

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ УКРАЇНИ
“КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ”

Англійська мова

Методичні вказівки
для самостійної підготовки
студентів 1-2 курсів
хіміко-технологічного факультету
напряму підготовки
6.051301 Хімічна технологія

до виконання комплексних контрольних робіт

(електронне видання)

Рекомендовано Вченою Радою ФЛ НТУУ «КПІ»

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(Протокол № від)*

Навчальне видання

Англійська мова загальнотехнічного спрямування

Методичні вказівки

для самостійної підготовки студентів 1-2 курсів

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Передмова

Методичні вказівки для самостійної підготовки студентів 1-2 курсів хіміко-технологічного факультету до виконання комплексних контрольних робіт укладено відповідно до рекомендацій чинної навчальної програми з дисципліни «Англійська мова», і ставлять за мету перевірку рівня сформованості компетентності у читанні та перекладі, а також лексичної і граматичної компетентностей володіння загальнотехнічною англійською мовою.

Методичні вказівки складаються з 3 основних розділів і містять теоретичні та практичні рекомендації щодо виконання контрольних завдань. Також до уваги студентів представлені завдання, розроблені на основі аналізу основних труднощів, що виникають під час виконання завдань з читання текстів загальнотехнічного характеру, лексичних та граматичних завдань, завдань на переклад. Зразки контрольних завдань для 1-2 курсів та ключі до них додаються.

Завдання комплексних контрольних робіт складено на основі вивченого матеріалу відповідно до робочих навчальних програм кредитних модулів «Вступ до загальнотехнічної англійської мови» (1 курс) та «Англійська мова загальнотехнічного спрямування» (2 курс) з урахуванням специфіки факультету та спеціальностей.

Мета цього видання – допомогти студентам 1 та 2 курсів хіміко-технологічного факультету успішно підготуватися до написання комплексної контрольної роботи з англійської мови та ознайомитися зі структурою роботи, критеріями її оцінювання, а також надати рекомендації щодо особливостей виконання усіх видів контрольних завдань.

РОЗДІЛ 1.

ЗАГАЛЬНІ ВИМОГИ ДО КОМПЛЕКСНОЇ КОНТРОЛЬНОЇ РОБОТИ З ДИСЦИПЛІНИ «АНГЛІЙСЬКА МОВА»

Комплексна контрольна робота має професійне спрямування і складається з тестових завдань, виконання яких потребує вміння застосовувати інтегровані знання програмного матеріалу дисципліни «Англійська мова».

Комплексна контрольна робота охоплює весь програмний матеріал навчальної дисципліни. Кожен варіант має однакову структуру та рівнозначну складність. На виконання комплексної контрольної роботи надається 90 хвилин.

1.1. Загальні вимоги до рівня володіння іноземною мовою з дисципліни «Англійська мова»

Метою навчання іноземним мовам у вищих навчальних закладах України є практичне оволодіння іноземною мовою в обсязі, необхідному для ситуативного та професійного спілкування. В процесі досягнення цієї мети студенти мають одержати достатній рівень комунікативної компетенції, яку складають мовленнєві вміння, сформовані на основі мовних, комунікативно-пізнавальних та мовленнєвих навичок, включаючи навички перекладу загальнотехнічних текстів, реферування та анотування загальнотехнічних текстів, а також підготовку до подальшої самостійної роботи з мовним матеріалом для забезпечення освітніх запитів і гармонійного поєднання навчального процесу з науковою діяльністю.

У процесі вивчення дисципліни «Англійська мова» студенти повинні:

- а) отримати знання граматичних структур, що є необхідними для розуміння адаптованих текстів загальнотехнічного характеру;
- б) отримати знання лексики широкого діапазону: повсякденного вжитку та загальнотехнічного спрямування;

в) набути навичок перекладу загальнотехнічних текстів,

г) набути професійно-орієнтованих мовних навичок

Тематика практичних занять відповідає завданням загальнотехнічної підготовки студентів з англійської мови та детально розглядається у Робочих навчальних програмах для 1 та 2 курсів хіміко-технологічного факультету.

1.2. Мета та завдання комплексної контрольної роботи з дисципліни «Англійська мова»

Метою комплексної контрольної роботи є перевірка знань лексичного, граматичного, термінологічного мінімуму з дисципліни «Англійська мова». Головне завдання даної роботи – визначити, чи відповідає рівень володіння загальнотехнічною англійською мовою студентами 1-2 курсів хіміко-технологічного факультету вимогам Робочої навчальної програми кредитних модулів «Вступ до загальнотехнічної англійської мови» (1 курс) та «Англійська мова загальнотехнічного спрямування» (2 курс) зокрема та дисципліни «Англійська мова» взагалі. Завдання комплексної контрольної роботи розроблені таким чином, що дозволяють здійснити тестову перевірку основних видів мовної діяльності.

Для отримання позитивного результату з комплексної контрольної роботи студент повинен :

- вміти читати адаптовані тексти технічного характеру;
- володіти лексичним мінімумом для читання та розуміння адаптованих текстів технічного характеру;
- знаходити необхідну інформацію у письмовому матеріалі;
- розпізнавати терміни загальнотехнічної тематики;
- розпізнавати та розуміти різні граматичні явища;
- правильно розуміти структуру речень англійською мовою;
- здійснювати письмовий переклад речень загальнотехнічної тематики.

1.3. Структура комплексної контрольної роботи з дисципліни

«Англійська мова»

Пакет завдань комплексної контрольної роботи складається з 15 варіантів. Кожен варіант містить 6 тестових завдань, серед яких є завдання на розуміння тексту, на знання 7в.7льно технічног термінології та базової граматики, а також завдання на переклад речень з англійської мови на українську і навпаки. Студент виконує комплексну контрольну роботу на окремих бланках відповідей.

1.4. Критерії оцінювання контрольних завдань з дисципліни

«Англійська мова»

Оцінювання результатів здійснюється відповідно до європейських стандартів за 100-бальною шкалою. Результати, отримані під час тестування, підлягають кількісному підрахунку, на основі якого виставляється оцінка.

Критеріями оцінювання є лексична та граматична коректність виконаних студентами контрольних завдань. Бали нараховуються за кількість правильних відповідей шляхом порівняння відповідей контрольних завдань, виконаних студентами, з ключами, які подаються викладачам для перевірки завдань.

