progressively more waterlogged. One day, the land will turn to mud, and the neighbourhood will begin to go downhill. The landslide may bury the shanties.

In the last decade, floods, droughts, windstorms, earthquakes, avalanches, volcanic eruptions and forest fires have become increasingly common. There has been disastrous flooding in Asia, Africa, Central and South America and Oceania. Storms have been getting worse everywhere too, with a growing number of hurricanes hitting the US, the Caribbean and Central America. Drought has affected large areas of Sub-Saharan Africa for years and many other zones are becoming drier. A number of nations have already been in armed conflict over water, and drought in the West of the US has resulted in enormous forest fires.

So, why is the nature beginning to turn on us? This has mainly been caused by the mismanagement of the world's resources: carbon emissions from rich countries; the activities of the big multinational companies; the deforestation of the world's forests. As a result, a hotter ocean breeds fiercer cyclones and hurricanes. Water evaporates, and more powerful winds dump this water against mountainsides with increasing fury.

Volcanic eruptions and earthquakes have always been a threat in certain parts of the world. A volcanic eruption virtually wiped out the small Caribbean island of Montserrat in 1997 and there have been serious earthquakes in Greece, Turkey, and El Salvador. Volcanoes and earthquakes are even more dangerous than in the past as around half the world's population now lives in cities. An even greater number live at risk, in some degree, from earthquakes which have taken a toll of more than 1.6 million lives in the last hundred years.

#### Vocabulary

hell and high water	попри, незважаючи на
disaster	нещастя
predict	передвіщувати
shanty	халупа
coast	узбережжя
crowd	натовп

slope	схил
landslide	зсув ґрунту
waterlogged	заболочений
mud	ґрязюка
neighbourhood	сусідство
drought	засуха
earthquake	землетрус
avalanche	лавина
flooding	повінь
hurricane	ураган, смерч
volcanic eruption	виверження вулкану
turn on	обертатися проти
mismanagement	неправильне управління
fury	лють
dangerous	небезпечний

## **II. Write whether these statements are true or false and give the correct variant.**

1. Environmental disasters can be the biggest threat in the future. 2. The world is getting colder. 3. The land in shanty towns will turn to mud because of the heavy rains. 4. Volcanic eruptions happen not so often now. 5. Many zones are becoming damper. 6. Nations are fighting for oil. 7. The nature is beginning to turn on us because it is made worse by people. 8. Hurricanes develop because it is natural.

## **III. Match the synonyms.**

1) disaster, emission, avalanche, hell and high water, flood, hurricane, eruption, downhill, undernourished, unstable.

2) tragedy, starving, windstorm, overflow, below, changing, downwards, in spite of, outbreak, irradiation.

## **IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. To have made filters on the chimneys saved the trees. 2. We need planned economy so as to balance production and ecology. 3. The Yellow river failed to reach the sea in 1997. 4. Do your best to study well. 5. It is important for us to use pure kinds of energy. 6. Many mines are said to be ruined by explosions. 7. Mismanagement is known to result from social contradictions. 8. To purify production wastes is necessary.

## **V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. We were told that we \_\_\_\_ give an answer in several days. 2. \_\_\_\_ you like to live on clean territory? 3. You \_\_\_\_ be more attentive to people. 4. He \_\_\_\_ have been here if you have called him. 5. \_\_\_\_ you mind always turning off the light? 6. We all \_\_\_\_ be ecologically minded if we studied the subject at school.

7. Children \_\_\_\_ be told about the diseases and accidents following pollution.

8. They knew that tornado \_\_\_\_ come in few days.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. \_\_\_\_ can say that good books are always few. 2. Poor people live in shanty towns and \_\_\_\_ are endangered by floods. 3. Professors were discussing something, the \_\_\_\_ to the left looked very interested. 4. \_\_\_\_ is important to think about our environment. 5. Tornados were always destructive in the USA, but the last \_\_\_\_ was especially furious. 6. We have come to the conclusion \_\_\_\_ warming brings more hurricanes. 7. \_\_\_\_ is quite evident that scientific thinking should win. 8. The nature has turned on us. \_\_\_\_ is the result of the mismanagement of the world's resources.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. Environmentally friendly people not (leave) litter after themselves. 2. For years toxic plant gases (burn) the tops of the trees. 3. The quantitative aspects of ecological thought (grow) quickly. 4. This year the plant (do) everything for wasteless production. 5. Do you know that ecological genetics (deal) with the behaviour of genes in natural populations? 6. New methods of water purification (develop) by environmental research. 7. Time (come) to think about our environment. 8. If we not (care) of nature, animals and plants (die).

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. Fish is known to die in dirty lakes, 2. The number of vegetarians is likely to be growing in civilized countries. 3. From ancient times people happened to have destroyed many worldwide habitats and natural preserves for their commercial purposes. 4. Peter Walker, the member of the International Federation of Red Cross and Red Crescent Societies, investigating the natural disasters, noticed, "Your house having been washed away, the land that you farmed has disappeared." 5. Storms have been getting worse everywhere, with a growing number of hurricanes, hitting the US, the Caribbean, and Central America. 6. Droughts having affected large areas of Sub-Saharan Africa for years, many other zones are becoming drier. 7. Green scientists knew volcanic eruptions and earth-quakes to have always been a threat in certain parts of the world. 8. Disaster professionals predict things to get worse in future.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

It is known that Charls Robert Darwin, the revolutioner in biology, was born in Shrewsbury, England on February, 12, 1809. His father, as history goes, was a wealthy physician. Darwin liked neither Shrewsbury School, nor Edinbourg medical Colledge,



then Cambridge Christ's College which he attended. Further on, his acquaintance with John Stevens Henslow, the professor of botany, influenced his choice of profession.

Owing to his friend Darwin went on a trip around the world. The book "The Origin of Species" which Darwin wrote after the trip became famous all over the world. He proved that neither two animals nor plants of the same kind are exactly alike. The idea which Darwin laid is called "the theory of evolution"

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Урядові органи повинні робити все можливе, щоб запобігти стихійним лихам. 2. Жовта ріка на території Китаю, відома частими розливами, у 1997 році не досягла моря. 3. Доповіли, що конференція з екологічних питань відбудеться у червні. 4. Хто, можливо, буде жертвами стихійних лих? 5. Відомо, що природні катастрофи пов'язані з політичною ситуацією в країнах. 6. Хто має відповідати за наслідки Чорнобильської аварії? 7. Люди живуть, рахуючи кожну годину. 8. Щоб жити на землі, треба її захищати.

**Variant 2**

**I. Copy and translate the following text.**

**ECOLOGICAL SITUATION IN UKRAINE**

Ecological situation in Ukraine is qualified as a crisis due to the deformed structure of national economy with mining branches of production and energy and resource capacious technologies predominating, without building effective purifying stations.

Industrial pollution has reached a critical level in Ukraine. Heavy industry and chemical plants line the banks of large rivers such as the Dnieper, Siversky Donets, and Buh. Nuclear power plants, following some fiendish logic, are found in the vicinity of major cities, like giant water boilers.

While it is true that poisonous discharges in the atmosphere have dropped due to the economic decline, water and the ground present an altogether different picture. Among the principal consumers of water are industry, agriculture household, housing and municipal services. Industrial water is indigestible. The Green Party's attempt to draw public attention to the water situation is still in vain.

There are horrible projects that are totally unjustified ecologically, like transferring Dnieper water to the Danube. Fish is killed in the Dnieper with organic waste from nuclear and chemical plants. Hand skin abscess are an occupational hazard for fishermen of the Kakhovka water reservoir. Subterranean salty and dirty seas in place of closed pits, oil and gas boreholes fill drinking wells with salt water.

Cutting out forests businessmen are robbing the country of its valuable natural resource and undermining our ecology and climate. Neglecting fields resulted in half of the crops drying out. Misusing meadows, fields, and green city zones, building cottages

there spoil the beauty of Ukraine. Forest fires because of people's carelessness or evil intentions burn out kilometres of our green lungs. Chemicals are spilt on the railways

and the adjacent territory poisoning population and causing diseases. Chernobyl disaster took and is taking the lives of people. But even more terrible disaster is the uncontrolled economy brought about by political crisis and violations of the law.

### **Vocabulary**

pollution	забруднення
reach a level	досягти рівня
heavy industry	важка промисловість
line the banks	стояти на берегах
nuclear power plants	ядерні електростанції
fiendish	недобрий
in the vicinity of	поблизу
poisonous discharges	отруйні викиди
decline, drop	падати
principal consumer	головний споживач
approximately	приблизно
power supplies	постачання запасів енергії
household	побутовий
hasard	ризик, хвороба
mine, pit	шахта
rob	грабувати
violation of the law	порушення закону
evil intention	злий намір

### **II. Write whether these statements are true or false and give the correct variant.**

1. Effective purifying stations are built. 2. Industrial pollution has reached a critical level in Ukraine. 3. Heavy industry and chemical plants are built far from large rivers. 4. Nuclear power plants are found in the vicinity of major cities, like giant water boilers. 5. Poisonous discharges in water and the ground have not dropped. 6. The Green Party's attempt to draw public attention to the water situation is very effective. 7. There are horrible projects that are totally unjustified ecologically. 8. Subterranean salty and dirty seas in place of closed pits, oil and gas boreholes fill drinking wells with salt water.

### **III. Match the synonyms.**

1) contamination, atomic, situated, achieve, fall, measure, unclean, mine, construct, illness.

2) pit, pollution, level, disease, dirty, build, drop, found, nuclear, reach.

### **IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. The Green Party's attempts to draw public attention to the water situation. 2. It is necessary to make Ukrainian industry safer. 3. We should grow more forests to be cut for industry. 4. To have visited Chernobyl gave the foreigners much material for dispute. 5. The ecological problems ought to have been set before. 6. The government is believed to have known about the dangerous situation. 7. For the Soviet women to fight at the front was the highest honour. 8. Did people defend their motherland to die of the harmful ecology?

**V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. \_\_\_\_\_ an earthquake happen, all mines will be ruined, burying villages and towns above. 2. \_\_\_\_\_ you like to have poisoned fish for dinner? 3. Plants \_\_\_\_\_ not be built on the river banks. 4. It looks as if some politicians do what they \_\_\_\_\_ never caring about people. 5. The inspectors said that the radiation level \_\_\_\_\_ not increase. 6. We were informed that a modern purifying station \_\_\_\_\_ be built for Kyiv. 7. Nuclear power plants \_\_\_\_\_ not be found in the vicinity of major cities. 8. Why \_\_\_\_\_ we suffer because of bad political and economical management?

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. Industry produces much wastes, and \_\_\_\_\_ should be processed. 2. \_\_\_\_\_ can say that only working people are able to control power. 3. \_\_\_\_\_ is true that poisonous discharges in the atmosphere have dropped due to the economic decline. 4. Where are \_\_\_\_\_ free roads we enjoyed many years ago? 5. There are horrible projects \_\_\_\_\_ are totally unjustified ecologically. 6. \_\_\_\_\_ is possible to create a responsible society \_\_\_\_\_ will care about our environment. 7. Our city being polluted with cars, \_\_\_\_\_ is our fault. 8. \_\_\_\_\_ who has seen the victims of Chernobyl or perished miners will never forget and forgive.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. Chernobyl disaster in 1986 (bring) tragedy on many nations. 2. Radioactive clouds (be) carried by the wind to central Europe. 3. Much time (come) since the explosion of the block at the Chernobyl atomic power station. 4. High radiation level (keep) for many years. 5. They promised they (close) the Chernobyl power station. 6. But the station (work) now and (supply) many towns with electricity. 7. Chernobyl disaster (take) many lives of people. 8. We don't know what (happen) with us in future in such dangerous ecological situation.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. The living standard of the workers falling, the profits earned by the monopolists are particularly high. 2. Chernobyl rescuers are known to have received privileges.

3. The structure of national economy is deformed with resource capacious technologies predominating. 4. Industrial pollution is said to have reached a critical level in Ukraine. 5. Plants lining the banks of our largest rivers, nuclear power plants are found in

the vicinity of major cities. 6. We want our government to improve the air in the city.

7. Businessmen are robbing the country, undermining our ecology and climate. 8. Fields should be controlled for the crops not to dry out.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. Ecological situation in Ukraine is qualified as a crisis. 2. Due to the deformed structure of national economy mining branches of production and energy and resource capacious technologies are predominating. 3. Ukraine developed industry without building effective purifying stations. 4. Nuclear power plants are like giant water boilers. 5. While poisonous discharges in the atmosphere have dropped with soil it is quite different. 6. Among the principal consumers of water are industry and agriculture. 7. The Green Party's attempts to draw public attention to the water situation are but in vain. 8. Hand skin abscess are an occupational hazard for fishermen.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Екологічна ситуація в Україні може бути названа критичною. 2. Людям треба, щоб промисловість була нешкідлива для здоров'я. 3. Побудувавши заводи на берегах рік, люди спричиняють шкоду рікам. 4. Вода, використана заводами, непитна. 5. Відомо, що від отруйних викидів гине риба в ріках. 6. Промисловість, яка отрує атмосферу, має бути під контролем. 7. Нам всім слід контролювати чистоту своїх міст. 8. Вирубуючи ліси, будуючи котеджі на полях, люди знищують умови для свого життя.

**Variant 3**

**I. Copy and translate the following text.**

**AIR POLLUTION**

When something harmful is added to the environment, it causes the pollution. As a result of the antropogenic activity atmosphere pollution happens, which results in changes in atmosphere air chemical composition. The appearance of the supersonic jet airliners has presented many problems. These airliners use up tones of oxygen and throw out over 150,000 tons of water vapor into the stratosphere every day, increasing the temperature. It has to be decided if this is right in ecological terms. Space flights that break through the atmosphere envelope should be studied as to their effects on nature. A significant portion of industry and transportation is based on burning fossil fuels, such as gasoline. As these fuels are burned, chemicals and particulate matter are released into the atmosphere.

The most common substances which pollute the air contain carbon, sulfur and nitrogen. These chemicals interact with one another and with ultraviolet radiation in sunlight in various dangerous ways. Smog, usually found in urban areas with large numbers of automobiles, is

formed when nitrogen dioxide is broken down by sunlight, releasing ozone and other harmful substances. Smog can cause serious health problems. When sulfur dioxide and nitrous oxide are transformed into sulfuric acid and nitric acid in the atmosphere and come back on earth in precipitation, they form acid rain.

Air pollutions are classified as organized and nonorganized, heated and cold, principal or supplementary production, unpurified and purified wastes.

Acid rain. Acid rain is a serious global problem because few species are capable of surviving in the face of such acidic conditions. It comes from industrial countries, but wind carries it and a lot of falls on these countries' neighbors. Acid rain is a type of pollution which may take the form of snow, fog, or a dry form of precipitation and they can be carried long distances from the source before they are deposited. Acid rain has made numerous lakes so acidic that they no longer support fish populations. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide.

### Vocabulary

air pollution	забруднення повітря
harmful	шкідливий
appearance	вигляд
supersonic jet airliner	надзвуковий реактивний літак
throw out	викидати
decide	вирішувати
space flight	космічний політ
break through	прориватися крізь
envelope	обгортати
significant	значний
based on burning	заснований на спалюванні
common	звичайний
dangerous way	небезпечний засіб
smog – smoke + fog	чорний туман
cause health problems	викликати проблеми здоров'я
precipitation	осад
form acid rain.	утворювати кислотний дощ
capable of surviving	здатні вижити
acidic conditions	кислотні умови
wind	вітер
fall	падати
support	підтримувати

## II. Write whether these statements are true or false and give the correct variant.

1. Atmosphere pollution happens because of hurricanes. 2. Pollution results in changing chemical composition of the air. 3. Transportation is based on burning fossil fuels, such as hydrogen. 4. Carbon, sulfur and nitrogen interact in various safe ways. 5. Smog is rarely found in urban areas. 6. Sulfur dioxide and nitrous oxide are transformed into sulfuric acid and nitric acid in the atmosphere. 7. Precipitation may fall on the ground

as acid rain or snow. 8. Waste can not be purified.

### **III. Match the synonyms.**

1) contamination, precipitate, set free, solve, ecology, gasoline, remove, split, convert, return.

2) release, decide, environment, transform, pollution, fuel, throw out, come back, throw down, break down.

### **IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. We are to start an urgent campaign in order to preserve environment. 2. We know many pressure and interest groups to be searching for the solution to the problem of pollution. 4. Atmospheric pollution is considered to have been the result of the antropogenic activity. 3. To start a program of emergency conservation measures will decrease pollution. 5. The continental pollution is said to destroy the human habitat. 6. Sulfur dioxide and nitrous oxide in the atmosphere come back on earth in precipitation to form acid rain. 7. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide. 8. To have made his discoveries Darwin observed nature.

### **V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. We \_\_\_\_ use safer fuel in industry. 2. We \_\_\_\_ inhale fresh air if we reduced gaseous wastes. 3. The leaders of technical progress didn't think about what \_\_\_\_ happen with our atmosphere. 4. Businessmen do as they \_\_\_\_ and don't care about clean air. 5. Freon \_\_\_\_ not be used as cooling agent in refrigerators. 6. Why \_\_\_\_ we use harmful gases in refrigerators and poison our air too?! 7. If I hadn't seen myself yellow poodles (калюжі) on the ground, I \_\_\_\_ have never understood what acid rain was. 8. We \_\_\_\_ like to use the energy of the sun.

