МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ОДЕСЬКИЙ ДЕРЖАВНИЙ ЕКОЛОГІЧНИЙ УНІВЕРСИТЕТ

МЕТОДИЧНІ ВКАЗІВКИ
до виконання контрольної роботи з англійської мови
для студентів II курсу заочної форми навчання
Напрям підготовки – Гідрометеорологія
Спеціальність – Гідрологія та гідрохімія

"Затверджено"
на засіданні робочої групи методичної
ради "Заочна та післядипломна освіта"

Одеса – 2010

Методичні вказівки до виконання контрольної роботи з англійської мови для студентів II курсу заочної форми навчання.
Напрям підготовки – гідрометеорологія
Спеціальність – гідрологія та гідрохімія

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Передмова

Нормативна дисципліна „Англійська мова” відноситься до гуманітарного циклу освітньо-кваліфікаційного рівня бакалавр і є складовою частиною загальноосвітньої підготовки студентів ОДЕКУ.

Практичне володіння англійською мовою при заочній формі навчання означає вміння самостійно за допомогою словника читати літературу за фахом англійською мовою, знаходити корисну для роботи інформацію, а також перекладати тексти за фахом рідною мовою.

Метою запропонованих методичних вказівок для самостійної роботи студентів (СРС) та навчального матеріалу з англійської мови для студентів ІІ курсу заочної форми навчання, напрям підготовки – “гідрометеорологія”, спеціалізація – „гідрологія та гідрохімія” є:

– виробити у студентів навички читання та перекладу науково-технічної літератури англійською мовою за фахом “гідрологія”;

– розвинути вміння розуміти зміст прочитаного;

– виробити навики постановки запитань до тексту англійською мовою;

– підготовити студентів до складання іспиту з англійської мови.

Навчальна програма для студентів ІІ курсу заочної форми навчання розрахована на 134 годин СРС та на 16 годин аудиторної роботи.

Програма з дисципліни англійська мова для студентів ІІ к. заочної форми навчання (IV семестр)

Змістовні модулі	№п.п.	Назва теми заняття	Кількість годин				Форми контролю
			загальна	лекції	практичні заняття	самостій-на робота	
ЗМ-П1	1	Особливості умовних речень в англійській мові (I, II, III види умовних речень)	19	–	2	17	УО
	2	Особливості умовних речень в англійській мові (I, II, III види умовних речень)	19	–	2	17	УО
ЗМ-П2	3	Інфінітив та дієприк-метник. Їх складні форми	19	–	2	17	УО
	4	Звороти, які рівнозначні додатковим реченням: об’єктний інфінітивний, суб’єктний інфінітивний, незалежний (самостійний дієприкметниковий зворот)	19	–	2	17	УО
ЗМ-П3	5	Граматичні функції дієслів ***should*** і ***would***	19	–	2	17	КР №4
	6	Звороти з інфінітивом, дієприкметником і герундієм, які рівнозначні додатковим реченням	19	–	2	17	КР №5

ЗМ-П4	7	Різні значення слів: ***only, both…and, either…or, neither…nor, as***. Самостійний переклад суспільно-політичного тексту – 5.000 др.зн.	18	–	2	16	КР №6
	8	Різні значення слів: ***because of, for, since, due, provided***. Самостійний переклад суспільно-політичного тексту – 5.000 др.зн.	18	–	2	16	КР №7
		Всього	**150**	**–**	**16**	**134**	

Контрольні роботи №4 та №5 передбачають контроль СРС. Кожний з чотирьох варіантів контрольних робіт №4 та №5 містять оригінальні тексти за фахом „гідрологія", які були узяті з сучасної англійської технічної літератури; граматичні вправи для створення навичок володіння визначеними граматичними конструкціями.

Контрольні роботи №6 та №7 передбачають письмовий переклад з англійської мови суспільно-політичного тексту по 5 тис. др.. знаків за вільним вибором студента. При виконанні контрольної роботи слід користуватися загальними та спеціалізованими перекладними словниками.

Поточна та підсумкова оцінка знань студентів здійснюється за модульно-накопичувальною системою. Мінімальна сума балів, яку може набрати студент, складає 60 балів, з них за контрольні роботи – 48 балів (КР№4 –12, КР№5 –12, КР№6 –12, КР№7 –12), з практичної частини – 12 балів. Виставлення семестрової оцінки для заліку здійснюється згідно з такими критеріями:

– ***"зараховано"*** – студент переклав не менш ніж **80 %** тексту без суттєвих граматичних помилок, склав запитання до змісту тексту та показав знання основних термінів за фахом "гідрологія", які зустрічалися у контрольних роботах;

– ***"не зараховано"*** – студент переклав менш ніж **80%** тексту у контрольних роботах, припустив більш 10 граматичних помилок при перекладі текстів та складанні запитань, та не показав знань основних термінів за фахом "гідрологія", що зустрічалися у контрольних роботах.

Практична частина курсу складається з 4-х змістовних модулів, що відповідає розділам робочої програми дисципліни та складається з теоретичної та практичної частин. Теоретична частина оцінюється за наявністю письмових контрольних робіт, а практична – за результатами усного опитування на практичних заняттях.