Максимальна кількість балів – 100 балів.

Комплексна контрольна робота вміщує 6 тестових завдань.

Завдання I. «*Reading comprehension*», яке складається з тексту та п'яти речень для перевірки загального розуміння прочитаного без словника тексту, оцінюється таким чином:

5 речень x 3 бали = 15 балів.

Завдання II. «*Reading comprehension*», яке складається з тексту та п'яти питань для перевірки загального розуміння прочитаного без словника тексту, оцінюється таким чином:

5 питань x 3 бали = 15 балів

Завдання III. «*English in Use: Vocabulary*» складається з десяти речень, які містять пропуски, та варіантів заповнення пропусків в реченнях і має на меті перевірити знання загально-технічної лексики. Студент отримує два бали за кожен правильно обраний варіант відповіді:

$$10 \text{ питань} \times 2 \text{ бали} = 20 \text{ балів}$$

Завдання IV. «*English in Use: Grammar*» складається з десяти речень, які містять пропуски, та варіантів заповнення пропусків в реченнях і має на меті перевірити знання граматики. Студент отримує два бали за кожен правильно обраний варіант відповіді:

$$10 \text{ речень} \times 2 \text{ бали} = 20 \text{ балів}$$

Завдання V. «*Translationpractice*» складається з десяти речень англійською мовою та варіантів їхнього перекладу українською і має на меті перевірити рівень сформованості перекладацької компетентності. Кожен вірно обраний варіант відповіді оцінується у 3 бали:

$$5 \text{ речень} \times 3 \text{ бали} = 15 \text{ балів}$$

Завдання VI. «*Translationpractice*» складається з десяти речень українською мовою та варіантів їхнього перекладу англійською і має на меті перевірити рівень сформованості перекладацької компетентності. Кожен вірно обраний варіант відповіді оцінується у 3 бали:

$$5 \text{ речень} \times 3 \text{ бали} = 15 \text{ балів}$$

ШКАЛА ОЦІНЮВАННЯ КОМПЛЕКСНОЇ КОНТРОЛЬНОЇ РОБОТИ

| Кількість балів за виконання ККР | Оцінка за чотирьохбальною системою |
|----------------------------------|------------------------------------|
| 100.....90 | “відмінно” |
| 89.....75 | “добре” |
| 74.....60 | “задовільно” |
| 59.....0 | “незадовільно” |

Відповіді на контрольні завдання записуються на окремих листках для відповідей, зразок яких наводиться нижче.

Зразок бланку відповідей
НАЦІОНАЛЬНИЙ ТЕХНІЧНИЙ УНІВЕРСИТЕТ УКРАЇНИ
“Київський політехнічний інститут”

КОМПЛЕКСНА КОНТРОЛЬНА РОБОТА

з навчальної дисципліни

«Іноземна мова»

(Англійська мова)

(назва)

для студентів спеціальності (напрямку) _____

(код)

(назва)

Студент _____

(прізвище, ім'я та по батькові)

Факультет (інститут) хіміко-технологічний, курс _____, група _____

Початок роботи _____ год. _____ 9в..

Завершення роботи _____ год. _____ 9в..

Варіант 1

I. Reading comprehension. Part 1 (15 points)

Read the text and decide whether the statements are true (T) or false (F).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
|----|--|----|--|----|--|----|--|----|--|

Total ____ / 15 points

II. Reading comprehension. Part 2 (15 points)

Read the text and answer the questions choosing the correct option (a, b, c).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
|----|--|----|--|----|--|----|--|----|--|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

Read the sentences and fill in the gaps with the correct option (a, b, c).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|-----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
| 6. | | 7. | | 8. | | 9. | | 10. | |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

Read the sentences and fill in the gaps with the correct option (a, b, c).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|-----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
| 6. | | 7. | | 8. | | 9. | | 10. | |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

Translate the sentences from English into Ukrainian by choosing the correct option (a, b, c).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
|----|--|----|--|----|--|----|--|----|--|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

Translate the sentences from Ukrainian into English by choosing the correct option (a, b, c).

| | | | | | | | | | |
|----|--|----|--|----|--|----|--|----|--|
| 1. | | 2. | | 3. | | 4. | | 5. | |
|----|--|----|--|----|--|----|--|----|--|

Total ____ / 15 points

РОЗДІЛ 2.

КОМПЛЕКСНА КОНТРОЛЬНА РОБОТА ДЛЯ СТУДЕНТІВ ХІМІКО-ТЕХНОЛОГІЧНОГО ФАКУЛЬТЕТУ 1 КУРСУ НАВЧАННЯ ЗА НАПРЯМОМ ПІДГОТОВКИ 6.051301 ХІМІЧНА ТЕХНОЛОГІЯ

Варіант 1

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

The chemistry of the nucleus

In 1934 Irene and John-Frederic Joliot-Curie had been bombarding a disc of non-radioactive aluminium with alpha particles. By accident their radioactivity recorders were in operation near the aluminium even after they had removed the alpha particle source.

To their surprise, some kind of radiation was still coming from the aluminium foil. Then they tested the emanation. The aluminium disc was giving off positive electrons (positrons). The Joliot-Curies repeated their experiment and found the same results. For the first time in the history of science, they made a radioactive element in the laboratory. Ever since Bequerel's discovery in 1896 scientists had believed that radioactivity existed in a very few massive elements. But by about that time, E. Lawrence in California created radioactive sodium, iodine and many others. All of these «artificial-radioactive» substances lost their radioactivity very quickly.

It now became clear why scientists had never found light radioactive elements in nature. They all had existed and disappeared long ago. The only radioactivity still left on Earth was in very long lived elements like uranium, thorium and radium. Nuclear chemistry had come into being.