### **VI. Fill in the gaps with the pronouns: it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. When something harmful is added to the environment, \_\_\_\_ causes the pollution. 2. \_\_\_\_ airliners use up tones of oxygen and throw out over 150,000 tons of water vapor into the stratosphere every day. 3. \_\_\_\_ has to be decided if this is right in ecological terms. 4. Space flights \_\_\_\_ break through the atmosphere envelope should be studied as to their effects on nature. 5. As \_\_\_\_ fuels are burned, chemicals and particulate matter are released into the atmosphere. 6. \_\_\_\_ interact with one another and with ultraviolet radiation in sunlight. 7. Acid rain comes from industrial countries, but wind carries \_\_\_\_ and a lot of

falls on these countries' neighbors. 8. One can say \_\_\_\_ our life depends on the air that we use.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. The supersonic jet airliners (present) many problems by now.
2. Smog usually (find) in urban areas.
3. These airliners (use up) tones of oxygen.
4. The temperature of our atmosphere constantly (increase).
5. The substance (degrade) into carbon and water.
6. I (observe) many acid rains in my childhood.
7. The plants already (throw) out much poisons in the air.
8. There (to be) more severe hurricanes in future.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes**

1. Something harmful being added to the environment, it causes the pollution.
2. Atmosphere pollution is said to result in changes in air chemical composition.
3. The airliners using up tones of oxygen, their appearance has presented many problems.
4. The airliners throwing out over 150,000 tons of water vapor into the stratosphere every day, it increases the temperature.
5. Acid rain is also thought to be responsible for the decline of many forest ecosystems worldwide.
6. When removed the wastes were analysed for toxic substances.
7. Everybody knows smog to cause serious health problems.
8. For ultraviolet radiation not to be so dangerous the air should not be contaminated with chemicals.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. Darwin took interest in everything as far as it concerned botany.
2. He collected and studied both insects and plants.
3. It is known that Darwin was bitten by a beetle during his voyage to tropical countries.
4. Although Darwin got seriously ill he didn't stop his work on the theory of evolution.
5. Neither strong pain nor other problems could make him leave his work.
6. Nevertheless his research helped him to bear the pain.
7. Civilization is created by famous scientists as well as by unknown ones.
8. Young people should be educated so that they could develop all valuable achievements of science.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Чому ми повинні дихати забрудненим повітрям?
2. Відомо, що кислі дощі разносяться вітром до інших країн.
3. Літаки – швидкий вид транспорту, але вони споживають багато кисню і викидають водяну пару.
4. Є причини турбуватися про майбутнє, і вони дуже серйозні.
5. Минулі покоління не дуже думали про те, яку екологію вони нам залишать.
6. Необхідно, щоб діти мали екологічну практику у школі.
7. Оскільки сірка, азот та вуглець є найбільшими забруднювачами повітря, необхідно зменшити їх викиди у

атмосферу. 8. Вважають, що кислотні дощі є причиною зубожіння лісових екосистем.

## Variant 4

### I. Copy and translate the following text.

#### WATER POLLUTION

Water is a structural component of our body, as well as all organisms of the biosphere. In their relation to water all branches of economy are divided into *users* and *consumes*. The former use water as media without taking it out of the source (water transport, hydropower plants) which the latter do for drinking, cooking, etc.

Water problem acquired global international scale. In our days water is an item of international trade. Industrial enterprises use water in large quantities. The greatest consumers of water are chemical plants, cellulose-paper mills and enterprises of non-ferrous metallurgy. The rate of pollution of sweet water basins is high. At present over 90 mln tons of mineral fertilizers and more than 2 mln tons of toxic chemicals are spread in water basins. Oceans and seas are sewage collectors poisoned with radioactive wastes. Statistics says that nearly 1.5 billion people lack safe drinking water and that at least 5 million deaths per year can be attributed to waterborne diseases. With almost 80 percent of the planet covered by oceans, most coastal waters are now polluted. Beaches around the world are closed regularly, often because of high amounts of bacteria from sewage disposal, and marine wild life is beginning to suffer.

Since the middle of the nineteenth century there has been a continual development of our knowledge of the effects of pollution and the means by which it may be prevented or controlled. The problem has become especially acute in the second half of the twentieth century when in the USA water in a number of lakes and rivers proved to be already undrinkable. The living resources of the sea are renewable. If managed rationally they could provide food and materials probably forever. The only way to overcome the catastrophe of water pollution is to put an ocean to a greater international control. The territorial waters should come under a new ocean regime. Under this regime the mineral and other resources of the ocean would become reserves and could be used by following generations.

#### Vocabulary

lack	відсутність
death	смерть
disease	хвороба
fertilizer	добриво
land	земля, країна



cover	покривати
coastal	узбережний
beach	пляж
sewage	рідкі відходи
wild	дикий
suffer	страждати
acute	гострий

proved to be	виявився
undrinkable	непитна
renewable	відновлена
manage	тут змогти
provide forever	забезпечити назавжди
generation	покоління

## **II. Write whether these statements are true or false and give the correct variant.**

1. Users take water out of the source. 2. Water purity is a problem of international importance. 3. In our days water is not an item of international trade. 4. The rate of pollution of sweet water basins is low. 5. Mineral fertilizers are thrown in water. 6. Safe drinking water is a problem in few countries. 7. Much water in a number of lakes and rivers proved to be already undrinkable. 8. The living resources of the sea are not renewable.

## **III. Match the synonyms.**

1) illness, contamination, comprise, quantity, permanent, influence, ways, supply, enterprise, disaster.

2) amount, include, means, plant, constant, provide, pollution, catastrophe, effect, disease.

## **IV. Copy and translate the following sentences. Define the function of the Infinitive.**

1. At least 5 million deaths per year can be attributed to waterborne diseases. 2. Pollution may be prevented or controlled. 3. The only way to overcome the catastrophe of water pollution is to put an ocean to a greater international control. 4. The territory was disinfected to decrease radiation. 5. To have solved a chemical problem meant to write the formula of a chemical reaction. 6. The scientists study the means by which pollution may be prevented or controlled. 6. He asked me to send them the contract by mail 7. To produce chemicals or paper plants have to consume much water. 8. Sweet water is known to be the only water to drink (drinkable water).

## **V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. Oceans and seas \_\_\_\_\_ not be sewage collectors poisoned with radioactive wastes. 2. \_\_\_\_\_ we be able to drink water without purification? 3. Many people in the world \_\_\_\_\_ use filters as city water is polluted and infected. 4. We can't treat

nature as we \_\_\_\_\_, because we will suffer too. 5. It is necessary that the government \_\_\_\_\_ do something about the economy. 6. You \_\_\_\_\_ stop smoking. 7. The ecologists decided that they \_\_\_\_\_ develop laws to protect water resources. 8. Under the new ocean regime the mineral and other resources of the ocean \_\_\_\_\_ become reserves and could be used by the following generations.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one.**

**Translate the sentences into Ukrainian.**

1. \_\_\_\_\_ who use water as media without taking it out of the source are called users. 2. \_\_\_\_\_ include water transport, hydropower plants. 3. Chemicals \_\_\_\_\_ are spread in water basins poison drinking water. 4. Statistics says \_\_\_\_\_ nearly 1.5 billion people lack safe drinking water. 5. \_\_\_\_\_ is because of waterborne diseases that at least 5 million people die each year. 6. \_\_\_\_\_ problem may appear in civilized countries. 7. \_\_\_\_\_ must be careful while transporting chemicals by water. 8. If you choose among the evils choose the least \_\_\_\_\_.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. The consumer (use) water as media without taking it out of the source. 2. Water problem (acquire) global international scale. 3. Millions tons of toxic chemicals (spread) in water basins. 4. Since the middle of the nineteenth century there (be) a continual development of our knowledge of the effects of pollution. 5. The problem (become) especially acute in the second half of the twentieth century. 6. The USA water in a number of lakes and rivers (prove) to be already undrinkable. 7. If managed rationally water reserves (can) provide all people with fresh water. 8. The new generations (leave) ccontaminated air, soil and water.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. Water being polluted, people develop various diseases. 2. Fish is dying in the contaminated lakes, fishermen selling their catch at the markets. 3. Nearly 1.5 billion people are said to lack safe drinking water. 4. High amounts of bacteria from sewage disposal contaminating beeches, the latter are closed regularly. 5. For farmers to throw fertilizers into water means to poison themselves. 6. We want our government to face the ecological problems. 7. Calcium chlorine being dissolved in water, we observe the rapid fall of the temperature. 8. This problem is reported to have been studied by the scientists.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. You know that English has a long history. 2. Since early times the first inhabitants of Great Britain were the Celts. 3. The Romans who first occupied Great Britain left roads and fortresses with Roman names. 4. The German tribes of Angles, Saxons and Jutes were the founders both of the English nation and the English

language. 5. The land on which they settled was called England and the language they spoke English. 6. After the Norman conquest Great Britain fell under William the Conqueror. 7. Though the Normans became the masters and the English their slaves, the English didn't want to speak the language which the Normans spoke. 8. So the Anglo-Saxon language changed a little by the Normans became the real English, language.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Оскільки вода є одним із основних компонентів нашого організму, вона необхідна нам кожного дня. 2. Можна сказати, що вода є життя. 3. Для користувачів вода є тільки середовищем, тоді як споживачі потребують її для пиття, приготування їжі, ін. 4. Давно відомо, що мільйони людей мають потребу у питній воді. 5. Нам необхідно мати чисту питну воду. 6. Коли вода забруднена, виникають хвороби. 7. Харчові підприємства використовують воду для того, щоб переробляти їжу. 8. Екологи домовилися, що водні ресурси будуть взяті під міжнародний контроль.

**Variant 5**

**I. Copy and translate the following text.**

**WASTES. TEXT 1**

Ecology contamination may be qualified as entering or appearing in environment new, untypical chemical or biological substances harmfully influencing natural ecosystems and man, of which nature is unable to get rid by selfpurification. These substances are called contaminants or pollutants. Contaminants as foreign substances are classified quantitatively and qualitatively, as to influence on populations, etc.

Dry land is termed as *lithosphere* which takes 29,2% of the Earth and includes soils and natural resources both on the surface and in the depths. Lithosphere contamination occurs in natural way as a result of natural disasters, as well as through anthropogenic activities. Wastes formed by the anthropogenic activities are divided in three categories: industrial, agricultural and domestic.

Modern technology helps us to live longer and more comfortable lives. Our homes are warm in winter, cool in summer. We eat foods from all over the world. Doctors save us from death with new drugs. Chemicals help to stop diseases, make crops grow faster, clean our drinking water, and make our engines run. Chemical plants make the things we need to survive. They provide jobs for thousands of workers. But there is a "down" side of to modern technology: chemicals that save our lives can also kill us. The chemicals used to make such useful things as plastics, pesticides, even paper and cloth, can be harmful or toxic.

Once the product is made, the leftover chemicals are thrown away. If not disposed of properly, the wastes can poison people and kill off trees, plants and animals. Waste disposal is the collection, storage and processing of waste materials. In nature, wastes are for the most part returned to the environment through chemical action, bacterial activity, and weather. Some man-made waste are also processed, or degraded, by these natural processes. However, many of the wastes of an industrial society are not readily degraded and absorbed into the environment and must undergo special processing.

### **Vocabulary**

wastes	відходи
storage	зберігання
processing	переробка
to degrade	розкладатися
to undergo	підлягати
haul	перевозити
gully	водостічна канава
abandoned	покинутий
pit	яма, шахта
deterioration	погіршення
dumping site	ділянка поховання відходів

### **II. Write whether these statements are true or false and give the correct variant.**

1. Contaminants are chemical or biological substances. 2. Nature is able to get rid of contaminants by selfpurification. 3. Natural resources both of the land and sea are contaminated by natural disasters. 4. Industrial, agricultural and domestic wastes are the products of anthropogenic activities. 5. Creating comfortable life we think of nature. 6. Waste disposal is the collection and storing of waste materials. 7. All wastes are readily degrading. 8. Wastes processing is adequate.

### **III. Match the synonyms.**

1) medicine, harvest, quicker, purify, leftover, treat, decompose, accumulate, artificial, poison.

2) waste, desintegrate, contaminant, crop, unnatural, gather, drug, faster, process, clean.

### **IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. Modern technology helps us to live longer and more comfortable lives. 2. To have made our homes warm energy carriers were used. 3. We can eat foods from all over the world. 4. To be saved from death we use chemical drugs. 5. The things to think about are consequences of pollution. 6. They provide jobs for people to work. 7. Chemicals are said to save our lives and also kill us. 7. The chemicals are known to be harmful or toxic.

**V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. The scientists knew that plastics, pesticides, even paper and cloth \_\_\_\_ be harmful or toxic. 2. You \_\_\_\_ find it difficult to give all your time to science. 3. It is necessary that the air \_\_\_\_ be always fresh. 4. We \_\_\_\_ never forget wise advice. 5. We all \_\_\_\_ travel much if we only had money. 6. They knew that they \_\_\_\_ have to test the equipment first. 7. Each of us \_\_\_\_ do his duty. 8. If you had taken your chance you \_\_\_\_ be happy.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. \_\_\_\_ can say that contaminants or pollutants are harmful chemical or biological substances of which nature is unable to get rid by selfpurification. 2. \_\_\_\_ substances are called contaminants or pollutants. 3. Substances \_\_\_\_ pollute our environment are classified quantitatively and qualitatively, etc. 4. \_\_\_\_ is evident \_\_\_\_ the weather is getting warmer. 5. They choose among processing methods the \_\_\_\_ that is most effective. 6. \_\_\_\_ is quite natural \_\_\_\_ people care about waste. 7. \_\_\_\_ wastes that are not readily degraded need processing.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. The leftover chemicals (throw) away. 2. We should be sure that we (drink) pure water. 3. Modern technology (give) us everything for comfortable life. 4. Industry (provide) people with jobs many centuries. 5. But what (be going) to do with the dumping sites? 6. What we (do) with wastes in future? 7. If we don't dispose of the wastes properly they (kill) trees, plants and animals 8. Everything (do) today to develop the best methods of wastes processing.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. We know scientists to study contaminants. 2. Sea fish was found to be high in toxic metals. 3. We need modern technology to live longer and more comfortable lives. 4. Sulfur dioxide being a heavy substance, it is seen on the ground after acid rain. 5. Wastes should be processed, nature being unable to get rid of them by selfpurification 6. Oil spilt in the Black Sea is known to have killed a lot of fish and birds. 7. Some man-made waste are also degraded by natural processes, many of the industrial wastes being not readily degraded. 8. Chemical plants make the things we need to survive.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. Chemicals are used to make such useful things as plastics pesticides, even paper and cloth. 2. Since chemicals can be harmful or toxic their use is limited. 3. As for lithosphere contamination, it occurs in natural way as well as through anthropogenic activity. 4. Once the product is made, the leftover chemicals are thrown away. 5. If not disposed of properly, the wastes can poison people. 6. Chemical plants provide jobs

for thousands of workers. 6. Some man-made waste are also processed, or degraded, by natural processes. 7. However, many of the wastes of an industrial society are not readily degraded. 8. Both animals and people suffer from pollution.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Забруднення навколишнього середовища – це поява в ньому нетипових біологічних чи хімічних субстанцій, а природа невзмозі позбавитися їх. 2. Кажуть, що надприродні субстанції впливають на екосистему і людину. 3. Відомо, що антропогенна діяльність завжди впливала на людину та природу. 4. Оскільки люди хочуть жити комфортно, вони розвивають техніку та технології. 5. Для того, щоб вони жили комфортно, створюються матеріали, ліки, будинки, ін. 6. Заводи потрібні, щоб люди працювали. 8. Будуючи нові заводи, підприємці будуть думати про екологію. 8. Багато треба зробити для забрудненої природи.

**Variant 6**

**I. Copy and translate the following text.**

**WASTES. TEXT 2**

The serious contaminant of the lithosphere is housing and communal economy, also military-industrial complex. Housing and communal economy realizes building of homes, roads and other communal objects, thus occupying fertile lands and forming a great quantity of building waste.

For centuries, man's nondegradable waste materials have generally been hauled, along with degradable waste, for disposal in open gullies or abandoned pits. This type of disposal has led to a deterioration of the local environment around the dumping sites because the wastes are attacked by insects, produce unpleasant smell, and sometimes catch fire.

The dumping sites often spoil the natural beauty of the landscape. In the USA the per capita production of solid wastes has increased steadily to a daily rate of over 10 pounds (4,5 kg) per person, including both industrial and residential wastes. This is equivalent to a national total of about 360 million tons per year.

Unlike chemical wastes, radioactive wastes gradually decay and thus become less dangerous with the passage of time. Some radioactive wastes contain more than one source of radioactivity. Among the most evident sources of radioactive wastes are uranium mines, spent fuel from nuclear reactors, fuel reprocessing operators, nuclear weapons plants, hospitals with nuclear medicine facilities, and the nuclear research institutions.

Radioactive wastes are classified as low level and high level, depending on the intensity of their radioactivity. Both types can be treated to reduce the volume of the

waste. High-level wastes present a much more serious disposal problem than do low-level wastes.

However, the quantity of material to be disposed is much smaller than the quantity of low-level wastes. Sites under consideration for permanent containment of high-level wastes include reservoirs in deep salt or rock formations, reservoirs under the ocean floor, the polar ice caps, and under other space.

### Vocabulary

spoil	псувати
solid wastes	тверді відходи
increase steadily	постійно зростати
daily rate	денний рівень, швидкість
residential wastes	побутові відходи
gradually decay	поступово розкладатися
less dangerous	менш небезпечний
mine	шахта
spent fuel	використане паливо
reprocessing	переробка
nuclear weapon plant	завод ядерної зброї
facility	засіб, умови
research	дослідження
low level	низький рівень
depending on	залежно від
treat, process	обробляти, переробляти
to reduce	зменшувати
volume	об'єм
dispose of	тут позбавлятися
under consideration	про які йде мова
permanent containment	постійне місце зберігання

### II. Write whether these statements are true or false and give the correct variant.

1. The serious contaminant of the lithosphere is smoking. 2. For centuries, only man's nondegradable waste were disposed of in open gullies or abandoned pits. 3. Wastes produce unpleasant smell, and always catch fire. 4. Unlike chemical wastes, radioactive wastes gradually decay. 5. Some radioactive wastes contain less than one source of radioactivity. 6. Among the most evident sources of radioactive wastes are uranium mines. 7. Radioactive wastes are classified depending on their radioactivity intensity. 8. High-level wastes present equally serious disposal problem as do low-level wastes.