Підсумковим контролем є залік, а допуском до заліку є наявність контрольних робіт №№ 4, 5, 6, 7.

КОНТРОЛЬНЕ ЗАВДАННЯ №4

Щоб вірно зробити завдання №4, треба засвоїти розділи курсу англійської мови:

1. Умовні речення.
2. Складні форми інфінітива та дієприкметника.
3. Звороти, які рівнозначні додатковим реченням: об'єктний інфінітивний, суб'єктний інфінітивний, незалежний (самостійний) дієприкметниковий зворот.

Використовуйте наведені нижче **<u>зразки.</u>**

Зразок до вправи №III

1. We want this method to be applied at their hydrological station	1. Ми хочемо, щоб цей метод було використано на їхній гідрологічній станції
2. This method is reported to be applied at this hydrological station	2. Рапортують, що цей метод використовується на цьому заводі

Зразок до вправи №IV

1. Having done a given number of operations, the machine stopped automatically	1. Зробивши певну кількість операцій, машина автоматично зупинилась
2. A given numbers of operations having been done, the machine stopped automatically	2. Після того, як була виконана певна кількість операцій, машина автоматично зупинилась
3. The installation was automatized last year, its capacity rising by 25 per cent	3. Цей прилад було автоматизовано у минулому році, та його продуктивність зросла на 25%

Зразок до вправи №V

1. If this machine is installed at the plant, labour productivity will increase considerably	1. Якщо ця машина буде встановлена на заводі, продуктивність праці значно зросте
2. If this machine were installed at the plant, labour productivity would increase considerably	2. Якщо би ця машина була встановлена на заводі, продуктивність праці значно зросла б
3. If the new technology had not been introduced, labour productivity would not have been raised	3. Якщо б не була впроваджена нова техніка, продуктивність праці не зросла б

ВАРІАНТ №1

І. Зробіть письмовий переклад тексту:

Text INFILTRATION

Infiltration is the process by which water on the ground surface enters the soil. Infiltration rate in soil science is a measure of the rate at which soil is able to absorb rainfall or irrigation. It is measured in inches per hour or millimetres per hour. The rate decreases as the soil becomes saturated. If the precipitation rate exceeds the infiltration rate, runoff will usually occur unless there is some physical barrier. It is related to the saturated hydraulic conductivity of the near-surface soil. The rate of infiltration can be measured using an infiltrometer.

Infiltration is governed by two forces: gravity and capillary action. While smaller pores offer greater resistance to gravity, very small pores pull water through capillary action in addition to and even against the force of gravity.

The rate of infiltration is affected by soil characteristics including ease of entry, storage capacity, and transmission rate through the soil. The soil texture and structure, vegetation types and cover, water content of the soil, soil temperature, and rainfall intensity, all play a role in controlling infiltration rate and capacity. For example, coarse-grained sandy soils have large spaces between each grain and allow water to infiltrate quickly. Vegetation creates more porous soils by both protecting the soil from pounding rainfall, which can close natural gaps between soil particles, and loosening soil through root action. This is why forested areas have the heist infiltration rates of any vegetative types.

The top layer of leaf litter that is not decomposed protects the soil from the pounding action of rain, without this the soil can become far less permeable. In chaparral vegetated areas, the hydrophobic oils in the succulent leaves can be spread over the soil surface with fire, creating large areas of hydrophobic soil. Other conditions that can lower infiltration rates or block them include dry plant litter that resists re-wetting, or frost. If soil is saturated at the time of an intense freezing period, the soil can become a concrete frost on which almost no infiltration would occur. Over an entire watershed, there are likely to be gaps in the concrete frost or hydrophobic soil where water can infiltrate.

Once water has infiltrated the soil it remains in the soil, percolates down to the ground water table, or becomes part of the subsurface runoff process.

ІІ. Дайте письмову відповідь на такі запитання:

1. What is infiltration rate in soil science ?
2. When does the infiltration rate decrease ?
3. What is infiltration governed by ?

4. What plays a role in controlling infiltration rate and capacity ?
5. What conditions can lower or block infiltration rates ?

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що об'єктивний та суб'єктивний інфінітивні звороти відповідають додатковим реченням:

1. Everyone wanted him to win the competition.
2. She advised me to tell the police about the accident.
3. The scientists believe the total quantity of water on and around the Earth to have been more or less uniform throughout geologic time.
4. Some of the water precipitated on all land surfaces is assumed to come from local sources.
5. The amount of water vapour in the atmosphere is observed to be continually changing.
6. The engineer expected the work to be done in time.
7. We thought these figures to be absolutely wrong.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на відмінність у перекладі залежного та незалежного дієприкметникових зворотів:

1. The velocity of flowing water depends upon the slope and character of its channel.
2. Being cooled water becomes ice.
3. Having great areas the oceans are principal sources of the atmospheric water.
4. The water having been precipitated to the earth, part of it enters the ground.
5. The lakes had no outlet, their inflow evidently being lost by percolation.
6. With the weather being windy, we did not risk to cross the river.
7. Computers represent a completely new branch of science, the first of them having appeared not so long ago.