1. Irene and John-Frederic Joliot-Curie exposed a disk of non-radioactive aluminium to beta particles.

2. There was no radiation coming from the aluminium foil.
3. Radioactive sodium and iodine were created by Mendeleev.
4. The Joliot-Curies made a radioactive element in the laboratory.
5. The only radioactive elements left on Earth were elements like uranium, thorium and radium.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

The Inert Gases

The first of inert gases discovered was argon. In 1894 Lord Rayleigh observed that density of atmospheric nitrogen was greater than that of a chemical gas, and asked chemists to suggest a reason. They found that Cavendish in 1785 had noted that atmospheric nitrogen yielded an inert residue, after it had sparked with excess oxygen that could not combine with oxygen. Rayleigh and Ramsay accordingly passed atmospheric nitrogen over magnesium to remove the nitrogen as solid magnesium nitride and introduced the residual gas into a Plücker tube and examined its spectrum. Although the characteristic lines of nitrogen were present, there were also new red and green lines suggesting the presence of a new element. As Rayleigh and Ramsay knew that this new gas was present in the atmosphere they decided that they would call it argon, a Greek word meaning inert.

In 1868 the Danish astronomer Janssen examined the sun's corona spectroscopically. He detected that there was a prominent yellow line close to the sodium lines which did not correspond to any known element. The chemists suggested that this new line was due to an element present in the sun but not present terrestrially. By that time scientists already determined that alkali metals gave line spectra therefore they decided that the new element was a metal too. They suggested calling it helium, a Greek word meaning *the Sun*.

1. The first discovered inert gas was
 - a) helium

- b)* argon
 - c)* uranium
- 2. Rayleigh and Ramsay passed atmospheric nitrogen over magnesium
 - a)* to add nitrogen to magnesium
 - b)* to remove the nitrogen as solid magnesium nitride
 - c)* to examine the residue
- 3. The presence of a new element was shown by
 - a)* red and green lines
 - b)* yellow and red lines
 - c)* blue and green lines
- 4. Argon is a Greek word meaning
 - a)* inert
 - b)* radioactive
 - c)* sun
- 5. Scientists decided that the new element in the sun's corona was a metal because
 - a)* it had a metal glow
 - b)* they knew that alkali metals gave line spectra
 - c)* it wasn't found on Earth before

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

- 1. We may define chemistry as a study of _____ and its transformations.
 - a)* elements
 - b)* substances
 - c)* matter
- 2. There are three common states of matter, namely_____, liquid and gas.
 - a)* solid
 - b)* plasma
 - c)* Ice
- 3. An element is a pure substance that cannot be separated into simpler substances

- by _____ or chemical means.
- a)* transformational
 - b)* physical
 - c)* heating
4. Liquid is the state in which matter maintains a fixed _____ but adapts to the shape of its container.
- a)* shape
 - b)* volume
 - c)* space
5. Mixtures themselves are classified as either _____ or homogeneous.
- a)* different
 - b)* dispersed
 - c)* heterogeneous
6. Both the melting and _____ points of water, and of any other substance, are physical properties.
- a)* boiling
 - b)* evaporating
 - c)* crystallization
7. A chemical reaction is a process of rearranging, replacing, or adding _____ to produce new substances.
- a)* atoms
 - b)* electrons
 - c)* substances
8. We know that carbon dioxide and oxygen are gases at room temperature and water is a _____ at this temperature.
- a)* gas
 - b)* solid
 - c)* liquid
9. A _____ substance is a substance that has only one component.
- a)* heterogeneous
 - b)* pure

- c) clean
10. Gases are formed when the energy in the system exceeds all of the _____ forces between molecules.
- a) attaching
b) attractive
c) appealing

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. They _____ experiments in the laboratory every day.
- a) does
b) do
c) will do
2. I _____ a specimen of ore and determining the properties of this ore now.
- a) analyses
b) analyse
c) am analysing
3. Has Nick _____ the properties of this ore?
- a) determined
b) determine
c) determines
4. Students have not been _____ chemistry for two months.
- a) studied
b) studying
c) study
5. He _____ the volume of a liquid and studied the properties of hydrogen a week ago.
- a) defined
b) defines

- c) had defined
6. When we came, the analyst _____ the experiment.
- a) already began
 - b) had already begun
 - c) has already begun
7. He _____ how to define the equivalent weight of hydrogen and oxygen for 1 hour before we began an experiment.
- a) showed
 - b) was showing
 - c) had been showing
8. When I came he _____ a newspaper.
- a) had been reading
 - b) read
 - c) was reading
9. I believe they _____ a new type of glass.
- a) will develop
 - b) are developing
 - c) develop
10. As soon as the lecture is over I _____ to the reading hall.
- a) go
 - b) will go
 - c) am going

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. This type of change chemists have called a chemical change.
- a) Цей тип зміни хіміки назвали хімічною зміною.
 - b) Цей тип перетворення хіміки назвали хімічним перетворенням.
 - c) Цей тип перетворення хіміки назвали хімічними змінами.
2. The properties of the known elements can help us to arrange these elements into

a table.

- a) Властивості відомих елементів можуть допомогти нам розташувати ці елементи у таблиці.
 - b) Характеристики існуючих елементів допомагають нам переставити ці елементи у таблиці.
 - c) Властивості існуючих елементів можуть полегшити розташування елементів у таблиці.
3. Under normal conditions hydrogen is colourless, odourless, tasteless gas.
- a) За нормальних умов гідроген – це газ, що має колір, запах і смак.
 - b) За нормальних умов гідроген – це газ без кольору, запаху і смаку.
 - c) За нормальних умов гідроген – це газ кольоровий, запашний і смачний.
4. Oxygen is easily prepared in the laboratory by heating potassium chlorate.
- a) Оксиген легко добути в лабораторії нагріваючи хлорид натрію.
 - b) Оксиген легко добути в лабораторії нагріваючи хлорид калію.
 - c) Оксиген легко добути в лабораторії нагріваючи бертолетову сіль.
5. Nitrogen constitutes 78% of the earth's atmosphere.
- a) Нітроген складає більшість 78% земної атмосфери.
 - b) Нітроген складає 78% земної кори.
 - c) Нітроген складає 78% земної атмосфери.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Існує три типи хімічних зв'язків, які об'єднують атоми у молекули і сполуки.
- a) There are three types of chemical bond that combines atoms into molecules and compounds.
 - b) There are three types of chemical bonds that combine atoms into molecules and compounds.
 - c) There is three types of chemical bonds that combine atoms into molecules

and compounds.