### III. Match the synonyms.

- 1) place, sum, leftover, comprise, used, process, usage, lessen, amount, surface.
- 2) include, spent, waste, treat, diminish, site, area, disposal, total, quantity.

**IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. To have build homes, roads and other communal objects it was necessary to occupy furtille lands. 2. We see building homes have formed a great quantity of building waste. 3. Radioactive wastes are known to be low level and high level. 4. Both types can be treated to reduce the volume of the waste. 5. High-level wastes are believed to be a much more serious disposal problem than do low-level wastes. 6. However,

the quantity of material to be disposed is much smaller than the quantity of low-level wastes. 7. Sites to consider for permanent containment of high-level wastes include reservoirs in deep salt or rock formations. 8. To haul waste people are known to use pits.

**V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. Building \_\_\_\_ occupy furtille lands and form a great quantity of building waste. 2. It \_\_\_\_ be better to burn wastes in special bins. 3. Wastes \_\_\_\_ be disposed of in open gullies. 4. Did people think that they \_\_\_\_ live near the piles of wastes? 5. The scientists found out that radioactive wastes \_\_\_\_ decay without any treatment. 6. If wastes were not taken away we \_\_\_\_ be burried in them. 7. We \_\_\_\_ be especially careful with radioactive wastes. 8. All of us \_\_\_\_ like to never know the prblom of domestic wastes.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. \_\_\_\_ of contamints of the lithosphere is housing and communal economy. 2. There are many processing methods. \_\_\_\_ include incineration, biodergadation, chemical detoxification, etc. 3. Waste materials \_\_\_\_ can be processed for industry include paper and scrap. 4. \_\_\_\_ can be treated to reduce the volume of the waste. 5. \_\_\_\_ can say that nearby dumping sites are dangerous for health. 6. \_\_\_\_ is the dumping sites that spoil the natural beauty of the landscape. 7. Among the most dangerous industries are \_\_\_\_ processing radioactive substances and using them. 8. \_\_\_\_ is a much more serious problem how to dispose of high-level wastes.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. There was time when children (be) organized to clean school territories, streets and parks. 2. Nuclear weapon plants, hospitals (use) radioactive substances. 3. The moden factories (reprocess) food wastes immediately into some useful products. 4. They not (empty) waste containers regularly in many yards. 5. Unnecessary constructions already (spoil) the beauty of the city. 6. In the USA the per capita production of solid wastes (increase) steadily. 7. In the past radioactive wastes (bury) under the ocean floor, the polar ice caps, and under other space. 8. How radioactive waste (dispose of) in future?.



**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. The serious contaminant of the lithosphere being housing and communal economy, military-industrial complex endangers us even more. 2. We want them not to occupy fertile lands, parks and gardens. 3. We see builders form a great quantity of building waste. 4. This type of disposal is known to have led to a deterioration of the local environment. 5. The wastes producing unpleasant smell, the dumping sites are

unsanitary. 6. It is uncomfortable for the inhabitants to live nearby. 7. Radioactive wastes gradually decaying, they become less dangerous with time. 8. Some radioactive wastes are said to contain more than one source of radioactivity.

**IX. Translate the sentences paying attention to the introductory and connective words.**

1. As many industries deal with nuclear energy, there should be restriction to its use. 2. Radionuclides disintegrate slowly, that is why they contaminate environment for a long time. 3. Either other sources of energy must be used or atomic power stations built far from cities. 4. Since the territory of Ukraine is polluted enough with industrial wastes, dumping imported wastes should be forbidden. 5. Further research and proposals are needed as to the solid wastes disposal as well as spent fuel reprocessing. 6. Ecology is getting worth, therefore more attention is required to water purification. 7. If we don't protect our ecology the population will perish. 8. Both types of radioactive waste can be treated.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Можна багато сказати про забруднення середовища. 2. Житлове та комунальне господарство, розбудовуючи міста, залишає багато сміття. 3. Щоб очистити місто, необхідно вивезти купи твердих відходів. 4. Ділянки для поховання відходів виділяють неприємний запах, тому їх слід роташувати далеко від міст та селищ. 5. Кількість твердого мусору росте в містах, житлові та промислові території є їхніми джерелами. 6. Відомо, що радіоактивні відходи, розкладаючися, стають менш шкідливими. 7. Лікарні, дослідницькі інститути потребують ядерні речовини для використання у своїй діяльності. 8. Було повідомлено, що Україна не прийме хімічні відходи для поховання.

**Variant 7**

**I. Copy and translate the following text.**

**TREES IN DANGER**

Trees make natural landscape of the planet which is drastically endangered by the antropogenic processes, such as seashore shifts, forests cutting, creating large water reserves, etc.

Millions of years before animals lived on land, there were trees on the Earth. But today trees are in serious danger. In the 1970s, many of the elm trees in Europe were killed by Dutch elm disease. Now an even greater danger is threatening the forests and woods of Europe from northern Sweden to southern Italy. This new danger attacks all trees like oak, beech and birch as well as coniferous trees like fir tree and pine. First the branches turn yellow and brown. Then the trees' needles or leaves fall. The roots and the trunk shrink. Finally the trees die.

But what is killing the trees? Nobody knows exactly, but it is probably air pollution or acid rain. Factories, power stations emit tones of dust and smoke into the air. This smoke contains sulfur dioxide and nitrogen oxide. These substances mix with water vapour in the atmosphere and form sulfuric acid and nitric acid. Sunlight turns these acids into poisonous oxidants which fall in rain or snow onto the trees. What can be done about acid rain? Why doesn't government do anything to save the trees? Unfortunately, acid rain doesn't always fall on the countries which produce the pollution. The wind carries the poisonous substances from one country to another. Why should the people of the country pay to save another country's trees?

In other parts of the world trees are threatened by people, not by pollution. Trees are cut by people. The great rain forests of Asia and South America are being destroyed for firewood and building materials. Something must be done. Trees are important because they provide a home for many other plants, and animals too. They protect the flowers which grow on the forest floor. They provide food for insects, reptiles, birds and mammals. They protect the soil from the wind and the rain. Most important of all, the forests are the lung of the planet. Trees produce the oxygen which we breathe. If the trees die, we will too.

### **Vocabulary**

elm, fir tree	ялина
pine	сосна
to threaten	загрожувати
damage	руйнувати
fall	падати
oak	дуб
beech	бук
birch	береза
coniferous	смолисті, хвойні
power station	електростанція
emit	викидати
dust and smoke	пил та дим
vapour	пара
government	уряд
poisonous substance	отруйна речовина
insect	комаха

to provide

забезпечити

**II. Write whether these statements are true or false and give the correct variant.**

1. The industrial smoke does not contain sulfur dioxide and nitrogen oxide. 3. These substances mix with water vapour in the atmosphere and form soda. 4. Fortunately, acid rain always falls only on the countries which produce the pollution. 5. The coniferous forests of Asia and South America are being destroyed for firewood and building materials. 6. Trees produce the oxygen which we breathe. 7. They destroy the flowers which grow on the forest floor. 8. Most important of all, the forests are the natural resources of the planet.

**III. Match the synonyms.**

- 1) ground, illness, forest, reduce, contaminate, irradiate, ruin, furnish, generate, surface.  
2) supply, shorten, emit, pollute, disease, destroy, area, soil, wood, produce.

**IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. To save forests it is necessary to plant more trees. 2. The trees to preserve must be registered. 4. Why didn't governments do anything to have saved the trees? 3. Why should the people of the country pay to save another country's trees? 5. The great rain forests of Asia and South America are being destroyed for people to make firewood and building materials. 6. What is to be done? 7. Trees are necessary to provide home and food for many plants and animals. 8. For children to be caring about trees they should learn to grow them.

**V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. Trees \_\_\_\_ not have such diseases without anthropogenic activity. 2. The law wrote that nobody \_\_\_\_ destroy natural resources without punishment. 3. Something \_\_\_\_ be done about trees. 4. If the government \_\_\_\_ it could save many green zones in the city. 5. Everyone \_\_\_\_ like to see their cities green. 6. It is necessary that we \_\_\_\_ take part in Green Peace programs to save trees from cutting. 7. Without trees there \_\_\_\_ be no oxygen. 8. Everybody \_\_\_\_ defend the green belts of the cities.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. \_\_\_\_ is by people \_\_\_\_ trees are threatened. 2. Not only the tropical rain forests but also \_\_\_\_ in the North are being destroyed. 3. Trees are important and \_\_\_\_ is very well known. 4. They protect the flowers \_\_\_\_ grow on the forest floor. 5. \_\_\_\_ can be sure, if the trees die, we will die too. 6. Chemical substances may be dangerous. \_\_\_\_ from plants are safe. 7. We need healthy plants. \_\_\_\_ provide us with healthy food. 8. \_\_\_\_ is impossible to restore extinct species of plants and animals.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. But what (kill) the trees now? 2. Nobody (know) exactly, power stations emit tones of dust and smoke into the air. 3. This smoke (contain) sulfur dioxide and nitrogen oxide. 4. He not (care) about trees who (make) money on them. 5. Who can count how many trees already (kill)? 6. Trees (cut) by people. 7. Citizens (collect) signatures (підписи) under the letters to the government not to destroy green zones. 8. How people (protect) herbs, animals, insects in future?

**VIII. Copy and translate the following sentences. Define the infinitival and**

**participial complexes. .**

1. We know trees to produce oxygen. 2. Trees are said to protect water reserves. 3. Trees are known to protect the flowers which grow on the forest floor. 4. People cutting trees, natural landscape of the planet thus is drastically endangered. 5. Many of the elm trees in Europe are known to have been killed by Dutch elm disease. 6. This new danger attacking all trees like oak, beech and birch as well as coniferous trees, these trees die. 7. Insects, reptiles, birds and mammals need trees to provide food for them. 8. Sunlight turning sulfuric acid and nitric acid into poisonous oxidants, they fall in rain or snow onto the trees.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. The English language was imposed on the enslaved nations in Africa, India, Australia, New Zealand. 2. Since that time English has been widely spread. 3. We know that English is an international language today. 4. It is one of the languages of the United Nations Organization, Green Peace and other international organizations. 5. So it is important to know English. 6. English is studied both in schools and higher educational establishments. 7. At the English classes we can read, write as well as speak English. 8. I would like to visit Great Britain, that is why I learn my English.

**X. Translate the following sentences into English using the Infinitive and Participial wherever possible.**

1. Дерева, як відомо, завжди були джерелом кисню, їжі і захистом численних рослин, пташок, комах та людини. 2. Колись (once upon a time) на Землі росло багато дерев, люди тоді ще не мали технологій, щоб масово знищувати ліси. 3. Цивілізація принесла загибель деревам, люди знищують їх. 4. Дерева вирубують, щоб будувати будинки та робити поля. 5. Необхідні спеціальні закони, щоб захистити дерева. 6. Цивілізація принесла також хвороби дерев, дерева висихають і вмирають. 7. Доповідають, що дерева зараз гинуть від кислотних дощів, від отруйного диму заводів. 8. Дерева дуже потрібні нам для того, щоб існувала жива природа.

## Variant 8

### I. Copy and translate the following text.

#### WHY SAVE TROPICAL RAIN FOREST?

Tropical rain forests – those steamy jungles shown in movies, where it's always hot and it rains every day – are in trouble, and people around the world are becoming concerned. The rock star Sting has organized concerts to save the Brazilian rain forests, and dozens of environmental groups have raised millions of dollars to save tropical rain forests and send experts to help. Yet there are many people who say, "Why save rain

forests? Aren't people more important than trees?"

Located in a belt of 33 countries, mostly around the equator, more than half of the tropical rain forests have disappeared in the past fifty years. Some are actually turning into deserts. Cutting out Amazon forests is connected with building roads, towns, development of natural resources and arranging agricultural plantations. With this forest disappearing at a rate of 100 acres per minute nearly everyone in the world has something to gain from saving it. For example, scientists have learned that over 1300 rain forests plants in the Amazon area have medicinal value. But the value of tropical rain forests goes beyond medicine. The tropical forests concentrate about 3 mln species of flora and fauna, in particular, 80% insects and 65% plants. These forests have a critical impact on global weather patterns. Their vegetation absorbs enormous quantities of solar energy, thus affecting wind and rainfall patterns around the world. The forests play an important role in cleaning the Earth atmosphere.

This vegetation contains huge amount of carbon dioxide. As the forests disappear, the carbon dioxide is released into the air and contributes to "global warming" – what we know as the "greenhouse effect". Rain forests also help to prevent soil erosion in areas that could be damaged by floods and wind, and they also prevent pollution.

Income from mining, export crops, timber, and cattle can be calculated in dollars, but the benefits of the forests as a protector of the land cannot.

#### Vocabulary

to save rain forests	спастися дощові ліси
steam	пара
movie	кіно
in trouble	в небезпеці
become concerned	стурбовані
send	посилати
located in a belt	розташований у поясі
disappear	зникати
turn into deserts	перетворюватися на пустелі
at a rate	зі швидкістю
gain	вигравати
medicinal value	медична цінність

beyond	поза
impact	вплив
weather patterns	погода
vegetation	рослинність
huge amount	величезна кількість
contribute	привносити
global warming	глобальне потепління
prevent soil erosion	запобігати ерозії ґрунту
damaged by floods	пошкоджена припливами
income from mining	прибуток від гірничої промисловості
timber	деревина
cattle	худоба

## **II. Write whether these statements are true or false and give the correct variant.**

1. Millions of dollars are raised to develop tropical rain forests. 2. Some rain forests are actually turning into deserts. 3. Few rain forests plants in the Amazon have medicinal value. 3. Plants are arranged in place of the forests. 5. These forests have no impact on global weather patterns. 6. Cutting out rain forests is dangerous. 7. Rain forests create soil erosion. 8. Rain forests are protecting our atmosphere.

## **III. Match the synonyms.**

- 1) wood, care, affect, plants, amount, avoid, territory, harvest, count, gain.
- 2) calculate, prevent, crop, win, concern, impact, forest, vegetation, quantity, area.

## **IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. The city authorities should help to save forests. 2. For us to develop civilization we should take an active part in trees protection. 3. Why to save rain forests? 4. Nearly everyone in the world has something to gain from saving the forests. 5. Rain forests also help to prevent soil erosion. 6. To have saved Darnitsa elm trees filters were set on the plants' chimneys. 7. To be protected from erosion fields should be surrounded with forests. 8. Rain forests are proved to prevent soil erosion and pollution.

## **V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. We save rain forests for the sake of the coming generations. 2. All of us \_\_\_\_ like to see the tropic forests. 3. People \_\_\_\_ use the sun energy not to cut forests for fuel. 4. The environmental groups announced that they \_\_\_\_ protect rain forests. 5. Natural resources are used as people \_\_\_\_\_. 6. We \_\_\_\_ not forget about the danger of "global warming". 7. We \_\_\_\_ not use those rare herbs in medicine if there were no tropical forests. 8. Fighting to protect rain forests people knew that they \_\_\_\_ save our atmosphere.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. Tropical rain forests – \_\_\_\_ steamy jungles shown in movies, – are in trouble.
2. \_\_\_\_ is the ecologists, who care about tropical rain forests.
3. \_\_\_\_ is one of the urgent problems at present.
4. \_\_\_\_ who say, "Why save rain forests?" are ignorant of the problem.
5. The tropical rain forests \_\_\_\_ occupied large territories in North America have disappeared in the past fifty years.
6. \_\_\_\_ should think about the unique plants and animals in the forests.
7. \_\_\_\_ will be impossible to restore.
8. \_\_\_\_ forests have a critical impact on global weather patterns.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. You (concern) with the future of the rain forests?
2. Remember, how many elm trees people (cut) each New Year.
3. Forest already (cut) on large territories of Ukraine.
4. Today we not (need) wood to build houses.
5. If we are going to reduce our forest areas, we (rob) ourselves.
6. Millionaires (make) big money on developing tropical areas.
7. Nature (kill) by us.
8. Only common effort (save) our ozone lungs.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. The tropical rain forests are known to be those where it's always hot and it rains every day.
2. These being in trouble, people around the world are becoming concerned.
3. The rock star Sting is known to have organized concerts to save the Brazilian rain forests.
4. Dozens of environmental groups are reported to have raised millions of dollars to save tropical rain forests.
5. Environmental groups send experts to help to save rain forests.
6. With this forest disappearing at a rate of 100 acres per minute nearly everyone in the world has something to gain from saving it.
7. Scientists prove the rain forests' plants in the Amazon to have medicinal value.
8. The tropical forests are necessary for about 3 mln species of flora and fauna to survive.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. With many factors in view, wood must be economized and replaced.
2. For example, scientists have learned that over 1300 rain forests plants in the Amazon have medicinal value.
3. But the value of tropical rain forests goes beyond medicine.
4. The tropical forests concentrate about 3 mln species of flora as well as fauna, in particular, 80% insects and 65% plants.
5. Their vegetation absorbs enormous quantities of solar energy, thus affecting wind and rainfall patterns around the world.
6. As the forests disappear, so the carbon dioxide is released into the air.
7. The carbon dioxide contributes to "global warming" – what we know as the "greenhouse effect".
8. Rain forests also help to prevent soil erosion in areas that could be damaged by floods and wind.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Ліси, як відомо, дають нам кисень. 2. Тропічні ліси зараз у біді, і люди в усьому світі стурбовані їхнім майбутнім. 3. Тропічні ліси розташовані навколо екватора, і їхня флора та фауна найбагатіші в світі. 4. Вважають, що тропічні дощові ліси захищають Землю від потепління. 4. Коли знищують ліси, руйнують озоновий шар Землі. 6. Оскільки багато рослин дощових лісів мають медичну цінність, треба зберегти ліси. 7. Щоб спасти ці ліси, необхідно заборонити їхнє вирубування. 8. Важливо розповсюджувати екологічні знання, щоб люди піклувалися про природу.