V. Поставте дієслова у дужках у необхідному часі, письмово перекладіть умовні речення:

1. If I am going to be late, I (let) you know.
2. If you took more exercise, you (feel) healthier.
3. It would be useful if you (can use) computer.
4. If I (to know) your number, I would have phone you.
5. We wouldn't mind living in London, if the weather (be) better.
6. If he spoke clearly, people (understand) him.

ВАРІАНТ №2

І. Зробіть письмовий переклад тексту:

Text SURFACE RUNOFF

Surface runoff is the water flow which occurs when soil is infiltrated to full capacity and excess water, from rain, snowmelt, or other sources flows over the land. This is a major component of the water cycle. Runoff that occurs on surfaces before reaching a channel is also called a nonpoint source. If a nonpoint source contains man-made contaminants, the runoff is called nonpoint source pollution. A land area which produces runoff draining to common point is called a watershed. When runoff flows along the ground, it can pick up soil contaminants such as petroleum, pesticides (in particular herbicides and insecticides), or fertilizers that become discharge or nonpoint source pollution.

Surface runoff can be generated either by rainfall or by the melting of snow or glaciers.

Snow and glacier melt occur only in areas cold enough for these to form permanently. Typically snowmelt will peak in the spring and glacier melt in the summer, leading to pronounced flow maxima in rivers affected by them. The determining factor of the rate of melting of snow or glaciers is both air temperature and the duration of sunlight. In high mountain regions, streams frequently rise on sunny days and fall on cloudy ones for this reason.

In areas where there is no snow, runoff will come from rainfall. However, not all rainfall will produce runoff because storage from soils can absorb light showers. On the extremely ancient soils of Australia and Southern Africa, proteoid roots with their extremely dense networks of root hairs can absorb so much rainwater as to prevent runoff even when substantial amounts of rain fall. In these regions, even on relatively less infertile cracking clay soils, high amounts of rainfall and low potential evaporation are needed to generate any surface runoff, leading to specialised adaptations to extremely variable (usually ephemeral) streams.

Infiltration excess overland flow. This occurs when the rate of rainfall on a surface exceeds the rate at which water can infiltrate the ground, and any depression storage has already been filled. This is called infiltration excess overland flow. This more commonly occurs in arid and semi-arid regions, where rainfall intensities are high and the soil infiltration capacity is reduced because of surface sealing, or in paved areas.

After water infiltrates the soil on an up-slope portion of a hill, the water may flow laterally through the soil, and exfiltrate (flow out of the soil) closer to a channel. This is called *subsurface return flow* or interflow.

As it flows, the amount of runoff may be reduced in a number of possible ways: a small portion of it may evapotranspire; water may become temporarily stored in microtopographic depressions; and a portion of it may become run-on, which is the infiltration of runoff as it flows overland. Any remaining surface water eventually flows into a receiving water body such as a river, lake, estuary or ocean.

II. Дайте письмову відповідь на такі запитання:

1. What is a major component of the water cycle ?
2. What is a nonpoint source pollution ?
3. What do we call infiltration excess overland flow ?
4. When may the water flow laterally through the soil ?
5. What are the possible ways of runoff reduction ?

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що об'єктивний та суб'єктивний інфінітивні звороти відповідають додатковим реченням:

1. The scientists believe the total quantity of water on and around the earth to have been more or less uniform throughout geologic time.
2. We suppose this approach to the problem to be absolutely incorrect.
3. The total amount of water in and on the earth is believed to remain essentially constant.
4. Precipitation is likely to increase with altitude up to about 3,000 feet.
5. Marine navigation is known to be one of the most important subjects for mariners.
6. The chief expected him to prepare a report on possible demand.
7. They are known to apply mathematical techniques to the study of problems in business.
8. We know the earth's crust to be constantly changing.
9. Greater solar activity seems to produce lower earth temperature.
10. Heat and cold are believed to be distributed by ocean currents over thousand of miles.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на відмінність у перекладі залежного та незалежного дієприкметникових зворотів:

1. Having reached the earth, the precipitated water begins to accumulate additional impurities, both soluble and insoluble.
2. Being cooled water becomes ice.

3. The rain as it falls, evaporates somewhat adding water particles to the cold air.
4. Fog is water evenly distributed through air in minute particles.
5. The water having been precipitated to the earth, part of it enters the ground.
6. Situated on a narrow strip of land between the mountains and the sea, Rio de Janeiro has one of the world's finest harbours.
7. Weather permitting, we shall walk to the lakes.

V. Поставте дієслова у дужках у необхідному часі, письмово перекладіть умовні речення:

1. If I meet you tomorrow, I (to tell) you everything.
2. If they (to leave) Bermuda in summer, they will sail north to explore the Gulf Stream.
3. I would ring him up if I (to know) his number.
4. If they (can), they would be here.
5. If you (to come) home earlier yesterday, you would have found me there.
6. He (to be) so kind unless he had known your brother.