2. Елементи – це сполуки, що складаються з одного типу атому.
 - a)* Elements are substances composing of one type of atom.
 - b)* Element is a substance consisting of one type of atom.
 - c)* Elements are substances consisting of one type of atom.
3. The rare gases are remarkable for their unreactivity.
 - a)* Благородні гази відомі через те, що вони не реакційно здатні.
 - b)* Рідкі гази помітні через їх не реакційність.
 - c)* Інертні гази визначаються своєю інертністю.
4. Нержавіюча сталь містить щонайменш 10% хрому.
 - a)* Stainless steel contains at least 10 per cent chromium.
 - b)* Corrosion resistant steel contains more than 10 per cent chromium.
 - c)* At least 10 per cent chromium is found in rustless steel.
5. При поєднанні з певними іншими металами, цей метал збільшує міцність і стійкість до корозії.
 - a)* When combined with certain other metals, this metal increases strength and resistance to chemicals.
 - b)* In combination with other metals, this metal adds toughness and resistance to chemicals.
 - c)* In alloys with different metals, this metal imparts strength and resistance to chemicals.

Вариант 2

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Mixtures, Compounds, Elements

All of the chemical substances we know may be divided into three classes: mixtures, compounds and elements. A mixture is made up of two or more substances that are not combined chemically and may be present in any proportion. Mixtures are much worked at and experimented upon.

Mixtures may be separated into components which may be either simple mixtures and hence heterogeneous, or specific, homogeneous substances. Separation may be continued until substances are obtained. Each of these resulting substances falls into one of two categories. Substances which as a result of a chemical change can be broken down into two or more simpler chemical substances are called compounds. Compounds, as has been stated, are homogeneous and possess specific physical and chemical properties. But one of their chemical properties is the ability to decompose into simpler substances as the result of certain chemical changes.

Compounds are complex and they constitute by far the larger class of chemical substances. Substances which cannot be broken down into simpler chemical substances by chemical means are called chemical elements or simply elements.

Scientific knowledge of elements, compounds and mixtures grows at a faster and faster rate. An interesting aspect of this growth is the fact that the greater our knowledge becomes the greater is our vista and consequently the more we are aware of the magnitude of the unknown.

1. Among all chemical substances, mixtures are the least used in experiments.
2. A mixture is a substance in which its constituent parts are combined chemically.
3. Compounds are heterogeneous and do not have specific physical and chemical properties.

4. Compounds form the larger class of chemical substances.
5. Compounds can be decomposed into simpler substances as the result of certain chemical changes.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

Michael Faraday

The great English physicist Michael Faraday was born in the country near London in 1791, and at the age of thirteen he went to work. He began to work for a book seller and so came into contact with the world of books. He read most of all books on science.

At that time Davy read lectures on chemistry. Faraday attended lectures given him by Davy. He wrote down the lectures carefully and sent them to Davy, telling him that he wanted to give his life to science. When Davy saw the lectures he sent for Faraday. So Faraday became his assistant.

Faraday showed great ability as an experimenter. In 1813 Davy went to Europe where he stayed two years. Faraday was with him as his assistant. On the continent he visited the most important laboratories and met many great scientists such as Ampere, Volta, Rumford and others. Europe was Faraday's University.

After their return to England Faraday did many more experiments in chemistry and physics. He soon became a lecturer and then, in 1825, the director of the laboratory. When Davy died, Faraday took his place as professor of chemistry.

Faraday's most important discoveries were in electricity. After ten years of experimental work in August 1831, Faraday made the greatest of his discoveries — he discovered the principle of electromagnetic induction. Faraday died in 1867. He was one of the greatest experimenters in the world.

1. Faraday read a lot of books on science because
 - a) he was very smart
 - b) he worked for a book seller

pure substance retains its individual chemical properties.

- a)* mix
 - b)* mixture
 - c)* blend
4. Chemical _____ result in a change in composition and can be observed only through chemical reactions.
- a)* properties
 - b)* features
 - c)* characteristics
5. The composition of simple molecules can be shown by combining the _____ of the elements that the molecules contain.
- a)* signs
 - b)* letters
 - c)* symbols
6. In a covalent _____ between two atoms, electrons from both atoms are shared by both nuclei.
- a)* tie
 - b)* bond
 - c)* connection
7. Protons and _____ form the nucleus of the atom.
- a)* neutrons
 - b)* electrons
 - c)* leptons
8. Mass describes the _____ of matter in an object.
- a)* weight
 - b)* quality
 - c)* quantity
9. The sum of an atom's protons and neutrons is called the _____ number.
- a)* mass
 - b)* atom
 - c)* weight

10. Atoms unite together to form molecules and compounds by means of _____ bonds.
- a) intermolecular
 - b) chemical
 - c) covalent

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. He always _____ solutions in these bulbs.
 - a) is keeping
 - b) kept
 - c) keeps
2. He _____ sulphuric acid to the solution at the moment.
 - a) is adding
 - b) adds
 - c) was adding
3. We _____ forcing apart the atoms of mercury and oxygen this morning.
 - a) were finishing
 - b) have finished
 - c) finish
4. He _____ his research work for 3 years.
 - a) is doing
 - b) was doing
 - c) has been doing
5. Did you _____ chemistry last year?
 - a) studying
 - b) study
 - c) studied
6. Where _____ before he came to our lab?
 - a) had he worked

- b)* did he work
c) he worked
7. Scientists _____ new compound yesterday at 5 p.m.
a) were synthesizing
b) had been synthesizing
c) synthesized
8. This man _____ his exams next week.
a) takes
b) is taking
c) will be taking
9. Tomorrow from 10 till 11 we _____ a disc of non-radioactive aluminium with alpha-particles.
a) bombard
b) will bombard
c) will be bombarding
10. They _____ their knowledge in chemistry if they read a lot.
a) will increase
b) increase
c) increased

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. The rare gases are used in making metals and alloys, in chemical processing, and in nuclear reactors.
a) Благородні гази використовуються у виробництві металів і сплавів, хімічних процесах і ядерних реакторах.
b) Рідкісні гази застосовуються у виробленні металів і припоїв, в хімічній обробці і ядерних реакціях.
c) Інертні гази використовуються у виробництві металів і сплавів,

хімічній обробці і ядерних реакторах.