**Variant 9**

**I. Copy and translate the following text.**

**GLOBAL WARMING**

The warming of the Earth, caused by too much carbon dioxide in the atmosphere, is called the greenhouse effect. Burning the large quantities of fossil fuels increases the amount of carbon dioxide in the air. Cutting down trees adds to the problem, as there are fewer plants to use up the carbon dioxide. Light energy from the sun gets through the Earth, but once it has heated up, carbon dioxide stops the heat energy from escaping, and the Earth warms up. Like the glass panes in a greenhouse, gases in the Earth's atmosphere permit the sun radiation to heat the earth but do not permit the energy radiated back out from the earth to escape into space. These gases, primarily carbon dioxide, methane, nitrous oxide, and water vapor, are responsible for maintaining a global temperature acceptable to life.

Global warming could cause dramatic changes. Atmospheric scientists predict that temperature will continue to rise by between 1° and 3,5° C over the 21<sup>st</sup> century. The consequences of such a modest increase in temperature may be devastating. Sea level will rise, many plant and animal species will probably be driven into extinction, agricultural regions will be disrupted, and the frequency of severe hurricanes and droughts is likely to increase.

The pesticide chemicals get into the “food chain” through vegetables. Insects eat the pesticide. Birds eat the insects. Big birds eat little birds. At the top of the food chain you find birds like Peregrine Falcon. Now the Falcon is quite rare.

Even more drastic problems encounter our medicine with people on the territories poisoned with spilt chemicals. Crops and cattle in such areas accumulate toxins that poison food produced from them. Game and fish, flowers and forest lugzuries – fruits, berries and mushrooms – are all charged with danger.

The car is now the world's number one polluter. From the beginning to the end of its life, one car produces an enormous quantity of pollution. The production of one car results in 1,500 kilos of waste, and 75 million meters of polluted air.



## Vocabulary

in addition	в додаток
contribute to	робити внесок у
global warming	глобальне потепління
devastation	знищення
accident	нещасний випадок
cause	спричиняти
nuclear power station	ядерна електростанція
scattered	розкиданий
contamination	забруднення
reasonable solution	розумне рішення
affect human health	впливати на здоров'я людей

fossil fuel	випокне паливо
extinction	знищення
disrupt	зривати
frequency	частотність
prohibit	заборонити
Peregrine Falcon	піренейський сокіл
to recover	відновлювати
urban areas	міські райони

### II. Write whether these statements are true or false and give the correct variant.

1. Carbon dioxide permit energy to escape into space. 2. There are fewer plants to use up oxygen. 3. Temperature on the Earth will fall. 4. The frequency of severe hurricanes and droughts is likely to decrease. 5. Sea level will not fall. 6. Both big and little birds may be extinct. 7. Fish is not so much polluted. 8. Car does not pollute our atmosphere.

### III. Match the synonyms.

1) quantity, increase, gather, heating, allow, little, poison, forbid, disaster, devastation,  
2) permit, accident, prohibit, extinction, accumulate, intoxicate, grow, few, amount, warming.

### IV. Copy and translate the following sentences. Define the form and function of the Infinitive.

1. There are fewer plants to use up the carbon dioxide.gases in the Earth's atmosphere.  
2. The gases permit the sun radiation to heat the earth. 3. Atmospheric scientists predict temperature to rise by between 1° and 3,5° C over the 21<sup>st</sup> century. 4. The temperature rise will influence many rare species. 5. Global warming could cause dramatic changes. 6. The consequences of such a modest increase in temperature may be devastating. 7. These gases are capable to maintain a global temperature acceptable to life. 8. Pesticide chemicals are known to get into the "food chain" through vegetables.

### V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.

1. \_\_\_\_ temperature increase, sea level will rise. 2. \_\_\_\_ you like to see birds and animals disappearing? 3. It was reported that because of the hurricanes the agricultural regions \_\_\_\_ be disrupted. 4. The pesticide chemicals \_\_\_\_ not be used for them not to poison birds and animals. 5. \_\_\_\_ sea level will rise agricultural regions will be disrupted. 6. There have always been evident that cars \_\_\_\_ be limited in cities. 7. People \_\_\_\_ have less problems if they used natural plant protectors. 8. We were warned long ago that the global warming \_\_\_\_ turn into catastrophe.

**VI. Fill in the gaps with the pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. \_\_\_\_ can say \_\_\_\_ clouds cover has increased in many parts of the Earth. 2. \_\_\_\_

clouds accumulate with evaporation from increased people's activity. 3. There is a hypothesis \_\_\_\_ more frequent volcanic eruptions depend on rising temperature. 4. \_\_\_\_ is likely that the frequency of severe hurricanes and droughts will increase. 5. \_\_\_\_ big birds that eat little birds get poisoned. 6. The car is now the world's number \_\_\_\_ polluter. 7. \_\_\_\_ car produces an enormous quantity of pollution. 8. \_\_\_\_'s production results in 1,500 kilos of waste, and 75 million meters of polluted air.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. The warming of the Earth (call) the greenhouse effect. 2. Light energy from the sun (get) constantly through the Earth. 3. Once the sun energy (heat up), carbon dioxide stops the heat energy from escaping. 4. As a result the Earth (warms up). 5. Atmospheric scientists predict that temperature (continue) to rise by between 1° and 3,5° C over the 21<sup>st</sup> century. 6. The ice on the North Pole (melt) and the habitat of the Arctic Continent fauna (be) destroyed. 7. Burning the large quantities of fossil fuels already (increase) the amount of carbon dioxide in the air. 8. Game and fish, flowers — all (charged) with danger.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. People having burnt the large quantities of fossil fuels, it increased the amount of carbon dioxide in the air. 2. The natural green house effect being essential for the life on the Earth, it maintains the normal temperature. 3. The technologists are known to be responsible for economizing raw materials. 4. It is necessary for us to reduce production wastes. 5. The ocean level rising many dry lands may be flooded. 6. The green house effect being a natural process it is most important not to enhance (stimulate) the phenomenon. 7. The sun energy seems to be the best and purest source of energy. 8. We need pesticide chemicals to protect the crops from damage by insects and diseases.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. Once the Earth has heated up, carbon dioxide stops the heat energy from escaping, as a result the Earth warms up. 2. Though light energy from the sun is radiated back out from the earth, gases in the Earth's atmosphere do not permit the heat to escape into space. 3. Because we cut down trees there are fewer plants to use up the carbon dioxide. 4. As sea level will rise, many plant and animal species will probably be driven into extinction. 5. At the top of the food chain you find birds like Peregrine Falcon. 6. The consequences of such a modest increase in temperature may be devastating. 7. Both plant and animal species will be driven into extinction. 8. The frequency of severe hurricanes as well as droughts is likely to increase.

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Відомо, що потепління на землі викликане підвищенням концентрації

двоокису вуглецю в повітрі. 2. Оскільки люди вирубують дерева, все менше дерев споживають двоокис вуглецю. 3. Спалювати викопне паливо значить збільшувати кількість двоокису вуглецю в атмосфері. 4. Оскільки гази не дозволяють сонячній енергії покидати Землю, температура на Землі підвищується. 5. Кажуть, що підвищення температури призведе до катастрофічних змін. 6. Ніхто не заперечував, що пестициди будуть шкодити здоров'ю людей. 7. Слід сказати, що тема вивчення теплового ефекту дуже актуальна. 8. Люди спостерігають, що фрукти, овочі на забруднених територіях отруйні.

**Variant 10**

**I. Copy and translate the following text.**

**ACID RAIN**

Acid rain forms when certain chemicals are absorbed into the earth's atmosphere and fall to the ground in rain, snow, or fog. Dry acidic particles also fall to earth, impacting the land much as acid rain does. The primary source of acid rain is the burning of coal and oil in electrical power plants, industrial boilers, and internal combustion engines such as those in automobiles. Fossil fuels such as coal and oil produce sulfur dioxide and oxides of nitrogen when they are burned. In the atmosphere these react with ozone and other compounds forming acids, specifically sulfuric and nitric acids — the acids in acid rain.

There is clear evidence that acid rain causes damage to living creatures in lakes and streams, particularly in waters where the natural pH or degree of acidity is already high. Here the ability to neutralize the high acidity of added acid rain is marginal. Even small changes in the balance between acids and bases in stream and lake water can cause large changes in pH levels. Many kinds of fish and other aquatic organisms lose the ability to absorb and retain sodium (salt) in waters with a low pH. In Switzerland and Great Britain forests dry out because of acid rains. In Ukraine the area of acid soils grew by 33% for the last 35 years. Acid soils require liming that increases the cost of agricultural products.

Emissions of sulfur dioxide and nitrogen oxides, the building blocks of acid rain, can be reduced by switching to low-sulfur coal and oil supplies. Sulfur can be cleaned physically or chemically from coal and oil before burning. In addition, scrubbers can be used to remove acid-rain-causing emissions from gases after combustion. Emissions can also be controlled by lowering the temperature at which fuels are burned or by restricting the amount of oxygen used while they are burning. One of the best ways of restricting offending emissions is by simply conserving energy. Energy-efficient light bulbs and refrigerators, for example, reduce demand for electricity. Reducing energy consumption is the cheapest and most efficient way to reduce acid rain and is far better than any of the technical solutions to this problem.

### Vocabulary

impact the land	впливати на землю
coal	вугілля
internal combustion engine	двигун внутрішнього згоряння
clear evidence	явне свідощтво
causes damage	спричиняти шкоду
creature	створіння
degree of acidity	ступінь кислотності
lose the ability	втрачати здатність
absorb and retain	всотувати та утримувати
sodium	натрій
switch to supplies	використовувати носії
clean	чистий
scrubber	шкребниця
remove emissions	видаляти викиди
restrict the amount	обмежувати кількість
offending	абразивний
light bulb	електролампа
reduce demand for	зменшувати попит
consumption	споживання
cheap	дешевий
solutions to this problem	вирішення проблеми

### II. Write whether these statements are true or false and give the correct variant.

1. Air pollution is created by certain chemicals. 2. The primary source of acid rain is the burning of fossil fuel. 3. Burning industrial waste forms phosphoric acid in the air. 4. It is possible to neutralize the high acidity of the air. 5. Many fishes and other aquatic organisms lose the ability to remove chemicals in waters with a high pH. 6. Sulfur can be cleaned physically or chemically from coal and oil before burning. 7. Offending emission can be restricted. 8. Economizing energy will reduce acid rains.

### III. Match the synonyms.

- 1) take in, ground, affect, purify, restrict, apply, sour, irradiate, quantity, burning.
- 2) clean, limit, emit, acid, combustion, impact, use, amount, absorb, soil.

**IV. Copy and translate the following sentences. Define the form and function of the Infinitive.**

1. Emissions of sulfur dioxide and nitrogen oxides can be reduced. 2. There are many ways to reduce acid rain. 3. To absorb and retain sodium (salt) aquatic organisms should live in waters with a normal pH. 4. Sulfur can be cleaned physically or chemically from coal and oil before burning. 5. In addition, scrubbers can be used to remove acid-rain-causing emissions from gases after combustion. 6. Emissions can also be controlled by lowering the temperature at which fuels are burned. 7. To report the ecological problems on mass media is important. 8. It is necessary to restrict the amount of oxygen used while fuels are burning.

**V. Copy the following sentences using the verbs should, would and translate them into Ukrainian.**

1. The ecologists predicted that the area of acid soils \_\_\_\_ grow. 2. Doctors warned that acid soils \_\_\_\_ increase cancer in population. 3. Acid soils \_\_\_\_ be restored and revived. 4. Why \_\_\_\_ people die of cancer because of unclever technologists? 5. \_\_\_\_ you like to use pure energy? 6. You \_\_\_\_ be very careful with gas stoves. 7. Civilized people don't waste energy as they \_\_\_\_\_. 8. Sodium reduces degree of acidity.

**VI. Fill in the gaps with the relative pronouns it, this, that, these, those, one. Translate the sentences into Ukrainian.**

1. Internal combustion engines such as \_\_\_\_ in automobiles also contribute to acid rain. 2. Burning fossil fuels produce sulfur dioxide and oxides of nitrogen. 3. In the atmosphere \_\_\_\_ react with ozone and other compounds forming acids. 4. There is clear evidence \_\_\_\_ acid rain causes damage to living creatures. 5. Acid soils grow infertile and \_\_\_\_ reduces food supplies. 6. \_\_\_\_ can say that the ability to neutralize the high acidity of added acid rain is marginal. 7. \_\_\_\_ is necessary to restrict the offending emission. 8. \_\_\_\_ of the best ways of restricting offending emissions is by simply conserving energy.

**VII. Put the verbs in brackets in the correct tense form. Write down and translate the sentences.**

1. Sulfur dioxide (fall) down on the ground as yellow precipitate. 2. In Ukraine the area of acid soils (grow) by 33% for the last 35 years. 3. Acid rain already (cause) much damage. 4. Drinking water (need) filtering and softening. 5. In some areas the degree of soil acidity (rise) dramatically. 6. We (conserve) energy when using electrical devices. 7. I wonder what is the pH of water we (drink) all our life. 8. We (not have) high crops if we don't restore the alkalinity (лужність) of the acid soils.

**VIII. Copy and translate the following sentences. Define the infinitival and participial complexes.**

1. Certain chemicals being absorbed into the earth's atmosphere, they fall to the ground in rain, snow, or fog. 2. Dry acidic particles falling to earth, they impact the land much as acid rain does. 3. The primary source of acid rain is known to be the burning of coal and oil in electrical power plants, industrial boilers etc. 4. Acid rain is evident to causes damage to living creatures. 5. Sulfur dioxide and nitrogen oxides being the building blocks of acid rain, they should be neutralized in wastes. 6. Reducing energy consumption is the cheapest and most efficient way to reduce acid rain, this being the best solutions to this problem. 7. We know energy-efficient light bulbs and refrigerators to reduce demand for electricity. 8. For people to economize energy special laws should be developed.

**IX. Copy and translate the sentences paying attention to the introductory and connective words.**

1. Because sulfuric acid is burning leaves trees are killed by acid rain. 2. In Switzerland and Great Britain forests dry out because of acid rains. 3. Acid rain causes damage to living creatures in lakes as well as in streams. 4. Both fish and other aquatic

organisms lose the ability to absorb and retain sodium (salt) in waters with a low pH. 5. Though reducing energy consumption is the cheapest and most efficient way to reduce acid rain many people do not care yet. 6. Since pH in lakes and streams grew low, fish disappeared there. 7. Neither fish nor crabs can live in acid waters. 8. Acid soils require liming that increases the cost of agricultural products

**X. Translate the following sentences into English using the Infinitive and Participle wherever possible.**

1. Коли хімічні речовини всотуються земною атмосферою, утворюються кислотні дощі. 2. Давно були свідoctва (evidence) того, що кислотні дощі знищують природу. 3. Коли ступінь кислотності води знижується, риба втрачає здатність всотувати та утримувати натрій – сіль. 4. Відомо, що в Швеції і Великобританії дерева всихають з-а кислотних дощів. 5. Для зниження кислотності ґрунту його слід вапнувати. 6. Зменшити кислотні дощі можна економією енергії. 7. Вважають, що економія енергії зменшить кислотність атмосфери. 8. Треба, щоб люди контролювали викиди забруднюючих речовин.

## **TEST № 4**

### **Variant 1**

#### **I. Copy and translate the following text.**

#### **SOCIO-ECOLOGICAL PROBLEMS**

Of all the species, humans have the greatest effect on the environment. Some of our activities make harm to the world's habitats (a place where certain organisms live). The balance of nature is upset by activities such as overfishing, overhunting, and cutting down too many trees. We also damage the environment by polluting the land, the air and oceans, rivers and lakes.

Fossil fuels are in limited supply; in addition, when burned they contribute to global warming, air pollution, and acid rain. Nuclear energy as an alternative is opposed by many because of the massive devastation an accident can cause. The accident at the Chernobyl's nuclear power station in 1986 scattered radioactive contamination over a large part of Europe.

One reasonable solution is to combine conservation strategies with the increased use of solar energy. The price of solar energy relatively to traditional fuels has been dropping steadily. Although it is desirable to have a wider range of energy options, other alternative sources of power (such as wind, geothermal, or hydroelectric) are not likely to provide large-scale solutions in the nearest future.

One of the causes of over-activity is the big number of people in the world. This number is rising. Human population growth may be seen to be a root of all of the world's environmental problems. Increasingly large number of people is being added to the world every day. As the number of people increases, more pollution is generated, more habitats are destroyed, and more natural resources are used up. Even if new technological advances were able to cut in half environmental impact that each person had, as soon as the world's

pollution size doubled, the earth would be no better off than before. Scientists predict that the population will continue to rise into the future to 19 billion people in 2200. Nevertheless the problem of overpopulation may go under the governmental control. The birth of two children into each family would reproduce the parents only. Taking into consideration that some families have but an only child the controlled birth rate will result in the sharp decline of population within a few generations.

### **Vocabulary**

habitats	місце проживання
upset	порушити
cause	спричиняти
contribute to	робити внесок у
global warming	глобальне потепління
devastation	знищення
accident	нещасний випадок
nuclear power station	ядерна електростанція
scattered	розкиданий
contamination	забруднення
reasonable solution	розумне рішення
affect human health	впливати на здоров'я людей

### **II. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) upset, habitat, damage, devastation, pollute.
- 2) natural place of growth; ruining, making desolate; make dirty; tip over, overturn; do harm or injury that causes loss of value.

### **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. The balance of nature is upset by activities such as overfishing, overhunting, and cutting down too many trees. 2. We also damage the environment by polluting the land, the air and water. 3. Having burned the large quantities of fossil fuels increased the amount of carbon dioxide in the air. 5. Being devastative is the main drawback of the nuclear energy. 6. People never thought about the danger of overpopulating the Earth. 7. Many men find pleasure in hunting and fishing. 8. Families are praised for having many children.