ВАРІАНТ №3

I. Зробіть письмовий переклад тексту:

Text **EROSION**

Surface runoff causes erosion of the earth's surface. There are four principal types of erosion: splash erosion, gully erosion, sheet erosion and stream bed erosion. *Splash erosion* is the result of mechanical collision of raindrops with the soil surface. Dislodged soil particles becoming suspended in the surface runoff and carried into streams and rivers. *Gully erosion* occurs when the power of runoff is strong enough that it cuts a well defined channel. These channels can be as small as one centimetre wide or as large as several meters. *Sheet erosion* is the overland transport of runoff without a well defined channel. In the case of gully erosion, large amounts of material can be transported in a small time period. *Stream bed erosion* is the attrition of stream banks or bottoms by rapidly flowing rivers or creeks.

Reduced crop productivity usually results from erosion, and these effects are studied in the field of soil conservation. The soil particles carried in runoff vary in size from about 0.001 millimeter to 1.0 millimeter in diameter. Larger particles settle over short transport distances, whereas small particles can be

carried over long distances suspended in the water column. Erosion of silty soils that contain smaller particles generates turbidity and diminishes light transmission, which disrupts aquatic ecosystems.

Entire sections of countries have been rendered unproductive by erosion. On the high central plateau of Madagascar, approximately ten percent of that country's land area, virtually the entire landscape is devoid of vegetation, with erosive gully furrows typically in excess of 50 meters deep and one kilometre wide. Shifting cultivation is a farming system which sometimes incorporates the slash and burn method in some regions of the world. Erosion causes loss of the fertile top soil and reduces its fertility and quality of the agricultural produce.

Modern industrial farming is another major cause of erosion. In some areas in the American corn belt more than 50 percent of the original topsoil has been carried away within the last 100 years.

The principal environmental issues associated with runoff are the impacts to surface water, groundwater and soil through transport of water pollutants to these systems. Ultimately these consequences translate into human health risk, ecosystem disturbance and aesthetic impact to water resources. Some of the contaminants that create the greatest impact to surface waters arising from runoff are petroleum substances, herbicides and fertilizers.

II. Дайте письмову відповідь на такі запитання:

1. What are splash and gully types of erosion ?
2. What are sheet and stream bed types of erosion ?
3. What does erosion cause ?
4. What are the principal environmental issues associated with ?

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що об'єктивний та суб'єктивний інфінітивні звороти відповідають додатковим реченням:

1. We know the earth's crust to be constantly changing.
2. The air is known to extend about 200 miles above the earth.
3. Greater solar activity seems to produce lower earth temperature.
4. Moulten and Chamberlin believed the earth and other planets to have come originally from the sun.
5. Heat and cold are believed to be distributed by ocean currents over thousand of miles.
6. Acid rains are known to be caused by a high level of air pollution by sulphur dioxide.
7. This vessel is known to cover an area with a system of evenly spaced sounding lines.
8. We suppose the final scale of any chart to depend upon the observations.

9. Our correspondent reports the situation to be now under control.
10. The engineer expected the work to be done in time.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на відмінність у перекладі залежного та незалежного дієприкметникових зворотів:

1. The moving wall of ice changes everything in its path.
2. Having undergone several transformation in recent geologic time the Caspian Sea now forms three sections.
3. Weather permitting, we shall walk to the Lakes.
4. Only the first choice was hard to make, the rest of choices causing no causing.
5. Situated on a narrow strip of land between the mountains and the sea, Rio de Janeiro has one of the world's finest harbours.
6. The data being sent by the sputnik are compared with the data being collected by ground observers.
7. The density of surface water having been increased by cooling and evaporation, a mass of surface water sinks until it meets water of the same density.

V. Поставте дієслова у дужках у необхідному часі, письмово перекладіть умовні речення:

1. If the hydrologists (to use) the necessary devices, the water measurements would be correct.
2. If the operator's cabin had been equipped with remote control, he (to be able) to work faster.
3. If I meet you tomorrow, I (to tell) you everything.
4. They can (to call) on us, if they like.
5. She would ring him up at once, if I (to know) his number.
6. He wouldn't be late, if everything (to be) all right.

ВАРІАНТ №4

I. Зробіть письмовий переклад тексту:

Text **GROUNDWATER**

Groundwater is water located beneath the ground surface in soil pore spaces and in the fractures of lithologic formations. A unit of rock or an unconsolidated deposit is called an aquifer when it can yield a usable quantity of

water. The depth at which soil pore spaces or fractures and voids in rock become completely saturated with water is called the water table. Groundwater is recharged from, and eventually flows to, the surface naturally; natural discharge often occurs at springs and seeps, and can form oases or wetlands. Groundwater is also often withdrawn for agricultural, municipal and industrial use by constructing and operating extraction wells. The study of the distribution and movement of groundwater is hydrogeology, also called groundwater hydrology.