2. Alkali metals are soft enough to be cut with a knife.
 - a) Лужні метали настільки м'які, що їх можна розрізати ножом.
 - b) Лужні метали достатньо м'які для того, щоб різати їх ножом.
 - c) Лужні метали можна різати ножом, бо вони дуже м'які.
3. Radon was discovered during the investigation of the properties of radium and radioactive substances.
 - a) Радон був винайдений після дослідження властивостей радію і радіоактивних частинок.
 - b) Радон був відкритий під час дослідження властивостей радію і радіоактивних речовин.
 - c) Радон був досліджений під час вивчення властивостей радію і радіоактивних сполук.
4. Silicon occurs mostly in the form of oxides.
 - a) Кремній зустрічається переважно у формі оксидів.
 - b) Кремній зустрічається рідко у формі оксидів.
 - c) Кремній ніколи не зустрічається у формі оксидів.
5. Two atoms of hydrogen can combine together to form a molecule of hydrogen.
 - a) Два атоми гідрогену можна поєднати для перетворення молекули водню.
 - b) Щоб сформувати молекулу водню, два атоми гідрогену розчеплюються.
 - c) Два атоми гідрогену можуть поєднуватись, утворюючи молекулу водню.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Коли струм проходить через воду, енергія розриває молекули води.
 - a) When current passes through water, the energy breaks the water molecules apart.

- b)* If we pass current through water, the energy splits the water molecules apart.
- c)* When current is put through water, the energy breaks down the water molecules.
2. Більша частина всесвіту складається з матерії і енергії.
- a)* Most parts of the Universe are composed of matter and energy.
- b)* The major part of the Universe has in its composition matter and energy.
- c)* Most of the Universe consists of matter and energy.
3. Солікаліювикористовуються там, де важлива водостійкість.
- a)* Potassium salts are applicable to ensure water resistance.
- b)* Sodium salts are used in places where we need water stability.
- c)* Potassium salts are employed where water resistance is important.
4. Типгазуутрубці визначає колір світіння.
- a)* A type of gas in the tube is determined by the color of glow.
- b)* The identity of the gas in the tube determines the color of the glow.
- c)* The color of glow can be determined by the type of gas.
5. Згорання викопного палива забезпечує нас енергією, але значно забруднює середовище.
- a)* Combustion of fossils provides energy but pollutes the environment very much.
- b)* Burning fossil fuels provides us with energy but greatly pollutes the environment
- c)* Environment is greatly polluted by burning fossil fuels.

Вариант 3

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Molecules

All substances, both elements and compounds, are composed of molecules. Molecules are the smallest particles into which a substance can be divided without destroying its properties. In some elements (most metals) a molecule consists of only a single atom. In some gaseous elements such as oxygen, nitrogen, a molecule consists of two atoms. In a molecule of an element all the atoms are of the same kind. A molecule of a compound contains atoms of two or more elements. In every molecule of a compound there is more than one kind of atom. A water molecule is made up of two atoms of hydrogen and one of oxygen; an alcohol molecule is composed of two atoms of carbon, six atoms of hydrogen and one atom of oxygen. The atoms within a molecule are held together by a force that is sometimes spoken of as chemical attraction. Each molecule is an independent particle and the properties of a substance are given to it by the molecules. Molecules are very, very small. They are made up of one atom or a number of atoms. It is stated that if seven million people begin to count the molecules in a single glass of water, and if each person counts at the rate of two molecules per second, they will need ten years to finish this work.

1. Only compounds are composed of molecules.
2. Molecules are the smallest particles into which a substance can be divided and which retain its properties.
3. A molecule of a compound is composed of two or more atoms.
4. Molecules are made up of protons and neutrons.
5. Each molecule retains properties of the substance.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

The Discovery of Radium

In 1896, Antoine Bacquerrel while studying the fluorescent shown by uranic salts such as potassium uranyl sulphate made an interesting observation that a wrapped photographic plate was being affected by these salts even in the dark. It appeared therefore that a new type of radiation was being emitted. The radiation passed through a black paper and affected a photographic plate.

Interested in the discovery Marie Curie suggested that the reason for the phenomenon was in the uranium atom as the other elements by themselves in uranium salts never emitted any rays.

Marie Curie began to test all sorts of substances for "rays" and soon discovered that thorium compounds were also active. It was found that this radioactivity is an atomic property with intensity directly proportional to the concentration of the element emitting it and independent of the state of chemical combination of that element.

Marie Curie noticed that certain ores showed greater activity than corresponded to their uranium content, and soon found that this was due to the presence of an unknown element, much more active than uranium. It was radium.

While separating radium salts from uranium ores the second radioactive element was discovered by Pierre and Marie Curie. They called it polonium, in honour of Poland, Marie Curie's motherland.

1. While studying the florescent Antoine Bacquerrel found
 - a) a new type of radiation
 - b) potassium uranyl sulphate
 - c) photographic plate
2. Interested in the discovery Marie Curie suggested that
 - a) it was the uranium atom which emitted radiation
 - b) the uranium salts emitted radiation
 - c) photographic plate emitted radiation itself
3. When Marie Curie began to test all substances for rays, she discovered that
 - a) radioactivity is a molecular property
 - b) thorium compounds also emitted rays

- c)* ray length is directly proportional to the concentration of the element emitting it
4. It was found that radioactivity was
- a)* dependent on the state of chemical combination of that element
 - b)* affected by the state of chemical combination of that element
 - c)* not influenced by the state of chemical combination of that element
5. Polonium was discovered
- a)* after Marie Curie left Poland
 - b)* while separating radium salts from uranium ores
 - c)* while discovering radium

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. The atom is the smallest subdivision of an element which still _____ the properties of that element.
- a)* corresponds to
 - b)* explains
 - c)* retains
2. Elements cannot be _____ down into simpler substances.
- a)* broken
 - b)* decomposed
 - c)* decayed
3. The properties of the elements are periodic functions of their _____ numbers.
- a)* molecular
 - b)* mass
 - c)* atomic
4. A mixture of salt and pepper is a good example of a _____ mixture.
- a)* dispersed
 - b)* homogeneous