### **V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. To influence environment is to change nature. 2. To have effected the environment for ages made humans real destroyers. 3. Some scientists suggest to limit or stabilize technical and economical progress now. 4. It may be necessary for us to rebuild the economy on the basis of the closed production cycles. 5. We should choose the best



methods not to spoil nature. 6. To have solved the problems of overfishing many laws were issued. 7. For our planet not to be overpopulated requires more demography control. 8. The scientists predict that the population will continue to rise in future.

#### **VI. Copy and translate the conditional sentences.**

1. If the birth rate were controlled the Earth would not be overpopulated. 2. The ecologists suggest that solar energy should be used. 3. Even if new technological advances were cut the earth would be no better off than before. 4. If natural resources are used rationally the nature will not be much damaged. 5. It is desirable that we should introduce more scientific achievements. 6. If the Earth had not been polluted before, people would live longer. 7. I wish you were happy! 8. May success attend you!

#### **VII. Copy the following sentences. Ask questions to the words in bold.**

1. **Planned industry and nature protection** will help to overcome negative impact of the technical progress. 2. The number of people increased **each century**. 3. People **are being impoverished** by large families. 4. Labour **has been separated** historically. 5. Energy from the sun **gets** cheaper. 6. The Chicago scientists have shown **the competition of the social groups in the American city**. 7. The problem of overpopulation **may go** under the governmental control. 8. The birth of two children into each family would reproduce **the parents only**.

#### **VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. As the object of social ecology is man, its aim is to explain some social phenomena. 2. In particular, how to explain crime and segregation in cities? 3. If we upset the balance of nature we ruin our health. 4. As we damage the environment by polluting we create conditions for diseases growth. 5. One of the causes of over-activity is the big number of people in the world, and this number is rising. 6. It is very important for all that socioecology should be developed. 7. A diploma is necessary if you want to hold a position of an engineer-technologist. 8. Everyone knows that Charles Darwin has developed the theory of the animals' and plants' species origin.

#### **IX. Fill in the gaps with prepositions and conjunctions.**

1. Of all the species, humans have the greatest effect \_\_\_\_ the environment. 2. Some \_\_\_\_ our activities do harm \_\_\_\_ the world's habitats (a place where certain organisms live). 3. The balance of nature is upset \_\_\_\_ activities such as overfishing, overhunting, and cutting down too many trees. 5. \_\_\_\_ the number of people increases, more pollution is generated, more habitats are destroyed, and more natural resources are used up. 6. Even \_\_\_\_ new technological advances were able to cut in half environmental impact \_\_\_\_ each person had, \_\_\_\_ the world's pollution size doubled, the earth would be no better off than before. 7. Scientists predict \_\_\_\_ the population will continue to rise into the future \_\_\_\_ 19 billion people in 2200. 8. Cutting down trees adds \_\_\_\_ the problem.

## **X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Природа знищується такою людською активністю, як надмірне рибальство, полювання, вирубування дерев. 2. Коли викопне паливо спалюється, це сприяє глобальному потеплішанню. 3. Ядерне паливо є альтернативою, але воно небезпечне, тому що дуже нищівне. 4. Якби кожний за своє життя посадив декілька дерев, він би допоміг природі. 3. Для нас бажано використовувати чисту і дешеву енергію. 4. Кажуть, що чисельність населення зростає в майбутньому. 5. Кількість людей на Землі зростає, і це причина всіх екологічних проблем. 7. Із збільшенням населення буде зруйновано більше природних середовищ. 8. Якби народженість була контрольована, Земля не була б перенаселена

### **Variant 2**

#### **I. Copy and translate the following text.**

#### **WHAT CAN WE DO?**

The state of the Earth affects all of us. Each person can help by putting the world first when making every day choices.

Recycling glass, metals, plastics, and paper reuses natural resources. Buying products with less packaging also saves resources. Energy can be saved by insulating houses and by turning off lights when they are not needed. Using bicycles or mass transportation instead of cars saves energy and reduces exhaust emissions. Electric transport – tramways, trolley-buses, metro proved long ago to be the best transport that satisfies all our needs as for reliability, speed, and clean air. So these kinds of transport are believed to be the most prospective and are being developed at fast rates. Renewable energy could be used more; it has added benefit of not creating waste products that add to pollution.

Pollution can be reduced by controlling the use of pesticides and fertilizers in farming. Insect repelling plants – natural as well as transgenic serve a good service to a man in saving and increasing crops, fruits and vegetables harvests. The dumping of radioactive waste, chemicals, and sewage into the oceans can also be prevented.

Swamps and lakes irrigation for human purposes dry out the soil, destroying water balance. On the other hand the arable lands are not watered enough with the result of the crops perishing from droughts. Developing watering systems would help both the soil and people depending on it.

If the human population keeps growing, the Earth will not be able to feed everyone unless wild life and their habitats are sacrificed. If population growth were to slow down, however, habitat destruction, including deforestation, might be halted. Careful planning could prevent urban areas from overrunning natural habitats. Individuals can help endangered species in general by following all the guidelines above. They can also help by

not buying specific items made from endangered species. These include decorative coral, which is gathered by dynamiting coral reefs, and ivory, which comes from elephants killed for their tusks.

### **Vocabulary**

state	стан
affect	впливати
put the world first	ставити світ на перше місце
recycling	переробка
insulate	ізолювати
exhaust emissions	вихлопи
wildlife	дика природа
sacrifice	жертвувати
slow down	уповільнювати
halt deforestation	зупинити знищення лісів
careful	обережний
urban area	міська територія
overrun	переповнювати
natural habitat	природне середовище
the guidelines above	названі вище вказівки
item	річ
ivory	слонова кістка
elephant tusks	бивні слона

### **II. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) packaging, recycling, exhaust, save, prevent.
- 2) method used in manufacture or industry; stop or hinder; make or keep safe; product covering; make empty and leave, use up completely.

### **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Glass, metals, plastics, and paper being recycled reuses natural resources.
2. Having bought products with less packaging also saved resources.
3. Energy can be saved by insulating houses and by turning off lights when they are not needed.
4. Using bicycles or mass transportation instead of cars saves energy and reduces exhaust emissions.
5. No waste products being created is an added benefit of renewable energy sources.
6. If the human population keeps growing, the Earth will not be able to feed everyone.
7. Careful planning could prevent natural habitats from being overrun.
8. Having dynamited coral reefs destroyed the natural habitat of sea fauna.

### **V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. To save energy helps our economy.
2. To have turned off light saved energy.
3. To go on foot is healthy and economical.
4. To have created waste products adds to pollution.
5. To save and increase crops, insect-repellents are utilized.
6. To be fed requires population control.
7. To slow down the population growth might halt habitat destruction.
8. To manage our country reasonably means to provide comfortable life for all.

#### **VI. Copy and translate the conditional sentences.**

1. If we could have only ecologically pure transport!
2. Should the population growth slow down there will be no danger of overpopulation.
3. We could use other methods to repel insects.
4. We would have had no droughts if we had created watering systems everywhere.
5. It is necessary that children should know more about their ecology.
6. Developing watering systems would help both the soil and people depending on it.
7. If people don't limit the birth rate, wild life and their habitats will be sacrificed.
9. We wish we could have wasteless production!

#### **VII. Copy the sentences. Ask questions to the words in bold.**

1. The state of the Earth **affects** all of us.
2. Each person can help **by putting the world first**.
3. Natural wealths **are being exploited** unreasonably.
4. Insect repelling plants **will serve** a good service to a man.
5. People believe that planned economy will limit water and fuels wasting.
6. If social conscience (свідомість) keep growing we will create a planned and balanced society.
7. Careful planning could prevent urban areas from **overrunning natural habitats**.
8. Decorative coral is gathered by **dynamiting coral reefs**.

#### **VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Because most of people want to live in towns, they are overpopulated.
2. Electric transport is the best transport, so we use it mostly.
3. People believe that these kinds of transport are the most prospective.
4. People want that electric transport should be developed.
5. It is considered that wild life could be saved only by strict control.
6. Scientists believe that people will create a well-planned society.
7. Insect repelling plants may be used so that farmers could save crops.
8. It is expected that overpopulation will bring hunger.

#### **IX. Fill in the gaps with prepositions and conjunctions.**

1. The state \_\_\_\_ the Earth affects all of us.
2. Buying products \_\_\_\_ less packaging also saves resources.
3. Energy can be saved \_\_\_\_ turning off lights when they are not needed.
4. The dumping of radioactive waste, chemicals, and sewage \_\_\_\_ the oceans can also be prevented.
5. Swamps and lakes irrigation \_\_\_\_ human purposes dry out the soil, destroying water balance.
6. On the other hand the arable lands are not watered enough \_\_\_\_ the result of the crops perishing \_\_\_\_ droughts.
7. Developing watering systems would help \_\_\_\_ the soil and people depending on it.
8. \_\_\_\_ population growth were to slow down, however, habitat destruction, including deforestation, might be halted.

#### **X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Якщо населення буде зростати надалі, Земля не зможе нагодувати усіх.
2. Якщо б народженість була поставлена під контроль, перенаселення не було б.
3. Переробка упаковки необхідна для того, щоб було менше відходів.
4. Те, що орна земля не обводнюється, призводить (results in) до загибелі врожаю.
5. Для збереження та збільшення врожаїв треба замінити пестициди рослинами, що відганяють комах.
6. Повідомляють, що деякі проекти руйнують баланс в природі.
7. Якби всі були економними, то вимикали б світло вчасно.
8. Відомо, що електричний транспорт – найчистіший вид транспорту.

### **Variant 3**

#### **I. Copy and translate the following text.**

#### **WASTEWATER TREATMENT**

Modern wastewater treatment is generally divided into three phases: primary, secondary, and tertiary. Each of these steps produces sludge, which can be disposed of or used for various purposes.

Primary treatment, or plain sedimentation removes only the settleable solids from wastewaters. A modern system for primary treatment entails collecting the wastewaters, conveying them to a central point for treatment, using screens to remove large objects and grit chambers to remove grit, and using primary sedimentation tanks to remove the suspended settleable solids.

There are two basic methods used in modern secondary treatment: the trickling filter and the activated-sludge process. In a trickling filter the wastewater is applied to the filter through rotary distributors and it is allowed to trickle down over large stone or plastic beds that are covered with microorganisms. The beds are not submerged, thus air can reach the organisms at all times. In the activated-sludge process, heavy concentrations of aerobic microorganisms, called biological floc or activated sludge, are suspended in the liquid by agitation that is provided by air bubbling into the tank or by mechanical aerators, final sedimentation tanks are needed to separate the material from the flowing liquid. Most of the biologically active sludge is then returned to the aeration tank to treat the incoming water.

Tertiary treatment is primarily intended to further clean or polish secondary treatment plant effluents by removing additional suspended material and lowering the BOD (biological oxygen demand), generally by filtration. To eliminate such constituents of wastewater as dissolved solids coagulation, sedimentation, precipitation, adsorption on activated carbon or other adsorbents, foam separation, electrodialysis, reverse osmosis, ion exchange, and distillation are used. Sludge from

wastewater treatment is biologically stabilized by aerobic or anaerobic digestion by microorganisms. Digested sludge may be heat-dried and used as a fertilizer.

### **Vocabulary**

wastewaters, effluent	стічні води
treatment	переробка
convey	переносити
screen	сито
grit chamber	камера з піском, камінням
sedimentation	осадження
suspended	підвішений
settleable solids	твердий осад
the trickling filter	капаючий фільтр
activated sludge	активний мул
biological floe	біологічне середовище
cover	покривати
submerged	занурений
liquid	рідина
agitation	перемішування

### **I. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) wastewater, treatment, sedimentation, remove, aeration.
- 2) removing only the settleable solids from wastewaters; processing with air; take off or away; particular way of dealing with smb or smth; used water.

### **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. A modern system for primary treatment entails collecting the wastewaters, conveying them to a central point for treatment, etc. 2. Using screens helps to remove large objects. 3. Grit chambers are used for removing grit. 4. Primary sedimentation tanks are used for removing the suspended settleable solids. 5. Agitation is provided by air bubbling into the tank. 6. Tertiary treatment cleans secondary treatment plant effluents by removing additional suspended material and lowering the BOD. 7. After having been filtered, water was clean from hard particles. 8. For being suspended in the liquid, the biological floc is agitated by mechanical aerators.

### **V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. People are able to use sweet water only. 2. To drink salt water of the sea or ocean is dangerous for health. 3. To have used sea water ends in stomach ailment or death. 4. In some Crimean towns salt water is treated for it to be used. 5. That is why to care about sweet water is necessary. 6. The problem is to disinfect river water and

remove or reduce harmful minerals. 7. To have been used by the plants made water undrinkable too. 8. The main requirement to drinking water is being safe.

#### **VI. Copy and translate the conditional sentences.**

1. If you visited a water treatment station you could see the whole process. 2. Should you find running water at home smelling of some chemical you may be sure it is processed. 3. If water were not chlorinated it would contain many dangerous microorganisms. 4. Unprocessed water couldn't be used. 5. If you use purifying filters your water will be softer and cleaner. 6. Without running water there would have never been comfort at home. 7. May we never have problems with drinking water! 8. Should industrial water be used at homes it would be undrinkable.

#### **VII. Copy the sentences. Ask questions to the words in bold.**

1. **The beds are not submerged**, thus air can reach the organisms at all times. 2. Final sedimentation tanks **are needed** to separate the material from the flowing liquid. 3. Biodegradation **has long been used** to treat municipal sewage sludge and some industrial wastes. 4. Most of the biologically active sludge is then returned **to the aeration tank** to treat the incoming water. 5. Air is bubbling into the tank **to provide aeration**. 6. The wastewater is applied to the filter through **rotary distributors**. 7. To eliminate dissolved solids it is necessary **to coagulate and precipitate them**. 8. They have always used **activated carbon** to adsorb toxins.

#### **VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. As our ecology is our future, ecological knowledge must be broadly popularized. 2. Ecologically minded children, as we think, will improve our environment. 3. Because mineral sediment forms inside the tea pot we have to clean it regularly. 4. Many people believe that water in artesian wells is cleaner. 5. It is known that water at the aeration stations is processed with chlorine or fluorine. 6. It is necessary for us that water should be boiled. 7. Industrial water is undrinkable, that is why it is used for other purposes. 8. We can read about filters that are cleaning and enriching water.

#### **IX. Fill in the gaps with prepositions and conjunctions.**

1. Modern wastewater treatment is generally divided \_\_\_\_ three phases: primary, secondary, and tertiary. 2. Each \_\_\_\_ these steps produces sludge. 3. Sludge can be disposed of \_\_\_\_ used \_\_\_\_ various purposes. 4. Primary treatment, \_\_\_\_ plain sedimentation removes only the settleable solids \_\_\_\_ wastewaters. 5. In a modern system the wastewater is conveyed \_\_\_\_ a central point \_\_\_\_ treatment. 6. Wastewater is allowed to trickle \_\_\_\_ over large stone beds \_\_\_\_ are covered with microorganisms. 7. Secondary treatment plant effluents are cleaned \_\_\_\_ filtration. 8. To eliminate \_\_\_\_ constituents of wastewater as dissolved solids coagulation, sedimentation, precipitation, adsorption on activated carbon or other adsorbants, are used.

## **X. Translate the following sentences into English using verbals and the Conditional Mood.**

2. Відомо, що очистка стічних вод – складний процес. 2. Воду очищують, обробляючи її мікроорганізмами. 3. Підприємства, як відомо, зливають свої стоки в комунальну каналізацію. 4. Стічні води харчових підприємств очищають попередньо на заводських локальних очисних спорудах, а потім подають на міські. 5. Біологічна очистка стічних вод може здійснюватись в природних умовах, а також у штучних спорудах. 6. Біологічні фільтри являють собою резервуари з подвійним дном: нижнє – суцільне, верхнє – у вигляді колосникової решітки. 7. Колосникова решітка розташована нагорі, і на неї кладуть завантажувальний матеріал. 8. Як відомо, очистка питної води необхідна.

### **Variant 4**

#### **I. Copy and translate the following text.**

#### **GREENPEACE**

Greenpeace is the leading independent organization that uses peaceful direct action and creative communication to expose global environmental problems. Greenpeace promotes solutions that are essential to a green and peaceful future. It was founded in 1971 in Canada, when members of the Committee in Vancouver, renamed their organization. These members set sail from Vancouver in a hired fishing boat for the US atomic test zone of Alaska to protest nuclear weapons testing. These brave people called themselves Greenpeace, linking their concern for the environment with their desire to see a world free from nuclear threats. After Greenpeace's action, the US abandoned its nuclear testing at Alaska. Greenpeace proclaimed their purpose: to create a green and peaceful world. Today, 30 years later, Greenpeace is a global environmental organization operating in more than 27 countries with more than 100,000 members in Canada and over 2.5 million members around the world.

Greenpeace international is funded by national offices. These, in turns, are financed almost entirely by small contributions from 5 million supporters in 158 countries. The Council – is the major decision-making body of Greenpeace. Each Greenpeace office appoints a representative to the council, who meets once a year to approve the budget of Greenpeace for the following year and to make decisions on the overall direction and policy, especially for the longer term.

At this moment, Greenpeace campaigners are working around the globe, monitoring governments and industry, researching solutions, blocking dangerous practices, doing whatever it takes to protect our planet's life-giving resources. Today Greenpeace works on the following environmental campaigns: Save the Great Bear rainforest, Save the boreal forest, Stop climate change, Eliminate the threat of genetic engineering; International



campaigns: Stop toxic pollution, Safeguard our oceans, Stop the nuclear threat, Protect Ancient Forests.