Typically, groundwater is thought of as liquid water flowing through shallow aquifers, but technically it can also include soil moisture, permafrost (frozen soil), immobile water in very low permeability bedrock, and deep geothermal or oil formation water. Groundwater is hypothesized to provide lubrication that can possibly influence the movement of faults. It is likely that much of the Earth's subsurface contains some water, which may be mixed with other fluids in some instances. Groundwater may not be confined only to the Earth. The formation of some of the landforms observed on Mars may have been influenced by groundwater. These is also evidence that liquid water may also exist in the subsurface of Jupiter's moon Europa.

An aquifer is a layer of relatively porous substrate that contains and transmits groundwater. When water can flow directly between the surface and the saturated zone of an aquifer, the aquifer is unconfined. The deeper parts of unconfined aquifers are usually more saturated with groundwater since gravity causes water to flow downward.

The upper level of this saturated layer of an unconfined aquifer is called the water table or phreatic surface. Below the water table, where generally all pore spaces are saturated with water is the phreatic zone.

Substrate with relatively low porosity that permits limited transmission of groundwater is known as an aquitard. An aquiclude is a substrate with porosity that is so low it is virtually impermeable to groundwater.

II. Дайте письмову відповідь на такі запитання:

1. What is groundwater ?
2. What is groundwater withdrawn for ?
3. What can groundwater technically include ?
4. What is an aquifer ?

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що об'єктивний та суб'єктивний інфінітивні звороти відповідають додатковим реченням:

1. Some of the water precipitated on all land surfaces is assumed to come from local sources.

2. The scientists believe the total quantity of water on and around the earth to have been more or less uniform throughout geologic time.
3. We thought these figures to be absolutely wrong.
4. When the air contains all the water vapour it can possibly hold at a given temperature the air is said to be saturated.
5. He doesn't want anyone to know the depth of the river.
6. They are supposed to have been working at the problem for two months.
7. We know the earth's crust to be constantly changing.
8. Cyclonic precipitation is said to move from high-pressure regions to low-pressure regions.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на відмінність у перекладі залежного та незалежного дієприкметникових зворотів:

1. The water having been precipitated to the earth, part of it enters the ground.
2. The velocity of flowing water depends on the slope and character of its channel.
3. Having reached the earth, the precipitated water begins to accumulate additional impurities.
4. The laboratory being provided with necessary instruments, they could carry out the work successfully.
5. With the weather being windy, we did not risk to cross the river.
6. Fog is water evenly distributed through air in minute particles.
7. Evaporation from the sea water is about 5% less than from fresh water, other conditions being the same.

V. Поставте дієслова у дужках у необхідному часі, письмово перекладіть умовні речення:

1. You will get good results if you (to apply) this method of calculation.
2. If they found the exact meaning of these words, they (to understand) the text easily.
3. Most rivers would have dried, if they (to depend) only on precipitation.
4. The results of the experiment (to be) much better if we had used the new equipment.
5. If the wind is favourable, the ship (to reach) the port.
6. Were the vapour cooled below its dew point, some of it (to become) liquid.

КОНТРОЛЬНЕ ЗАВДАННЯ №5

Щоб вірно зробити завдання №5, треба засвоїти розділи курсу англійської мови:

1. Граматичні функції дієслів **should, would**.
2. Звороти з інфінітивом, дієприкметником і герундієм, які рівнозначні додатковим реченням.
3. Різні значення слів: **only, both…and, either…or, neither…nor, as, because of , for, since, provided.**

Використовуйте наведені нижче **зразки.**

FOR

1. Polymers are used **for** different purposes	1. Полімери використовують **для** різних цілей
2. **For** a long time polymers were used instead of metals	2. **Протягом** довгого часу полімери використовували замість металів
3. Plastics are of great importance **for** they can replace metals	3. Пластики мають велике значення, **тому що** вони можуть замінити метали

SINCE

1. **Since** the experiment is completed, let us see its results	1. **Через те що** експеримент закінчено, давайте подивимось результати
2. Man used metals **since** ancient times	2. **З** давніх часів людина застосовувала метали

BECAUSE

1. Plastics will be widely used in industry **because** they posses valuable properties	1. Пластмаси будуть широко застосовуватись у промисловості, **тому що** вони мають цінні властивості
2. Plastics find wide use in industry **because of** their cheapness	2. Пластмаси знаходять широке застосування в промисловості **внаслідок** своєї дешевини

AS

1. **As** an engineer you must know this technological process	1. **Як** інженер ви повинні знати цей технологічний процес
2. **As** the chief engineer is here, we shall ask him to help us.	2. **Оскільки** головний інженер тут, ми просимо його допомогти нам
3. **As soon as** the chief engineer comes, we shall ask him to examine this device	3. **Тільки-но** прийде головний інженер, ми попросимо його перевірити цей механізм
4. The workers will take part in the conference **as well**	4. Робочі **також** приймуть участь у конференції

5. **As to** the chief engineer he can speak English	5. **Що стосується** головного інженера, він може говорити англійською.