- c)* heterogeneous
5. An atom can be divided into three smaller particles: _____, neutrons, and electrons.
- a)* leptons
b) protons
c) quarks
6. The path that an electron makes around a nucleus is similar to the path (called an _____) that a planet makes around the sun.
- a)* orbit
b) pathway
c) orbital
7. In an ionic bond, one atom loses one or more electrons to another. Both atoms thus become electrically _____ ions.
- a)* charged
b) discharged
c) loaded
8. _____ is a phenomenon in which the same number and types of atoms may join together in different molecular arrangements.
- a)* Valence
b) Isomerism
c) Atomicity
9. An electron, rotating around that nucleus, is electrically _____.
- a)* neutral
b) positive
c) negative
10. _____ forces, which exist between all particles, are very pronounced in solids and much less in gases.
- a)* attractive
b) splitting
c) gravitational

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. Inorganic chemistry _____ hydrocarbons.
 - a) isn't studying
 - b) does not study
 - c) don't study
2. Look! He _____ zinc into a flask.
 - a) is putting
 - b) puts
 - c) will put
3. She _____ some specimens of elements.
 - a) has just taken
 - b) had just taken
 - c) is taking
4. In 1869 Mendeleev _____ his "Principles of Chemistry".
 - a) was publishing
 - b) has published
 - c) published
5. By 5 o'clock he _____ the laboratory work and had studied mathematics.
 - a) did
 - b) had already done
 - c) was doing
6. At that moment he _____ hydrogen.
 - a) was making
 - b) made
 - c) has made
7. _____ to the laboratory tomorrow?
 - a) Will you have

- gone
- b)* Did you go
- c)* Will you go
8. A student _____ a solution by tomorrow.
- a)* will be making
- b)* will make
- c)* will have made
9. I will study at the library until I _____ my critical analysis of this paper on chemistry.
- a)* prepare
- b)* will prepare
- c)* prepared
10. When he _____ the laboratory, were the students doing their work?
- a)* had entered
- b)* entered
- c)* enters

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. The periodic system of the elements was the greatest contribution to chemistry.
- a)* Періодична система елементів була найбільшим внеском у хімію.
- b)* Періодична таблиця елементів стала визначним внеском у хімію.
- c)* Періодична система елементів найбільше сприяла розвитку хімії.
2. All these properties observed by chemists are very important.
- a)* Усі ці властивості, за якими вели спостереження хіміки, дуже важливі.
- b)* Важливими є всі властивості, за якими спостерігали хіміки.
- c)* Усі ці властивості, за якими спостерігають хіміки, дуже важливі.
3. Chemists study properties of elements and their compounds.
- a)* Хіміки досліджували властивості елементів і їх сполук.
- b)* Хіміки вивчають властивості елементів і їх сполук.

- c) Хіміки вчать властивості елементів і їх речовин.
4. A reduction reaction is one in which an oxidation state decreases.
- a) Ступінь окиснення зменшується під час реакції, відомої як реакція відновлення.
- b) Реакція відновлення – це така реакція, під час якої зменшується ступінь окиснення.
- c) Реакція відновлення – це тип реакції, коли знижується стан окиснення.
5. Oxygen is made commercially mainly by the distillation of liquid air.
- a) Оксиген отримують комерційно завдяки дистиляції газоподібного повітря.
- b) Оксиген можна отримати промисловим шляхом через дистиляцію рідкого повітря.
- c) Оксиген виробляється у промисловості шляхом дистиляції рідкого повітря.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Коли відбувається реакція, хімічні зв'язки руйнуються і утворюються нові.
- a) During a reaction, chemical bonds are torn apart and new ones are formed.
- b) When a reaction occurs, chemical bond is split apart and new ones are formed.
- c) When a reaction takes place, chemical bonds are broken and new ones are formed.
2. Атоми елемента, що мають змінну кількість нейтронів, називаються ізотопами.
- a) Atoms of an element that have differing numbers of neutrons are termed isotopes.
- b) Atoms of an element with different amount of neutrons are termed isotopes.
- c) Atoms of an element that don't have fixed amount of neutrons are called isotopes.

3. Молекули озону містять три атоми киснену.
- a)* The molecules of ozone are composed of three oxygen atoms.
 - b)* Three oxygen atoms comprise the molecule of ozone.
 - c)* The molecules of ozone contain three oxygen atoms.
4. Гідроген сполучається з кожним елементом у періодичній таблиці, окрім неметалів.
- a)* Hydrogen forms combinations with every element in the periodic table except the nonmetals.
 - b)* Hydrogen combines with every element in the periodic table except for the nonmetals.
 - c)* Hydrogen is bonded to every element in the periodic table except the nonmetals.
5. Не дивлячись на назву, в реакції окиснення не завжди використовується кисген.
- a)* Despite its name, an oxidation reaction does not always involve oxygen.
 - b)* An oxidation reaction does not necessarily include oxygen, despite the name suggests it.
 - c)* In spite of the title, oxygen is not always used in an oxidation reaction.

Вариант 4

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

The Atomic Structure of Matter

The most important of all chemical theories is the atomic theory. In 1805 the English chemist and physicist John Dalton stated the hypothesis that substances consist of small particles of matter. He called these particles atoms, from the Greek word "atomos", meaning indivisible. This hypothesis gave a simple explanation or picture of previously observed but unsatisfactorily explained relations between the weights of substances taking part in chemical reactions with one another. It was necessary that the hypothesis be confirmed. Hadn't it been verified by further work in chemistry and physics it wouldn't have become the atomic theory. The existence of atoms is now accepted as a fact.

All ordinary matter consists of atoms. The exceptional kinds of matter are the elementary particles from which atoms are made (electrons, protons, neutrons) and similar subatomic particles. But atoms are the units which retain their identity when chemical reactions take place, and therefore they are important to us now. Atoms are the structural units of all solids, liquids, and gases.

Every atom consists of one nucleus and one or more electrons. The nucleus is a small, heavy particle containing almost all the mass of the atom. The electron is a particle with a small mass. The electrons in an atom are attracted by the nucleus.

1. John Dalton claimed that substances consist of small particles of universe.
2. His hypothesis perfectly explained relations between the weights of substances taking part in chemical reactions with one another.
3. If the hypothesis hadn't been verified by further work in chemistry and physics it wouldn't have become the atomic theory.
4. Elementary particles, which atoms are made of, are called electrons, protons and neutrons.