### **Vocabulary**

expose	розкривати
to sail	плавати
to hire	наймати
link	зв'язувати
threat	загроза
abandon	покинути
to proclaim	проголошувати
concern	підключатися
purpose	мета
create	творити
head quarters	штаб квартира
operate	працювати
support	підтримувати
contribution	внесок
make a decision	приймати рішення
safeguard	стояти на сторожі, оберігати
to appoint	призначати
to approve	погоджувати

### **II. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) concern, weapon, global, expose, protect.
- 2) world wide; disclose, make known; keep safe from danger; something designed or used in fighting or struggling; anxiety, care about something.

### **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Being a leading independent organization gives Greenpeace the right to control ecology. 2. Exposing global environmental problems is absolutely necessary. 3. Having sailed for the US atomic test zone of Alaska expressed Greenpeace's protest against nuclear weapons testing. 4. Linking their concern for the environment shows their desire to see a world free from nuclear threats. 5. After Greenpeace's having sailed for the US test zone, the US abandoned its nuclear testing at Alaska. 6. Greenpeace proclaimed their purpose: creating a green and peaceful world. 6. Operating in more than 27 countries makes Greenpeace a global environmental organization. 7. There is much use in struggling against wars. 8. Being dangerous makes nuclear tests undesirable in many countries.

**V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. Greenpeace proclaimed their purpose: to create a green and peaceful world. 2. The council meets once a year to approve the budget of Greenpeace for the following year and to make decisions on the overall direction and policy. 3. To research solutions blocking dangerous practices is a noble mission. 4. Greenpeace may be proud to do whatever possible to protect our planet's life-giving resources. 5. Today Greenpeace works to save the Great Bear rainforest, the ocean, the boreal forest. 6. They suggest us to join in. 7. That the forces of peace will win is quite clear. 8. For us to save the Earth from nuclear threat is urgent.

**VI. Copy and translate the conditional sentences.**

1. If everyone spoke for peace there would be no wars. 2. If it had not been for Green Peace the USA would not have stopped nuclear tests in Alaska. 3. The United Nations Organization must order that wars should be banned forever. 4. There might have been more books and films about the effects of radiation on nature. 5. I wish we could

have never had Chernobyl disaster! 6. If people didn't care about their safety they would be eliminated. 7. If a child is isolated from his environment he will have an undeveloped mind. 8. It is necessary that all proposals should be registered.

**VII. Copy the sentences. Ask questions to the words in bold.**

1. Greenpeace promotes solutions **that are essential to a green and peaceful future**. 2. It was founded in 1971 **in Canada**. 3. Members of the Committee in Vancouver **renamed** their organization. 4. These members set sail for the US atomic test zone of Alaska **to protest nuclear weapons testing**. 5. The US **has abandoned** its nuclear testing at Alaska. 6. Green Peace **is supported** by people the world over. 7. Organizational Profile Greenpeace international is funded by **national offices**. 8. At this moment, Greenpeace campaigners **are working** around the globe.

**VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Greenpeace is the leading independent organization, and its decisions are important. 2. Green Peace is promoting peace, this is not their only function. 3. They went on a voyage to Alaska because they wanted to stop nuclear tests there. 4. Green Peace proclaims noble ideas, so the governments attend to it. 5. That they sailed to Alaska showed their care. 6. We know that they are developing relations with many countries. 7. The organization calls itself Green Peace because it promotes peace. 8. We invited them so that they could take part.

**IX. Fill in the gaps with prepositions and conjunctions.**

1. Young people \_\_\_\_ our country have every opportunity to study \_\_\_\_ to get a higher education. 2. Students can find all the books necessary \_\_\_\_ their studies in the libraries \_\_\_\_ reading rooms of their universities and work \_\_\_\_ the

laboratories and workshops \_\_\_\_ their universities. 3. To enter a university you have to take entrance examinations \_\_\_\_ are rather difficult. 4. Students are able to study \_\_\_\_ in evening \_\_\_\_ day-time departments. 5. There are full-time students, part-time student, \_\_\_\_ extramural students \_\_\_\_ study by correspondence. 6. The training \_\_\_\_ specialists \_\_\_\_ our universities combines theoretical studies \_\_\_\_ practical work and industrial training. 7. \_\_\_\_ the end of each term students have to take their examinations and credit tests. 8. The main task of higher school is to give students profound theoretical knowledge and practical skills \_\_\_\_ their profession \_\_\_\_ to train highly-qualified specialists

**X. Translate the following sentences into English using verbals and the Conditional Mood.**

6. 1. Грін Піс використовує мирні акції для боротьби за мирне та безпечне навколишнє середовище. 2. Грін Піс піднімає найважливіші проблеми захисту життя на Землі від ядерної загрози. 3. Ця організація фінансується багатьма країнами. 4. Учасники Грін Піс відпливли на кораблі до Аляски, щоб припинити

випробування ядерної зброї. 5. Учасники Грін Піс наполягали, щоб ядерні випробування в Алясці були заборонені. 6. Якби ми могли заборонити війни!

7. Грін Піс вимагає, щоб всі життєві ресурси нашої планети були взяті під контроль. 8. Зараз Грін Піс контролює держави та забороняє небезпечну діяльність.

**Variant 5.**

**I. Copy and translate the following text.**

**GLOBAL EFFORTS TO PROTECT THE OZONE LAYER**

In 1978 the USA banned the use of CFCs in hair sprays and other aerosols. The Montreal protocol was signed by most industrialized nations on cutback in CFC production and the complete elimination of these substances by the year 2000.

In 1981 the Governing Council set up a working group to prepare a global framework convention for the protection of the Ozone Layer. Its aim was to secure a general treaty to tackle ozone depletion. Warning labels are printed on all products with ozone-depleting substances. Recycling could play a significant supplementary role in preventing CFCs already in appliances from escaping into the atmosphere. To prevent the further depletion of the ozone layer many countries signed in Vienna (Austria) in 1985 The Convention on the atmospheric ozone protection and reducing production of freons and other substances ruining ozone.

There are efforts to find substitutes that are not harmful to the ozone layer. One is the hydro-chloro-fluorocarbon – 123 or HCFC-123 ( $\text{CF}_3\text{CHCl}_2$ ). The presence of the hydrogen atom makes the compound more susceptible to oxidation in the lower atmosphere, so that it never reaches the stratosphere. Unfortunately, the hydrogen also

makes the compound more active biologically than the CFCs. Laboratory tests have shown the HCFC –123 can cause tumors in rats, although its toxic effect on humans is not known. By reducing the Cl atoms, some chemists suggested sending a fleet of planes to spray 50,000 tons of ethane (C<sub>2</sub>H<sub>6</sub>) or propane (C<sub>3</sub>H<sub>8</sub>) high over the South Pole in an attempt to heal the hole in the ozone layer. Being reactive species, the chlorine atom would react with the hydrocarbons. The products of these reactions would not affect the ozone Cl + C<sub>2</sub>H<sub>6</sub> → HCl + C<sub>2</sub>H<sub>5</sub> concentration.

There are several alternatives to this project, e.g.: producing and releasing ozone into the stratosphere from airplanes, greenfreeze, a mixture of propane (R290) and isobutane (R600a).

### Vocabulary

ban	забороняти
sign	підписувати
cutback, reduction	скорочення
complete elimination	повне знищення
council	рада
aim	мета
secure	забезпечити
general treaty	загальний договір
tackle	вирішувати
warning labels	попереджуючі ярлики
supplementary	додатковий
in appliances	у застосуванні
escape	витікати
harmful to	шкідливий для
susceptible to	чутливий до
cause tumors	викликати пухлини

## II. Write the main idea of the text.

## III. Match the notions and their definitions.

- 1) eliminate, convention, protection, deplete, warn.
- 2) come to an end; give notice of possible danger or unpleasant consequences; take away; taking care of; agreement on some problem.

## IV. Copy and translate the following sentences. Define the form and function of the Gerund.

1. Using aerosoles may be dangerous for health.
2. Ecological organizations suggest banning poisonous chemicals.
3. Having used some chemicals ended in skin diseases, especilly allergic and respiratory.
4. Being concerned about health helps us to detect ecologically harmful substances.
5. Air tests proved CFCs' having escaped into atmosphere.
6. Recycling could prevent CFCs from escaping into the atmosphere.
7. Chemicals are sold after being banned
8. Using chemical pigments is also unhealthy.

**V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. In 1978 the USA banned to use of CFCs in hair sprays and other aerosols.
2. To help survive flora and fauna some chemicals should be forbidden.
3. It is easy to poison all around, but it is difficult to clean.
4. To use cars means to kill our atmosphere.
5. In 1981 the Governing Council set up a working group to prepare a global framework convention for the protection of the Ozone Layer.
6. To prevent the further depletion of the ozone layer many countries signed the convention in 1985.
7. The aim of the convention was to secure a general treaty to tackle ozone depletion.
8. Some chemists suggested to spray ethane ( $C_2H_6$ ) or propane ( $C_3H_8$ ) high over the South Pole.

**VI. Copy and translate the conditional sentences.**

1. When production is safe our ecology will be restored.
2. Should people find substitutes that are not harmful to the ozone layer our atmosphere would be cleaner.
3. If it had not been for the scientists people would have never known about the

poisoned air.

4. If the hydrogen compound was less active biologically than the CFCs it could be used in refrigerators.
5. It is quite necessary that safer cooling agents should be found.
6. Producing and releasing ozone into the stratosphere from airplanes might be helpful.
7. There could be other methods to heal the hole in the ozone layer.
8. If the HCFC -123 had not caused tumors in rats, it could have probably replaced freons.

**VII. Copy the following sentences. Ask questions to the words in bold.**

1. The Montreal protocol was signed by **most industrialized nations**.
2. The Montreal protocol stated **cutback in CFC production**.
3. Governing Council prepared a global framework convention for **the protection of the Ozone Layer**.
4. We are being poisoned with toxic elements **from domestic technique**.
5. Nature protectionists **are trying** to tackle ozone depletion.
6. The Convention **included** measures on the atmospheric ozone protection.
7. There are **several** alternatives to this project.
8. Ammoniac was used **in refrigerators** even before freon.

**VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Industrialized nations agreed that they will completely eliminate poisonous substances by the year 2000.
2. Ozone hole is increasing with years, and there is a danger of losing oxygen.
3. As freons are ruining ozone their production should be reduced.
4. We need refrigerators because we store food there.
5. It is expected that new nontoxic substances will be created.
6. It is known that hydrogen compound have developed cancer in rats.
7. Ecologists are concerned with the problem of poisonous gases, that is why they call people's attention to them.
8. Ecologists propagate natural substances, so that people could be healthy.

**IX. Fill in the gaps with prepositions and conjunctions.**

1. There are efforts to find substitutes that are not harmful \_\_\_\_ the ozone layer.
2. The presence \_\_\_\_ the hydrogen atom makes the new compound more susceptible \_\_\_\_ oxidation \_\_\_\_ the lower atmosphere, \_\_\_\_ that it never reaches the stratosphere.
3. Unfortunately, the hydrogen also makes the compound more active biologically than the CFCs.
4. Laboratory tests have shown \_\_\_\_ the HCFC-123 can cause tumors in rats, \_\_\_\_ its toxic effect on humans is not known.
5. Some chemists suggested sending a fleet of planes to spray 50,000 tons of ethane ( $C_2H_6$ ) or propane ( $C_3H_8$ ) high over the South Pole in an attempt to heal the hole in the ozone layer.
6. Being reactive species, the chlorine atom would react \_\_\_\_ the hydrocarbons.
7. The products \_\_\_\_ these reactions would not affect the ozone  $Cl + C_2H_6 \rightarrow HCl + C_2H_5$  concentration.
8. \_\_\_\_ plants and people suffer from the toxic gases.

**X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Викидати отруйні гази у повітря небезпечно для людей. 2. Оскільки фреони руйнують озон, їхнє виробництво було обмежене. 3. Вважають, що

результатом підйому температури буде глобальне потепління. 4. Думають, що переробка CFC буде запобігати їхньому витіканню в атмосферу. 5. Те, що фреони утворюють сполуки, які руйнують озоновий шар атмосфери, доводить їх небезпечність. 6. Вчені пропонують **розпиляти** над Північним полюсом озон чи спеціальні речовини для того, щоб затягнути озонову діру. 7. Підписання Конвенції про захист озонового шару свідчить про піклування екологів про навколишнє середовище. 8. Для того, щоб захистити озоновий шар атмосфери, необхідно розробити безпечні замінники фреонів.

**Variant 6**

**I. Copy and translate the following text.**

**ADAPTATION**

The ability to adapt to a wide range of environments is not peculiar to humans. Adaptability is found throughout the living world and is perhaps the one quality that distinguishes the living world from the inanimate (not-living) world. The response to the impact of environmental forces determines whether the organism will experience health or disease, success or failure, in a given situation. Biologists can measure the fitness of a particular environment for a given organism by asking particular questions: Can the organism occupy this environment? Can it make effective use of the environment's resources? Can the organism multiply abundantly in this environment? These standards are obviously inadequate, however, when applied to humans adaptability, for humankind includes more than just the needs of present. It must consider the limitations imposed by the past and the anticipations of the future.

Throughout prehistory and history, human societies have used many different hereditary, physical, mental, and social mechanisms to adapt to new environmental situations. There is a tendency to believe that biological adaptation is no longer important. It is commonly stated that the human species can afford to lose their physical and mental abilities because people can create an environment in which such abilities are no longer necessary.

Human beings can survive, function, and multiply despite malnutrition, environmental pollution, excessive noise, boredom, and overcrowding. While this kind of biological adaptability is an asset for the survival of Homo Sapiens as a biological species, it can also undermine the attributes that make human life different from animal life. From the human point of view, the success of adaptation must be judged in terms of how it maintains the values of being human.

Human adaptability to his natural environment may be observed in food, home constructions, medicines, wear, occupations, even behaviour. Climate, geography influence these and many other human physical as well as social needs.

### **Vocabulary**

range	діапазон,
peculiar to	особливий. характерний
submit	підкоряти
determine	визначати
fitness	придатність
abundantly	багато
hereditary	спадковий
adapt	пристосовуватися
multiply	розмножуватися
anticipate	передбачати
to afford	дозволяти собі
essential	необхідний, істотний
malnutrition	недоїдання
boredom	нудьга
undermine	підривати
attribute	відмітна риса
to judge	судити, оцінювати

## **II. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) adaptation, hereditary, multiply, inanimate, society.
- 2) not-living; the ability to adapt to a wide range of environments; civilized community; increase in number; passed on from parent to child, from one generation to following generations.

**IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Adapting to a wide range of environments is not peculiar to humans. 2. The response to the impact of environmental forces determines surviving. 3. In responding to a given situation people reveal their adaptability. 4. Biologists can measure the fitness of a particular environment for a given organism by asking particular questions. 5. Having created his biome proves species survival. 6. One should show abilities for occupying his environment. 7. Being underfed is usual for many people. 8. A certain area is unlikely to be occupied by a species after having been occupied by some other species.

**V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. It is impossible for people to lose their physical and mental abilities if they are engaged in both kinds of activities. 2. To have used hands made human different from animal. 3. To live is to adapt. 4. To be surrounded by foreign species may reduce some species. 5. To apply general standards to human adaptability gives a picture of nations' formation and expansion. 6. People expect to be supported by society. 7. It

is natural for a species to be independent from other species. 8. It was difficult for the ecologists to come to a decision.

**VI. Copy and translate the conditional sentences.**

1. If people had not adapted to their environment they would have perished. 2. It is necessary that we should respond to the influence of society. 3. What would you do in this situation? 4. It is necessary that all species should survive. 5. The dominant species require that minor species should subjugate. 6. If people had not cared we could have been drawn into a war. 7. If people had not considered the limitations imposed by the past and the anticipations of the future they could not have survived. 8. If people might develop in their native surrounding they could save their traditions.

**VII. Copy the sentences. Ask questions to the words in bold.**

1. Adaptability is found **throughout the living world**. 2. Adaptability **distinguishes** the living world from the inanimate (not-living) world. 3. The organism will experience **health or disease, success or failure** in a given situation. 4. **Biologists** are asking particular questions. 5. The organism **has occupied** this environment by his activity. 6. **There is** a tendency to believe that biological adaptation is no longer important. 7. Human societies have used many different **hereditary, physical, mental, and social** mechanisms. 8. Adaptation must consider the limitations imposed by **the past**.

**VIII. Transform the sentences into the participial and infinitival complexes. Write down and translate the transformations.**

1. An individual finds himself in a changed media, he uses social means to adapt to it. 2. Because adaptability is an active process, a person should solve a number of problems. 3. When he is solving the social problems he is using the



socially adapted actions. 4. If he wants to adapt he should accept the norms and values of the new social environment 5. They consider that adaptation has two forms: active and passive. 6. They believe that active adaptation is the process when an individual tries to influence his surrounding. 7. Passive adaptation is another form, when an individual does not try to change his media. 8. Individual wants the media to satisfy his social requirements.

### **IX. Fill in the gaps with prepositions and conjunctions.**

1. \_\_\_\_ for my future speciality I will be an ecologist. 2. I will be able to work \_\_\_\_ any food enterprise, \_\_\_\_ a purifying station \_\_\_\_ our course of studies covers a broad range of disciplines. 3. We study \_\_\_\_ organic and inorganic chemistry \_\_\_\_ biochemistry. 4. Ecology is a study of the relationship \_\_\_\_ plants and animals \_\_\_\_ their physical and biological environment. 5. The objects of ecology are \_\_\_\_ biotic factors: organisms, plants, animals, \_\_\_\_ abiotic factors; \_\_\_\_ : water, soil, climate, light, and oxygen. 6. Ecology is concerned \_\_\_\_ the problems of demography and energetics, economics and nutrition, legal, social, political, pedagogical, etc. 7. Ecology is a very important science, \_\_\_\_ humans abuse nature \_\_\_\_ their activity. 8. I like my future

speciality. It is useful \_\_\_\_ me and \_\_\_\_ society.