DUE

1. Wide use of plastics is **due to** their cheapness	1. Широке застосування пластмас **обумовлено** їх дешевиною
2. Plastics are widely used in engineering **due to** their good insulation properties	2. **Завдяки** хорошим ізоляційним властивостям пластмаси широко застосовуються в техніці

PROVIDED

1. **Provided** automatic devices are used, we shall increase the labour productivity	1. **Якщо** будуть застосовані автоматичні прилади, ми збільшимо продуктивність праці

EITHER …OR

1. You can apply **either** metal **or** plastics in this case	1. У цьому випадку ви можете застосувати **або** метал, **або** пластмасу

NEITHER …NOR

1. You can apply **neither** metal **nor** plastics in this case	1. У цьому випадку ви не можете застосувати **ні** метал, **ні** пластмасу

BOTH …AND

1. You can apply **both** metal **and** plastics in this case	1. У цьому випадку ви можете застосувати **як** метал, **так і** пластмасу

ONLY

1. He **only** examined the instrument	1. Він **тільки** перевірив прилад
2. He is **the only** man who will be able to repair the instrument	2. Він – **єдина** людина, яка може відремонтувати прилад

ВАРІАНТ №1

І. Зробіть письмовий переклад тексту:

Text **WATER CYCLE**

Groundwater makes up about twenty percent of the world's fresh water supply, which is about 0.61% of the entire world's water, including oceans and permanent ice.

Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table. It is estimated that the volume of groundwater comprises 30.1% of all freshwater resources on earth compared to 0.3% in surface freshwater; the icecaps and glaciers are the only larger sources of fresh water on the earth at 68.7%.

Groundwater can be a long-term 'reservoir' of the natural water cycle (with residence times from days to millennia), as opposed to short-term water reservoirs like the atmosphere and fresh surface water (which have residence time from minutes to years). The figure shows how deep groundwater (which is quite distant from the surface recharge) can take a very long time to complete its natural cycle.

The Great Artesian Basin in central and eastern Australia is one of the largest confined aquifer systems in the world, extending for almost 2 million km^2. By analysing the trace elements in water sourced from deep underground, hydrogeologists have been able to determine that water extracted from these aquifers can be more than 1 million years old.

By comparing the age of groundwater obtained from different parts of the Great Artesian Basin, hydrogeologists have found it increases in age across the basin. Where water recharges the aquifers along the Eastern Divide, ages are relatively young. As groundwater flows westward across the continent, it increases in age, with the oldest groundwater occurring in the western parts. This means that in order to have travelled almost 1000 km from the source of recharge in 1 million years, the groundwater flowing through the Great Artesian Basin travels at an average rate of about 1 metre per year.

II. Поставте письмово п'ять запитань до тексту у вигляді плану.

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення дієслів *should, would* :

1. Many of the modern achievements in hydrology would be quite impossible without computers.
2. These parts should be subjected to X-ray examination.
3. If there were no water cycle, there would be no rains.
4. The engineers would soon obtain better results, since they use a computer.
5. I should like to go away for the weekend.
6. The engineer said that he would take the hydrological readings every two hours.
7. It was decided that the matter should be referred to a special committee.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що інфінітивні та дієприкметникові звороти найчастіше відповідають додатковим реченням:

1. The problem to be solved is rather difficult.
2. The substance being heated, the motion of the molecules increases.
3. To separate a compound into its elements, chemical means must be used.
4. Specialists wanted the unknown element to be analysed and tested.
5. The electrons move with various speed, they velocity depending on the temperature and nature of material.
6. The sun is known to be source of heating.
7. The technology to be applied greatly improves the quality of water.
8. Having added the heat we could change the state of a substance.

V. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення виділених слів:

1. Both magnetic and gravity measurements were made at various periods during the summer.
2. Because of the danger of radiation one must take safety measures.
3. Provided we place the hydrometer in the ship with the thermometer it changes its position and consequently its reading.
4. Hydro-electric stations generate electrical power for industry as well as for everyday life needs.
5. The appearance of new materials is due to the achievements of chemistry.
6. The mixing of water can either be lateral or vertical.
7. As winter approached, the days become shorter.
8. He had to work hard for not to fail in his exam.

ВАРІАНТ №2

І. Зробіть письмовий переклад тексту:

Text **OVERDRAFT**

Groundwater is a highly useful and often abundant resource, however over-use or overdraft can cause major problems to human users and to the environment. The most evident problem (as far as human groundwater use is concerned) is a lowering of the water table beyond the reach of existing wells. Wells must consequently be deepened to reach the groundwater; in some places (e.g., California, Texas and India) the water table may, in turn, cause other problems such as subsidence and saltwater intrusion.

Groundwater is also ecologically important. The importance of groundwater to ecosystems is often overlooked, even by freshwater biologist and ecologists. Groundwaters sustain rivers, wetlands and lakes, as well as subterranean ecosystems within karst or alluvial aquifers.

Not all ecosystems need groundwater, of course. Some terrestrial ecosystems, for example those of the open deserts and similar arid environments, exist on irregular rainfall and the moisture it delivers to the soil – supplemented by moisture in the air. While there are other terrestrial ecosystems in more hospitable environments where groundwater plays no central role, groundwater is in fact fundamental to many of the world's major ecosystems. Water flows between groundwaters and surface waters. Most rivers, lakes and wetlands are fed by, and (at other places or times) feed groundwater – to varying degrees. Groundwater feeds soil moisture through percolation, and many terrestrial vegetation communities depend directly on either groundwater or the percolated soil moisture above the aquifer – for at least part of each year. Hypothetic zones (the mixing zone of streamwater and groundwater) and riparian zones are examples of ecotones largely or totally dependent on groundwater.