5. Atoms are particles which all solids, liquids, and gases are made of.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

Classification of elements

The division of chemical substances into elements and compounds had been achieved by the end of the eighteenth century. A long time was required for the recognition of the fact that the elements could be classified in the way now described by the Periodic Law. The first step was taken in 1817, when the German chemist J. W. Dobereiner showed that the combining weight of strontium lies midway between the combining weight of the two related elements calcium and barium.

Other chemists then showed that the elements could be classified into groups consisting of more than three similar elements. Fluorine was added to the halogens, and magnesium to the alkaline-earth metals.

Oxygen, sulphur, selenium, and tellurium had been classed as one group, and nitrogen, phosphorus, arsenic, antimony, and bismuth as another group of elements by 1854.

The English chemist Newlands in 1863 proposed a system of classification of the elements in order of atomic weights, in which the elements were divided into seven groups of seven elements each. Both of these systems were not developed further. But the final and most important step was taken by Mendeleev. He classified the elements according to their atomic weights, their physical and chemical properties with special attention to valence. Mendeleev not only classified the elements known to chemists at that time but predicted the existence of some other elements.

1. By the end of the eighteenth century
 - a) substances were classified into elements and compounds
 - b) there was no uniform division of chemical substances
 - c) the division of chemical substances hadn't been achieved
2. The recognition of the fact that the elements could be classified in the way now

described by the periodic Law took

- a)* one century
 - b)* many years
 - c)* a short time
3. The classification of elements, according to their atomic weights, their physical and chemical properties with special attention to valence was stated
- a)* by Chancourtois
 - b)* by Newlands
 - c)* by Mendeleev
4. It was shown by other chemists that elements could be classified
- a)* into groups consisting of more than three similar elements;
 - b)* into periods of different elements;
 - c)* into separate blocks of elements.
5. A system of classification of the elements in order of atomic weights was proposed by
- a)* J. W. Dobereiner
 - b)* Mendeleev
 - c)* Newlands

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. The molecule is the smallest subdivision of a(n) _____ that still retains the properties of that compound.
- a)* element
 - b)* mixture
 - c)* compound
2. _____ is the state in which matter maintains a fixed volume and shape.
- a)* Gas
 - b)* Solid
 - c)* Liquid

3. Under normal _____hydrogen is a colorless, odorless and tasteless gas.
- a)* pressure
 - b)* conditions
 - c)* terms
4. The positive charge of the proton is balanced by the negative charge of the_____.
- a)* electron
 - b)* neutron
 - c)* nucleus
5. Elements are distinguished by their _____number (number of protons in their nucleus).
- a)* cardinal
 - b)* mass
 - c)* atomic
6. The attraction between electrons and their nucleus is based on their _____electric charges.
- a)* opposite
 - b)* contrary
 - c)* reverse
7. When a current passes through water, the energy from the electricity breaks the water molecules apart into _____and oxygen atoms.
- a)* carbon
 - b)* hydrogen
 - c)* nitrogen
8. There are three types of chemical bonds that combine atoms into molecules and compounds, namely covalent, _____, and coordinate.
- a)* attractive
 - b)* ionic
 - c)* gravitational
9. Liquids have definite volume if the temperature and _____are constant.

- a)* energy
 - b)* environment
 - c)* pressure
10. We can measure the _____point of water, when liquid water becomes a gas.
- a)* boiling
 - b)* melting
 - c)* freezing

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. _____oxygen the most abundant element in the earth's crust?
 - a)* Does
 - b)* Is
 - c)* Can be
2. Alec _____the properties of the ore at the moment.
 - a)* is determining
 - b)* determined
 - c)* determines
3. We _____one substance into two.
 - a)* are already decomposing
 - b)* have already decomposed
 - c)* already decomposed
4. We _____the new data some days ago.
 - a)* had analysed
 - b)* have been analysing
 - c)* analysed
5. The Joliot-Curies _____a radioactive element by the end of the experiment.
 - a)* were making

- b)* made
c) had made
6. They _____ for a new magazine when I came in.
a) were looking
b) looked
c) are looking
7. Students _____ solutions for two hours before they achieved satisfactory results.
a) were preparing
b) had been preparing
c) prepared
8. In two days we _____ the results of our test.
a) will discuss
b) discussed
c) discuss
9. When I _____ my work I will go to the hostel.
a) am finishing
b) will finish
c) finish
10. Tomorrow at 7 p.m. I _____ this theory to my groupmate.
a) will have explained
b) will be explaining
c) will explain

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. There are some elements which don't exist in nature, scientists obtained them in a laboratory.
a) Вчені отримали у лабораторії елементи, що не зустрічаються у природі.

- b)* Існують елементи, що не зустрічаються у природі, їх отримали вчені у лабораторії.
- c)* Існують елементи, що зустрічаються у природі отримані вченими у лабораторії.
2. Oxygen occurs in the free state in the atmosphere.
- a)* Оксиген зустрічається у вільному стані в атмосфері.
- b)* Оксиген зустрічається у зв'язаному стані в атмосфері.
- c)* Оксиген існує у вільному стані в атмосфері.
3. Mendeleev is the scientist known by all chemists due to his Periodic Law.
- a)* Менделєєв – це вчений, відомий серед хіміків завдяки Періодичному закону.
- b)* Менделєєв – це хімік, відомий серед хіміків завдяки Періодичному закону.
- c)* Менделєєв – це вчений, відомий серед науковців завдяки Періодичному закону.
4. Atomic weight, or mass, was long considered the most important property of an element.
- a)* Атомна вага, або маса, довго вважалась найважливішою властивістю елемента.
- b)* Атомну вагу, або масу, довго розглядали як основну властивість елемента.
- c)* Найважливішою властивістю елемента довго була атомна вага, або маса.
5. Tritium has a nucleus consisting of one proton and two neutrons.
- a)* Ядро тритію утворене з протона і двох нейтронів.
- b)* Тритіймаєядро, щоскладаєтьсязпротонаінейронів.
- c)* Ядро тритію складається з одного протона і двох нейтронів.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Електрон – це дуже маленька частинка, що знаходиться назовні ядра.
 - a)* The electron, being a very small particle, is situated outside the nucleus.
 - b)* The electron is a very small particle located outside the nucleus.
 - c)* The electron is a very small part of nucleus located outside.
2. Гідроген сполучається з окисеном, утворюючи воду.
 - a)* Hydrogen, combined with oxygen, forms water.
 - b)* Hydrogen combines with oxygen to form water.
 - c)* Hydrogen forms a combination with oxygen to produce water.
3. Реакція може включати іони, сполуки, або молекули одного елемента.
 - a)* A reaction could include ions, compounds, or molecules of a single element.
 - b)* A reaction contains ions, compounds, or molecules of an element.
 - c)* A reaction could be composed of ions, substances, or molecules of a single element.
4. Зв'язок між електронними структурами атомів відомий як хімічний зв'язок.
 - a)* The combination of the electron structures of atoms is known as the chemical bond.
 - b)* The chemical bond can be defined as the union between the electron structures of atoms.
 - c)* The union between the electron structures of atoms is referred to as the chemical bond.
5. Кожна орбіталь має характерний енергетичний стан і форму.
 - a)* Each orbital has a characteristic energy state and shape.
 - b)* Each orbital is characterized by an energy state and shape.
 - c)* Each orbital possesses characteristics such as energy state and shape.