### **X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Адаптація до широкого оточення нетипова для людини, людина обирає невеликий соціум. 2. Відомо, що адаптивність відрізняє живу природу від неживої. 3. Для адаптації людині необхідно вирішити ряд соціальних проблем. 4. Коли людина адаптується, вона використовує соціальні засоби – норми поведінки, діяльність. 5. Якщо фізичні та розумові здібності людини не потрібні, вона може втратити їх. 6. Вважають, що біологічна адаптація зараз не важлива. 7. Цінність бути людиною визначає адаптацію людини. 8. Думають, що бути адаптованим до суспільства значить бути його активним учасником.

### **Variant 7**

#### **I. Copy and translate the following text.**

#### **POPULATION DYNAMICS**

The numbers of plants or animals in a population change with time. Sometimes the changes in population densities are sudden and explosive, at other times they are gradual. Often changes are related to seasonal events, such as the emergence of houseflies in the spring and their rapid die-off in the autumn.

The rate of growth of an animal population depends on the birthrate, the natural death rate, the predator-prey relationships, the food supply, parasitic activity, infection by bacteria, and other factors, such as climatic changes. Some animals are strongly

territorial and will not let others of their species occupy the same territory thus quickly limiting the population density of the species. Some factor limits the growth and the growth curve of most populations results in a sigmoid S-shaped curve.

Many animals manage to keep their population below the level at which they would begin to starve. Often when a bird population is increasing rapidly, there will be fewer eggs laid and fewer hatchlings. On the other hand the enormous density of passenger pigeons in early America was thought to have been the very stimulus that maintained reproduction of the pigeon. When reduced by man, the population suddenly went below the self-sustaining size and extinction of the species resulted from lack of social stimulus.

An explosive increase of population occurs when predators are removed. There is an enormous increase in prey population. The predator-prey relationship is always a complicated one. The activity of the predator generates a defensive response in the prey, such as increased ability to hide or to avoid the predator. The predator population will then drop and the prey population will increase. But then it becomes easier for the predator to encounter the more abundant prey, and the cycle swings the other way. Many animal populations

undergo strong cyclic changes in this way.

### **Vocabulary**

enormous density	надзвичайна густина
sudden and explosive	раптовий та бурхливий
related to seasonal events	пов'язаний зі зміною пори року
emergence	необхідність
predator-prey relationships	відношення хижака та дичини
growth S-shaped curve	крива росту у формі S
to keep below the level	тримати нижче рівня
to starve	голодувати
increase rapidly	швидко зростати
fewer hatchlings	менше пташенят
passenger pigeon	мандруючий голуб
maintain	підтримувати
self-sustaining size	необхідна кількість
defensive response	захисна реакція
avoid	уникати
drop	падати
encounter	зустрічати
abundant	достньо
swing	коливатися

## **II. Write the main idea of the text.**

## **III. Match the notions and their definitions.**

1) predator, occupy, species, starve, prey.

2) praying upon others; animal, bird, etc. killed or eaten by another; group having some common characteristics; suffer or die from hunger; live in.

**IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. There will be fewer eggs laid and fewer hatchlings. 2. Being infected by bacteria reduces the population. 3. Having removed predators increases the population explosively. 4. Being reduced by man, resulted in extinction of the population. 5. With controlled birthrate nations can live without starving. 6. Physically, the individual's behavior was regarded as interaction of forces of attracting and repulsing. 7. Multiplying may not restore because of lack of social stimulus. 8. Saving people's biomes makes nationalities important.

**V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. Not to let others of their species occupy the same territory results in limiting the population density of the species. 2. Many animals manage to keep their popula-

tion below the level at which they would begin to starve. 3. Limiting the population density of the species results in better feeding. 4. The enormous density of passenger pigeons in early America was the stimulus to maintain their reproduction. 5. To have been reduced by man resulted in extinction of the species. 6. Then it becomes easier for the predator to encounter the more abundant prey. 7. To save various nations is possible only by social agreement. 8. To be good means to be human.

**VI. Copy and translate the conditional sentences.**

1. If it were not for the food supply, and other factors, the populations would grow enormously. 2. If some animals were not strongly territorial they would let others of their species occupy the same territory. 3. Should the people had not adapted genetically and culturally they could not have survived in low temperatures. 4. If physical adaptation is not taken into account we will not explain appearance and skin colour of peoples in extremal climates. 5. Should people didn't tend to retaining social order the society couldn't exist as a unity. 6. It is necessary that the nations should be able to withstand their rights. 7. Could the national economies be stable there would be much less problems with migration. 8. But for the political problems UNO might help starving nations maintain their life level.

**VII. Copy the following sentences. Ask questions to the words in bold.**

1. The numbers of plants or animals in a population change **with time**. 2. Often changes are related **to seasonal events**. 3. The rate of growth of an animal population depends on **the birthrate, etc.** 4. Some factor **limits** the growth. 5. A bird population is **increasing** rapidly. 6. **Under different environmental and cultural factors** men have adopted different diets 7. Animal populations were reduced **by man**. 8. The population suddenly went **below the self-sustaining size**. 9. Extinction

of the species **has resulted** from lack of social stimulus.10.The predator-prey relationship **will** always **be** a complicated one.

**VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Most nations got used to live on one territory and are unable or dislike to change their residence, but some are very mobile. 2. Many species are becoming extinct, so they should be restored artificially. 3. It is evident that people migrate on material reasons. 4. If individual and social interests are balanced people will create really free society. 5. It is known that people can move from one social strata to another. 6. Individual will develop when he is engaged in collective work. 7. People require that leader should move constructive ideas. 8. People want that their children could have better living.

**IX. Fill in the gaps with prepositions and conjunctions.**

1.The numbers \_\_\_\_ plants or animals in a population change with time.  
2. Sometimes the changes \_\_\_\_ population densities are sudden \_\_\_\_ explosive,  
3.Often changes are related to seasonal events, \_\_\_\_ the emergence of houseflies \_\_\_\_  
the spring. 4. \_\_\_\_ bacteria, and other factors, \_\_\_\_ climatic changes. 5. \_\_\_\_  
the population density of the species is quickly limited. 6. \_\_\_\_ reduced \_\_\_\_ man,  
the population suddenly went \_\_\_\_ the self-sustaining size. 7. There should be food  
\_\_\_\_ all. 8.The activity of the predator generates ability of the pray to hide  
\_\_\_\_ to avoid the predator. 9.The predator population will \_\_\_\_ drop and the  
prey population will increase. 10.But \_\_\_\_ it becomes easier \_\_\_\_ the predator  
to encounter the more abundant prey.

**X. Translate the following sentences into English using verbals and the Conditional Mood.**

1 Для того, щоб популяція зростала треба, щоб її не знищували. 2. Якби хижаки не знищували дичину, то дичина б не мала достатньо їжі. 3. Оскільки зміни густини деяких популяцій залежать також від рівня народжуваності, то бувають більші та менші популяції. 4. Вважають, що багато популяцій тварин міняються циклічно. 5. Якби деякі популяції не витісняли інші з їхньої території, останні б не зменшувалися. 6. Відомо, що пора року чи соціальний фактор може впливати на зменшення та зникнення виду живих істот. 7. Саме тому, що дичина уникає хижаків, вона розмножується. 8. Коли хижаків знищують, дичина зростає в кількості.

**Variant 8**

**I. Copy and translate the following text.**

## SOCIAL ECOLOGY. TEXT 1

Social ecology studies the relationships among natural environment, population, technology, and society. Socioecology includes such divisions as: ecological education, law, population ecology, management, audit, international and national policy, urboecology, etc. Ecological safety is provided by the organizational, legal, economic and social means. Violation of the ecology protection laws is rated as a crime followed by the punishment: fine, timely dismissal or even imprisonment.

Anthropological ecology. Geographers, such as Friedrich Ratzel, pointed out that man's relationships to environment are conditioned by technology by which parts of culture can be explained. Anthropologists, in their ecological studies, have been concerned primarily with past civilizations and with tribal people, and with the wide variety of technical and economic adaptations to given environments. In the southwestern desert of North America, Navajo Indians became shepherders, Pueblo Indians were corn farmers, and Shoshone were collectors of wild food. Thus, available natural resources do not necessarily determine particular cultural adaptations: man can make a choice.

On the other hand, if a specific resource is relied upon extensively, this fact may condition the entire course of development. The Egyptians' use of the Nile is an example. The decision to develop agriculture in a narrow, annually flooded strip in a desert permitted the population to build up in a small space; the compact population, plus the task of controlling the waters, led to bureaucratic structures that influenced every aspect of Egyptian civilization.

A classic study in which anthropologists discovered a significant relationship between certain biological and cultural processes involved in environmental adaptation was that concerning the "sickle-cell" disease, an inheritable condition of the hemoglobin (red) blood cells. Found in many African populations, it was caused by malaria and led to a buildup of a mutated gene.

### Vocabulary

point out	вказувати
be concerned with	займатися, бути пов'язаним з
tribal people	племінні народи
southwestern desert	південнозахідна пустеля
became shepherders	стали скотоводами
determine	визначати
particular	певний, особливий
rely upon	спиратися на
entire	увесь
decision	рішення
narrow	вузький
annually flooded strip	щорічно затоплена полоса

permit	ДОЗВОЛЯТИ
influence	ВПЛИВ
significant	ЗНАЧНИЙ
"sickle-cell" disease	хвороба кров'яних тілець
inheritable condition	наслідувана умова

## **II. Write out the main idea of the text.**

## **III. Match the notions and their definitions.**

- 1) condition, society, tribe, anthropology, culture.
- 2) system whereby people live together in organized community; science of man; advanced development of human powers; something of which another thing depends; of a racial group united by language and customs under a chief.

## **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Navajo Indians were occupied with sheep breeding, Pueblo Indians – with corn growing. 2. Studying ecology makes people human. 3. Violating the ecology protection laws is rated as a crime. 4. Being collectors of wild food made Shoshone

tribe free from productive labour. 5. Do you mind discussing social problems? 6. There was no question of explaining everything by technological progress. 7. Having adapted to their environment makes people choose their occupations. 8 Please, pardon my using my native language.

## **V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. To devide social ecology into branches means show different aspects of life. 2. To connect Africans' migration with the cracking of the African continent ir natural. 3. To have studied tribal people gave the ecologists material about the historic relations of human and nature. 4. It is necessary for us to understand the influence of the technocal progress on our environment. 5. If we start to live the life of ancient tribes we will come close to nature. 6. Anthropologists suggest to study the human development. 7. To have studied past civilizations explained many social phenomena.. 8. To coexist is not to assimilate and substitute.

## **VI. Copy and translate the conditional sentences.**

1.If we lived a simple life we would be much healthier. 2. If people would not have violated the ecology protection laws so many natural disasters could have been prevented. 3. Should we have more choice we would be happier. 4. If the Egyptians had not lived in the narrow space, they could not have created their specific beurocratic social structure. 5. It was necessary to develop land so that people could feed themselves. 6. It is high time that some political changes should come. 7.I suggest that democratic system should be introduced everywhere. 8. Suppressed masses of population behave as if they were not thinking about their future.

## **VII. Copy the following sentences. Ask questions to the words in bold.**

1. Social ecology **comes** from the greek words oikos – home and logos – word, notion, teaching. 2. Ecology is a field of knowledge studying interrelations **of a human with his natural and social environment**. 3. **Ecological safety** is provided by the organizational, legal, economic and social means. 4. Planetary human activity suggests the developnebt of **international ecological** cooperation. 5. Friedrich Ratzel **pointed out** that man's relationships to environment are conditioned by technology. 6. Anthropologists, **in their ecological studies**, have been concerned primarily with past civilizations' adaptations to given environments. 7. In the southwestern desert of North America, Navajo Indians became **sheepherders**. 8. Thus, available natural resources **do not necessarily determine** particular cultural adaptations.

## **VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Planned economy provides stable development of society and allows to realize long-term ecological programmes. 2. Though relationships among population, natural environment are the objects of both anthropologists and sociologists, their aims are different. 3. Ecologists suggest that the object of ecology is a system "nature – society".

4. It is believed that Friedrich Ratzel had found the clue to cultures formation. 5. People adapt so as to have opportunities to survive. 6. Natural resources do not necessarily determine particular cultural adaptations: man can make a choice. 7. It is the social surrounding that makes the individual. 8. It is anthropologists who should be concerned with technical and economic adaptations to given environments.

## **IX. Fill in the gaps with prepositions and conjunctions.**

1. Social ecology studies the relationships \_\_\_\_ natural environment, population, technology, \_\_\_\_ society. 2. Socioecology includes \_\_\_\_ divisions \_\_\_\_: ecological education, law, population ecology, management, etc. 3. Violation of the ecology protection laws is rated \_\_\_\_ a crime followed by the punishment: fine, timely dismissal or even imprisonment. 4. \_\_\_\_ anthropologists and sociologists have studied the relationships \_\_\_\_ population. 5. \_\_\_\_, available natural resources do not necessarily determine particular cultural adaptations. 6. The decision to develop agriculture \_\_\_\_ a narrow, annually flooded strip \_\_\_\_ a desert permitted the population to build up \_\_\_\_ a small space. 7. It led to bureaucratic structures \_\_\_\_ influenced every aspect of Egyptian civilization. 8. Found in many African populations, the "sickle-cell" disease was caused \_\_\_\_ malaria and led to a buildup \_\_\_\_ a mutated gene.

## **X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Якби заняття людей не залежали історично від природних умов, не було б такого різноманіття цивілізацій. 2. Відомо, що порушення екологічних законів карається штрафом або ув'язненням. 3. Очевидно, що екологія розвинулася на

засадах багатьох наук. 4. Те, що екологи вивчали минулі цивілізації, дало їм матеріал для висновків. 5. Розвиток скотарства, землеробства пов'язують з певними кліматичними умовами. 7. Є різні заняття для людей, так що вони можуть зробити вибір. 8. Якби людське відношення до природи не було опосередковано технікою, то не можна б було пояснити розвиток культури.

## **Variant 9**

### **I. Copy and translate the following text.**

#### **SOCIAL ECOLOGY. TEXT 2**

Sociological ecology developed in the 1920's at the University of Chicago, where sociologists produced a series of studies illustrating the use of ecological principles in charting population and cultural movements in a modern city. So urboecology evolved. One approach used in this work was based on concepts borrowed from natural ecology. Thus the concept of "succession," referring to the replacement in the natural environment

of one plant species by another, was applied to human social or economic groups. These natural ecology principles were combined with the principles of "social morphology" defined by the French sociologist Emile Durkheim. Social morphology concerns the relationships of size, density, and spatial distribution of the population to the separation of functions in a society. Common to both approaches was a concern with competition as the moving force in the environment.

Modern sociological ecology bases its study of the development and form of an urban community on both approaches. There is an emphasis upon spatial distribution insofar as it relates to the overall balance of activities and groups within a city. Research has shown that the American city has about five concentric zones. The business district is at the center, and outside of this is a zone for light manufacturing and recreation. The latter may also contain an area of cheap lodgings. The next three zones are areas of residence: the first for working people; then middle-income groups; and finally the suburbs.

The residential areas closest to the center of the city tend to resemble ghettos. Each population group strives to invade the adjacent and more desirable zone. However, despite the replacement or succession of groups, the social characteristics of the zones remain the same and are therefore felt to be "natural areas."

The main task of urboecology is the search for the optimal solutions of towns construction, directed at improvement of life conditions and all-round rationalisation of nature utilization in the measures of urban area.

#### **Vocabulary**

charting	перепис населення
approach	підхід



borrow	позичати
succession	послідовність, наслідуваність
apply to	застосовуватися до
concern	піклуватися
goods	товари
light manufacturing	легка промисловість
recreation	відпочинок
cheap lodgings	дешеві домівки
middle-income	середній прибуток
suburbs	закраїни
tend to resemble	скоріше нагадує
strives to invade	намагатися зайняти
adjacent	сусідній
desirable	бажаний
despite	незважаючи на
remain the same	залишатися таким самим

## **II. Write the main idea of the text.**

## **III. Find the words in the text to match the following definitions.**

- 1) chart, approach, succession, residential, ghetto.
- 2) natural areas; of residence; draw information in the form of curves and diagrams; act of coming nearer; the replacement in the natural environment of one plant species by another.

## **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Sociologists illustrated the use of ecological principles in charting population in a modern city. 2. Having applied sociology to ecology resulted in a new science – social ecology. 3. It is typical for the nations to survive on one territory without being replaced by another nation. 4. Competing is not fighting. 5. Illustrating the use of ecological principles in charting population and cultural movements in a modern city started urboecology. 6. After having lectured on ecology ecological education was developed. 7. Replacing one plant species by another in the natural environment was called "succession." 8. Outside of the business area is a zone for light manufacturing and recreation.

## **V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. Each population group starts to compete for the adjacent and more desirable zone.
2. To consider ecological norm helps to protect population from extinction.
3. Socio-ecological principles were developed to estimate relationships between society and ecology.
4. To have separated functions in a society made people unequal.
5. To compete

is to struggle for better life conditions. 6. To replace in the natural environment of one plant species by another demonstrates species survival. 7. The main task of urboecology is to search for the optimal solutions of towns construction. 8. The optimal solutions of towns construction are directed to improve the life conditions in the limits of the urban area.

#### **VI. Copy and translate the conditional sentences.**

1. It would be impossible to prevent people from changing their places of living. 2. If all people could have equal opportunities they would surely survive. 3. If the scientists had used the new methods, they would have had better results. 4. It is required that social norms should be observed. 5. If one fights he wins. 6. People are afraid lest natural disasters should happen. 7. If people's morals were higher nobody would suffer. 8. If we only knew what would happen in the next century!

#### **VII. Copy the sentences. Ask questions to the words in bold.**

1. Sociological ecology developed in the 1920's **at the University of Chicago**. 2. Sociologists produced **a series of studies**. 3. The opportunities of our science will be larger **with democracy**. 4. Modern sociological ecology bases its study on the development and form of **an urban** community. 5. **There is** an emphasis upon spatial distribution. 6. Each population group **is striving** to invade the adjacent and more

desirable zone. 7. So urboecology has evolved as **series of studies of ecological principles in charting population and cultural movements in a modern city**. 8. **The principles of "social morphology"** were defined by the French sociologist Emile Durkheim.