When we extract groundwater linked to a river system, we extract water from that river, even if the result is not evident for some time. And of course vice versa. Water management agencies around the world are still struggling to come to terms with this simple fact.

II. Поставте письмово п'ять запитань до тексту у вигляді плану.

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення дієслів *should, would* :

1. The weather experts said that it would rain tomorrow.
2. You should stop smoking, it is so bad for your health.
3. Without electric equipment space flights would be impossible.
4. This device is automatic, but a mechanic is always available in case anything would be wrong.
5. I should say nothing about it, if I were you.
6. Perhaps you would be kind enough to let us know about this.
7. As far as this research is concerned, mention should be made that it is of great significance for our university.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що інфінітивні та дієприкметникові звороти найчастіше відповідають додатковим реченням:

1. The groundwater is said to be under artesian condition.

2. The velocity of flowing water depends on the slope and character of its channel.
3. When fully developed, tropical storms are very dangerous.
4. To compute the amount of water suspended in the air one must make observations of humidity.
5. We suppose this approach to the problem to be absolutely incorrect.
6. The amount of water vapour in the atmosphere is observed to be continually changing.
7. This task is to take observations of the water quality in this lake.
8. The water having been precipitated to the earth, part of it enters the ground.

V. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення виділених слів:

1. Weather patterns have been changing recently due to the global warming up.
2. Not only does water expand when it is being cooled between 4 or 0^{o}, but when it changes to the solid there is marked expansion.
3. Of the earth's resources none is so fundamental as water.
4. Both groundwater and water in the rocks is mostly fresh.
5. The total amount of water contained in our planet is constant and can neither be increased nor diminished.
6. Infiltration often begins at a high rate and decreases to a much lower and more or less constant rate as the rain continues.

ВАРІАНТ №3

I. Зробіть письмовий переклад тексту:

Text **SUBSIDENCE**

In its natural equilibrium state, the hydraulic pressure of groundwater in the pore spaces of the aquifer and the aquitard supports some of the weight of the overlying sediments. When groundwater is removed from aquifers by excessive pumping, pore pressures in the aquifer drop and compression of the aquifer may occur. This compression may be partially recoverable if pressures rebound, but much of it is not. When the aquifer gets compressed it may cause land subsidence, a drop in the ground surface. The city of New Orleans, Louisiana, is actually below sea level today, and its subsidence is partly caused by removal of groundwater from the various aquifer/aquitard systems beneath it. In the first half of the 20^{th} century, the city of San Jose, California, dropped 13

feet from land subsidence caused by overpumping; this subsidence has been halted with improved groundwater management.

Seawater intrusion

Generally, in very humid or undeveloped regions, the shape of the water table mimics the slope of the surface. The recharge zone of an aquifer near the seacoast is likely to be inland, often at considerable distance. In these coastal areas, a lowered water table may induce sea water to reverse the flow toward the sea. Sea water moving inland is called a saltwater intrusion. Alternatively, salt from mineral beds may leach into the groundwater of its own accord.

Mining

Sometimes the water movement from the recharge zone to the place where it is withdrawn may take centuries. When the usage of water is greater than the recharge, it is referred to as mining water (the water is often called fossil water because of its geologic age). Under those circumstances it is not a renewable resource.

Pollution

Iron oxide staining caused by reticulation from an unconfined aquifer in karst topography (Perth, Western Australia).

Not all groundwater problems are caused by over-extraction. Pollutants released to the ground can work their way down into groundwater. Movement of water and dispersion within the aquifer spreads the pollutant over a wider area, which can then intersect with groundwater wells or find their way back into surface water, making the water supplies unsafe. The interaction of groundwater contamination with surface waters is analyzed by use of hydrology transport models.

II. Поставте письмово п’ять запитань до тексту у вигляді плану.

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення дієслів *should, would* :

1. People all over the world should combine efforts to solve the serious problem of environment protection.
2. After reading a new technical article you would write an abstract.
3. If there were no atmosphere, there would be no clouds, no rain.
4. The emission of the gases into the atmosphere should be monitored carefully.
5. The scientists confirmed that the wastewater would contain carcinogenic aromatic hydrocarbon compounds.

6. Many of the modern achievements in various fields of science would be quite impossible without computers.
7. You should use all the new equipment for your experiments.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що інфінітивні та дієприкметникові звороти найчастіше відповідають додатковим реченням:

1. Methods to be used in organising precipitation data in preparation for analysis are necessarily dependent on the data themselves and the purposes to be served.
2. Water being a good insulator, prevents the conduction of much heat to any great depth.
3. The rain as it falls, evaporates somewhat adding water particles to the cold air.
4. Evaporation form sea water is about 5 per cent less than from fresh water, other conditions being the same.
5. To ensure uniform water temperature, the liquid should be stirred.
6. Having great areas the oceans are principal sources of the atmospheric water.
7. Precipitation appears to increase with altitude up to 3,000 feet and then to decrease.
8. The scientists believe the total quantity of water on and around the earth to have been more or less uniform throughout geologic time.

V. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення виділених слів:

1. Precipitation falling to the earth's surface is <u>either</u> retained where it falls, <u>or</u> finds its way into the surface-channel system of the basin.
2. <u>As</u> rain continues, the soil surface covers with a film of water.
3. <u>Both</u> the rate of melting of snow <u>and</u> the intensity of rainfall are the factors which affect the fluctuation of rivers.
4. The action of groundwater is controlled by the physical properties of the rocks <u>as well</u>.
5. <u>As</u> the heat causing the flow in the fine sand is about ten times <u>as</u> great <u>as</u> that causing flow in the coarse sand.
6. The rate of melting of snow and the intensity <u>is due</u> to the factors which affect the fluctuation of rivers directly.

ВАРІАНТ №4

І. Зробіть письмовий переклад тексту:

Text **INFILTRATION CALCULATION METHODS**

Robert E. Horton (1933) suggested that infiltration capacity rapidly declines during the early part of a storm and then towards an approximately constant value after a couple of hours for the remainder of the event. Previously infiltrated water fills the available storage spaces and reduces the capillary forces drawing water into the pores. Clay particles in the soil may swell as they become wet and thereby reduce the size of the pores. In areas where the ground is not protected by a layer of forest litter, raindrops can detach soil particles from the surface and wash fine particles into surface pores where they can impede the infiltration process.

Wastewater collection systems consist of a set of lines, junctions and lift stations to convey sewage to a wastewater treatment plant. When these lines are compromised by rupture, cracking or tree root invasion, infiltration of stormwater often occurs. This circumstance often leads to a sanitary sewer overflow, or discharge of untreated sewage to the environment.

Infiltration is a component of the general mass balance hydrologic budget. There are several ways to estimate the volume and/or the rate of infiltration of water onto a soil. Three excellent estimation methods are the Green-Ampt method, SCS method, Horton's method, and Darcy's law.

The general hydrologic budget, with all the components, with respect to infiltration F. Given all the other variables and infiltration is the only unknown, simple algebra solves the infiltration question.

$$F = BI + P - E - T - ET - S - R - IA - BO,$$

where

- F is infiltration, which can be measured as a volume or length ;
- BI is the boundary input, which is essentially the output watershed from adjacent, directly connected impervious areas;
- P is precipitation ;
- E is evaporation ;
- ET is evapotranspiration ;
- S is the storage through either retention or detention areas;
- R is surface runoff ;
- IA is the initial abstraction, which is the short term surface storage such as puddles or even possibly detention ponds depending on size ;

- BO is the boundary output, which is also related to surface runoff, R, depending on where one chooses to define the exit point or points for the boundary output.

The only note on this method is one must be wise about which variables to use and which to omit, for doubles can easily be encountered. An easy example of double counting variables is when the evaporation, E, and the transpiration, T, are placed in the equation as well as the evapotranspiration, ET. ET has included in it T as well as a portion of E.

II. Поставте письмово п'ять запитань до тексту у вигляді плану.

III. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення дієслів *should, would* :

1. You should follow all the important scientific researches in your field.
2. When the ice vanished, the lakes would gradually drain away.
3. The expected climatic change would sharp the problems of drought, deforestation and soil erosion.
4. The emission of the gases into the atmosphere should be monitored carefully.
5. It is required that modern machines should meet high standards of quality.
6. The attention should be paid to large-area pollution.
7. Further tests would be made to determine the possibility of using the new method.

IV. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на те, що інфінітивні та дієприкметникові звороти найчастіше відповідають додатковим реченням:

1. Having reached the earth, the precipitated water begins to accumulate additional impurities, both soluble and insoluble.
2. His task is to take observations of the water quality in this lake.
3. The total amount of water in and on the earth is believed to remain essentially constant.
4. When freezing water expands by about one-tenth of its volume.
5. Fog is water evenly distributed through air in minute particles.
6. The density of surface having been increases by cooling and evaporation, a mass of surface sinks until it meets water of the same density.
7. When the air contains all the water vapour it can possibly hold at a given temperature the air is said to be saturated.
8. With the weather being windy, we didn't risk to cross the river.

V. Перепишіть та письмово перекладіть на українську мову наведені нижче речення, звертаючи увагу на різні значення виділених слів:

1. The amount of evaporation from either land or water surface during a storm is negligible because of high relative humidity.
2. Snow as it falls varies greatly in its water contain.
3. Provided the ground was saturated with water, there could be no further infiltration.
4. Both swamps and shallow lakes have been drained in order that the reclaimed areas may be used for agriculture.
5. In nature, flow media are neither homogeneous nor isotropic.
6. The conservation of groundwater is very important because it moves very slowly.
7. An artesian acquifer exists due to artesian condition.

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