#### **VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. There are different branches of ecology, socioecology is one of them. 2. When an urban area is considered, social distribution should be taken into account. 3. When the territory is populated job problems appear. 4. If the city administration want to have a modern city, they should care about it. 5. Ecological propaganda is necessary so that people should keep the cities clean. 6. Is it necessary that functions in a society should be separated? 7. It is known that construction of cities differs in many countries. 8. It is believed that competition is the moving force in society.

#### **IX. Fill in the gaps with prepositions and conjunctions.**

1. One approach used \_\_\_\_ urboecology was based on concepts borrowed \_\_\_\_ natural ecology. 2. These natural ecology principles were combined \_\_\_\_ the principles of "social morphology" defined \_\_\_\_ the French sociologist Emile Durkheim. 3. Social morphology concerns the relationships \_\_\_\_ size, density, and spatial distribution of the population. 4. Common to both approaches was a concern with competition \_\_\_\_ the moving force in the environment. 5. Research has shown \_\_\_\_ the American city has about five concentric zones. 6. The next three zones are areas of residence: the first for working people; \_\_\_\_ middle-income groups. 7. The residential areas closest \_\_\_\_ the

center of the city tend to resemble ghettos. 8. \_\_\_\_\_, despite the replacement or succession of groups, the social characteristics of the zones remain the same and are therefore felt to be "natural areas."

**X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Соціальна екологія, як відомо, — наука про те, як суспільні явища впливають на особу. 2. Наслідів природного середовища іншим народом, як відомо, здійснювалася силою. 3. Людям було б краще жити у своєму національному та культурному середовищі. 4. Якби була рівна плата за працю, то не було б бідних та багатих. 5. Кажуть, що американські міста побудовані за концентричним принципом. 6. Кожна соціальна група намагається просунутися у кращий район міста. 7. Головні завдання урбоекології – підвищення життєвого рівня людей та раціональне використання природних ресурсів у міській зоні. 8. Жити значить мислити.

**Variant 10**

**I. Copy and translate the following text.**

**SOCIAL ECOLOGY.TEXT 3**

Human ecologist is concerned with the entire hominid line, from the *Australopithecus* to the modern man. The recent studies embrace smoking, alcoholism, drugs and AIDS spreading due to the limited opportunities of people in society. Much research has been devoted to demonstrating statistical relationships between the location and characteristics of natural areas and the characteristics of their residents. For example, alcoholism and delinquency are much more common in areas adjacent to the city center and decline toward the suburbs; however, pockets of exceptions, based on special cultural changes, often occur. High rates of schizophrenic disease are associated with social disorganization. Bad housing is usually associated with poor health of the residents.

Some sociological ecologists have also investigated natural resource utilization by agrarian peoples. A characteristic problem concerns the extent to which people display "rationality" in their use of resources, that is, balancing the need for the resource, the cost of developing it, and the need for conservation. Such studies contribute to our knowledge of how man can utilize nature without destroying it in the process.

Ecology is closely tied up to human culture through education. Culture may be defined as all spiritual and material wealth created by mankind and people's

constructive attitude to it. Undeveloped humanistic emotions in people result in careless and cruel attitude to nature. Wars destroy civilization.

Our society is impoverished by misusing natural preserves, turning them into private pleasure zones, drinking and playing establishments, developing unhealthy inclinations in people; also by eliminating establishments and enterprises necessary for the countries' economy, thus depriving people of means of existence. Ecologically unclean, genetically modified foods may cause accelerated physical development in children and higher cancer rates in all ages.

### **Vocabulary**

hominid line	людський рід
drug	наркотик
embrace	охоплювати
opportunity	можливість
delinquency	розумова відсталість
decline	зменшуватися
suburb	закраїна
exception	вийняток
utilization	використання
investigation	дослідження
extent	розмір
conservation	зберігання
contribute to	робити внесок у
careless	недбайливе
cruel	жорстокий
impoverished	збіднівший
eliminate	знищувати
devoid of	полишений

## **II. Write the main idea of the text.**

### **III. Match the notions and their definitions.**

- 1) culture, rationality, delinquency, attitude, devastate.
- 2) wrong doing by young persons; way of feeling, thinking or behaving; ruin, make desolate; ability to reason; all spiritual and material values created by mankind and people's constructive attitude to them.

## **IV. Copy and translate the following sentences. Define the form and function of the Gerund.**

1. Human ecologist is concerned with studying the entire hominid line. 2. A characteristic problem concerns balancing the need for the resource. 3. Bad housing is usually associated with poor health of the residents. 4. Much research has been devoted to demonstrating statistical relationships between the location and its residents. 5. The recent studies embrace smoking, alcoholism, drugs and AIDS spreading. 6. After having been

spread AIDS endangers everyone. 7. We observe nature being destroyed. 8. Social faults may be overcome by raising the quality of mass media programs.

**V. Replace the Infinitive with the Gerund. Write down and translate the sentences.**

1. To be limited in opportunities in tragedy of poor population. 2. People start to smoke, take alcohol and drugs because of their limited opportunities in society. 3. To take into account characteristics of their residents is important. 4. How to balance the need for the resource, the cost of developing it, and the need for conservation are the objects of socioecological studies. 5. Socioecology contributes to our knowledge of how to utilize nature and not to destroy it in the process. 6. To have not received humanistic education develops unhealthy inclinations in people. 7. To bring up healthy generations is a problem. 8. Much effort is given to spread ecological knowledge.

**VI. Copy and translate the conditional sentences.**

1. If people had not been subject to social influence they would have not taken bad examples. 2. Should ecology had been studied at school children would have thought more about their environment and themselves. 3. There might not be so much alcoholism and delinquency in areas adjacent to the city center but for unemployment and difference in peoples' opportunities. 4. Each could be able to organize himself if it were not for social intention to mislead other people for making profit. 5. If the

residents had not had bad housing they would have not inherited poor health. 6. If social degradation declines toward the suburbs it may be explained by better occupations of their residents. 7. Whatever might be said about equal rights there has never been equality in society. 8. Had the society been not stratified historically, there would have never been such deep discrepancies (протиріччя) between people.

**VII. Copy the sentences. Ask questions to the words in bold.**

1. **Rational** use of resources is an urgent problem. 2. Social disuse and misuse will result in **poor living conditions and crime**. 3. Genetically modified foods **may cause** accelerated physical development in children. 4. Ecology is closely tied up to human culture **through education**. 5. Mankind has been creating great spiritual and material wealth **for centuries**. 6. Undeveloped humanistic emotions develop **careless and cruel attitude to nature**. 7. **Wars, nuclear, chemical and other weapons** destroyed civilization. 8. Our society **has come** to the idea of peaceful coexistence.

**VIII. Transform the subordinate clauses into the participial and infinitival complexes. Write down and translate the transformations.**

1. Alcoholism and delinquency are much more common in areas adjacent to the city center and decline toward the suburbs. 2. Pockets of exceptions often occur and they are based on special cultural changes. 3. High rates of schizophrenic disease are associated with social disorganization; so positive, optimistic thinking should be developed in children. 4. Because bad housing is usually associated with poor health of the residents, the government should provide the citizens with healthy homes.

5.They consider culture as all spiritual and material wealth created by mankind and people's constructive attitude to it. 6. Healthy way of life is necessary if you want to keep fit for physical and mental activity. 7. It is quite possible that food consumption and child-birth should be regulated. 8. It is known that wars destroy civilization.

**IX. Fill in the gaps with prepositions and conjunctions.**

1. Culture may be defined \_\_\_\_ all spiritual \_\_\_\_ material wealth created \_\_\_\_ mankind and people's constructive attitude to it. 2. Alcohol \_\_\_\_ well \_\_\_\_ tobacco are of no good \_\_\_\_ our body. 3. \_\_\_\_ nature protection and improving people's life is necessary. 4. Living standards must be raised \_\_\_\_ that people could survive. 5. Human ecologist is concerned \_\_\_\_ the entire hominid line, \_\_\_\_ the *Australopithecus* \_\_\_\_ the modern man. 6. "Rationality" is balancing the need \_\_\_\_ the resource, the cost \_\_\_\_ developing it, and the need \_\_\_\_ conservation. 7. Smoking, alcoholism, drugs and AIDS are spreading \_\_\_\_ the limited opportunities of people in society. 8. Man can utilize nature \_\_\_\_ destroying it in the process.

**X. Translate the following sentences into English using verbals and the Conditional Mood.**

1. Людська екологія пов'язана з вивченням людського роду. 2. Як відомо, людська екологія вивчає такі соціальні лиха, як алкоголізм, наркоманію, ін.  
2. Ріст рівня розумової відсталості та алкоголізму спостерігається близько

центру великих міст та падає у приміських районах. 3. Екологів цікавить, як люди пов'язують потреби у ресурсах з цінами і необхідністю їхнього збереження. 4. Екологам потрібно, щоб людина використовувала природу не руйнуючи її. 5. Культура може бути визначена як духовне багатство людства, і екологія пов'язана з культурою через освіту. 6. Оскільки діти мають перед очима поганий приклад руйнування природи, необхідна краща соціальна організація суспільства. 7. Обмежувати духовні можливості людей значить робити їх жертвами соціального зла. 8. Здоровий спосіб життя, високі ідеали класичної культури та виховання соціальної та національної толерантності могли б підвищити взаємопроникненість соціальних страт та зберегти національне різноманіття.

*Додаток 1*

**The Verbs of Motion and Doing  
Tense Forms. Active Voice**

Aspect	Tense	Affirmative Sentence (Statement)	Question	Negative Sentence
Indefinite	Present	I, we, you, they + V <sub>1</sub> he, she, it + V <sub>1</sub> + (e) s	do + S+ V <sub>1</sub> does+ S + V <sub>1</sub>	S + do, does not + + V <sub>1</sub>
	Past	S+ V <sub>2</sub>	did + S + V <sub>1</sub>	S + did not + V <sub>1</sub>
	Future	will + V <sub>1</sub>	will + S + V <sub>1</sub>	S + shall, will not + + V <sub>1</sub>
Continuous	Present	I am / he, she, it, is / you, we, they are + will + V <sub>ing</sub>	be <sub>1</sub> + S + V <sub>ing</sub>	S + be <sub>1</sub> not + V <sub>ing</sub>

	<b>Past</b>	S + was (однина) were (множина) + + V <sub>ing</sub>	be <sub>2</sub> + S + V <sub>ing</sub>	S + be <sub>2</sub> not + V <sub>ing</sub>
	<b>Future</b>	S + will be + V <sub>ing</sub>	will + S + be + + V <sub>ing</sub>	S + will be not + + V <sub>ing</sub>
<b>Perfect</b>	<b>Present</b>	I, you, we, they have + V <sub>3</sub> he, she, it has + V <sub>3</sub>	have / has + S + + V <sub>3</sub>	S + have / has not + + V <sub>3</sub>
	<b>Past</b>	S + had + V <sub>3</sub>	had + S + V <sub>3</sub>	S + had not + V <sub>3</sub>
	<b>Future</b>	S + will have + V <sub>3</sub>	will + S + have + + V <sub>3</sub>	S + will have not + + V <sub>3</sub>
<b>Perfect Continuous Tense</b>	<b>Present</b>	S + have / has been + + V <sub>ing</sub>	have / has + S + + been + V <sub>ing</sub>	S + have / has not been + V <sub>ing</sub>
	<b>Past</b>	S + had been + V <sub>ing</sub>	had + S + been + + V <sub>ing</sub>	S + had not been + + V <sub>ing</sub>
	<b>Future</b>	S + will have been + + V <sub>ing</sub>	will + S + have been + V <sub>ing</sub>	S + will not have been + V <sub>ing</sub>

### The Verbs of Motion and Doing Tense Forms. Passive Voice

<b>Aspect</b>	<b>Tense</b>	<b>Affirmative Sentence (Statement)</b>	<b>Question</b>	<b>Negative Sentence</b>
<b>Indefinite</b>	<b>Present</b>	S + be <sub>1</sub> + V <sub>3</sub>	be <sub>1</sub> + S + V <sub>3</sub>	S + be <sub>1</sub> not + V <sub>3</sub>
	<b>Past</b>	S + be <sub>2</sub> + V <sub>3</sub>	be <sub>2</sub> + S + V <sub>3</sub>	S + be <sub>2</sub> not + V <sub>3</sub>
	<b>Future</b>	S + will be + V <sub>3</sub>	will + S + be + V <sub>3</sub>	S + will not be + V <sub>3</sub>
<b>Continu</b>	<b>Present</b>	S + be <sub>1</sub> + being + V <sub>3</sub>	be <sub>1</sub> + S + being + + V <sub>3</sub>	S + be <sub>1</sub> not being + + V <sub>3</sub>



	<b>Past</b>	S + be <sub>2</sub> + being + V <sub>3</sub>	be <sub>2</sub> + S + being + V <sub>3</sub>	S + be <sub>2</sub> not being + + V <sub>3</sub>
<b>Perfect</b>	<b>Present</b>	S + have / has been + V <sub>3</sub>	have / has + S + + been + V <sub>3</sub>	S + have / has not been + V <sub>3</sub>
	<b>Past</b>	S + had been + V <sub>3</sub>	had + S + been + V <sub>3</sub>	S + had not been + + V <sub>3</sub>
	<b>Future</b>	S + will have been + + V <sub>3</sub>	will + S + have been + + V <sub>3</sub>	S + will not have been + V <sub>3</sub>

S – subject – підмет;

V<sub>1,2,3</sub> – дієслово у 1-й, 2-й, 3-й формі;

be<sub>1</sub>, – am, is, are;

be<sub>2</sub> – was, were

*Продовження*

## **Verbals. Віддієслівні форми**

### **The Infinitive. Інфінітив**

#### **The Infinitive Forms**

<b>Tense</b>	<b>Voice</b>	
	<b>Active</b>	<b>Passive</b>
<b>Simple</b>	to ask	to be asked
<b>Continuous</b>	to be asking	—
<b>Perfect</b>	to have asked	to have been asked
<b>Perfect Continuous</b>	to have been asking	—

#### **The Infinitive Functions**

<b>Function</b>	<b>Example</b>
<b>Subject</b>	To ski is pleasant.
<b>Object</b>	He asked me to help him.
<b>Attribute</b>	The article to be translated is very difficult.
<b>Adverbial Modifier</b>	She went to the station to meet her friend.

<b>Part of Compound Nominal Predicate</b>	Our intention was to help you.
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### The Complex Subject with the Infinitive

The ecologists are said to arrive on Monday.

### The Complex Object with the Infinitive

We know him to be a good student.

### The Participle. Дієприметник

#### The Participle Forms

Tense	Voice	
	Active	Passive
<b>Simple</b>	asking	being asked
<b>Perfect</b>	having asked	having been asked
<b>Past</b>	—	asked

*Продовження*

### The Participle Functions

Function	Example
<b>Attribute</b>	The doctor examining the patient was attentive.
<b>Adverbial Modifier</b>	Having plenty of time we decided to walk.
<b>Part of a Compound Nominal Predicate</b>	The students are translating the article.

### The Absolute Nominal Participle Construction

1. The ozone disappearing, the life on the Earth is endangered.
2. We discussed our problems, the time going on.

### The Gerund. Герундій

#### The Gerund Forms

Tense	Voice	
	Active	Passive
<b>Simple</b>	reading	being read
<b>Perfect</b>	having read	having been read

### The Gerund Functions

Function	Example
<b>Subject</b>	Learning rules without examples is useless.
<b>Object</b>	Our environment needs protecting.
<b>Attribute</b>	He has the pleasure of reading books.
<b>Adverbial Modifier</b>	The conference closed after hearing and discussing about 20 items.
<b>Part of a Compound Nominal Predicate</b>	Our dream is becoming good specialists.

Додаток 2

### English Prefixes and Suffixes

Prefixes		Adjective suffixes	
<b>arise</b>	вставати	<b>beautiful</b>	гарний
<b>believe</b>	вважати, вірити	<b>economic</b>	економічний
<b>conclusion</b>	висновок	<b>different</b>	різний
<b>destroy</b>	(роз) руйнувати	<b>easy</b>	легкий
<b>illegal</b>	незаконний	<b>important</b>	важливий
<b>include</b>	включати	<b>positive</b>	позитивний
<b>international</b>	міжнародний	<b>solar</b>	сонячний
<b>offset</b>	відмінити	<b>suitable</b>	підходящий
<b>overestimate</b>	переоцінити	<b>universal</b>	універсальний
<b>underestimate</b>	недооцінити	Noun suffixes	
<b>reread</b>	перечитати	<b>ability</b>	здатність
<b>prepare</b>	підготувати	<b>engineer</b>	інженер
Verb suffixes		<b>future</b>	майбутнє
<b>differ</b>	відрізнятися	<b>protecting</b>	захист
<b>operate</b>	працювати	<b>ecologist</b>	еколог

supply	постачати	evolution	розвиток
organize	організовувати	operator	оператор
distinguish	відрізняти	television	телебачення

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## ЗМІСТ

	Стор.
Пояснювальна записка до методичних вказівок	3
Контрольна робота 1	6
Контрольна робота 2	33
Контрольна робота 3	62
Контрольна робота 4	95
Додаток 1. Таблиці з граматики.	127
Додаток 2. Таблиці англійських префіксів і суфіксів	131
Список літератури	131

Навчальне видання

## **АНГЛІЙСЬКА МОВА**

### **МЕТОДИЧНІ ВКАЗІВКИ**

до вивчення дисципліни та виконання контрольних  
робіт для студентів напряму 6.140.106 “Екологія  
та охорона навколишнього середовища та збалансоване  
природокористування” заочної форми навчання

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