Вариант 5

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Elements, compounds and mixtures

Matter can be separated into 3 groups – elements, mixtures and compounds. They are all composed of atoms – the smallest units of matter. Element is the purest category of matter. All elements are composed of single atoms. A compound is a substance composed of two or more chemically bonded atoms. Atoms of the element sodium and atoms of the element chlorine bond to form the compound sodium chloride, more commonly known as table salt. Elements and compounds can be physically combined to form a mixture. Mixtures may include solutions, alloys and colloids. When sodium chloride is dissolved in water, it forms a solution of salt water. The two can be separated by physical means, in this case by simple evaporation. As small as the atom is, it has even smaller parts. Inside each atom is a nucleus of protons and neutrons surrounded by particles called electrons. Protons have a positive charge, electrons have a negative charge and neutrons have no charge. And these subatomic particles are composed of even smaller pieces. Physicists theorize that while electrons are type of fundamental particle called a lepton, neutrons and protons are made of quarks, a different fundamental particle. Each proton contains three quarks which form a positive charge and each neutron contains three quarks which form no charge. While protons and neutrons remain in a nucleus, electrons fly in the nucleus in a cloud.

1. Atoms are the smallest units of matter.
2. Compounds can be separated by physical means.
3. A nucleus is composed of protons, neutrons and electrons.
4. Fundamental particles are leptons and quarks.
5. Each proton and neutron is composed of two fundamental particles.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

The chemistry of salts

To most people the word "salt" means the white substance to be put on our food to make it more pleasant to taste. To the chemist the word "salt" denotes not one but a myriad of important chemical compounds. All these compounds are solids at room temperature. Salts have the ability to be crystallized. After being crystallized they vary in color and in form.

Most of the chemicals found on our laboratory shelves are salts, and this fact alone is evidence of their great number and variety. Not only there are many simple salts of the kind such as potassium nitrate, calcium chlorate, and ammonium phosphate but there are also double salts that contain two or more kinds of positive or negative radicals in the same molecule. Many of these exist in nature as minerals; among them are common feldspar and beryl. Still other salts contain hydrogen or hydroxide radicals and are acid or basic salts, the most well-known examples of which are sodium bicarbonate, malachite, a copper ore.

Salts are produced not only by the interaction of acids and bases but also by several other types of chemical reactions, and you know that the number of possible kinds that can be formed is practically limitless. Except in those cases in which a salt is produced through the reaction of a metal with an acid most methods to make salts involve double replacement reactions.

1. The properties of salts include
 - a) the ability to crystallize
 - b) the ability to have different color and shape after crystallization
 - c) all of the above
2. At room temperature salts have
 - a) a solid form
 - b) a liquid form

- c)* no form
- 3. Double salts can be described as
 - a)* those found in minerals
 - b)* those which contain two or more kinds of positive or negative radicals in the same molecule
 - c)* those which vary in color and shape
- 4. Feldspar and beryl are examples of
 - a)* minerals
 - b)* simple salts
 - c)* table salts
- 5. Acid or basic salts are those which contain
 - a)* minerals
 - b)* simple salts
 - c)* table salts

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. One _____ of water is composed of two hydrogen atoms and one oxygen atom.
 - a)* molecule
 - b)* atom
 - c)* compound
2. A compound can be separated into simpler _____ by chemical reactions.
 - a)* substances
 - b)* elements
 - c)* types of matter
3. Gas is the state in which matter _____ to occupy whatever volume is available.
 - a)* compresses
 - b)* contracts

- c) expands
4. A compound is represented using a_____.
- a) letter
 - b) formula
 - c) symbol
5. A liquid may be converted to a gas by _____at constant pressure to the boiling point.
- a) boiling
 - b) firing
 - c) heating
6. A proton in the atomic _____is electrically positive.
- a) particle
 - b) space
 - c) nucleus
7. When atoms of the same element _____together, they form homogeneous molecules.
- a) bind
 - b) attract
 - c) connect
8. Molecules and compounds are formed when changes occur at the atomic _____in the atoms of the elements.
- a) layer
 - b) level
 - c) subdivision
9. When the element loses its electron, it becomes a positively charged atom, called a positive_____.
- a) bond
 - b) proton
 - c) ion
10. Compounds (or molecules) which have the same chemical composition but occur in distinct forms are known as _____.

- a) isomorphs
- b) isomers
- c) isotopes

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. He usually _____ many articles on chemistry.
 - a) is reading
 - b) read
 - c) reads
2. The assistant _____ the tube with water at the moment.
 - a) was filling
 - b) is filling
 - c) fills
3. Two substances different from the red oxide _____ into being.
 - a) just come
 - b) have just come
 - c) have just came
4. I _____ this substance for 30 minutes now.
 - a) have been boiling
 - b) have been boiled
 - c) boiled
5. He _____ the properties of the iron content 2 days ago.
 - a) had determined
 - b) was determining
 - c) determined
6. They _____ the same results by the time they discussed the experiment.
 - a) had found
 - b) found

- c) was finding
7. Students _____ a lecture while an analyst was producing carbon.
- a) were writing
b) wrote
c) had been writing
8. It is expected that he _____ the phenomenon in three months.
- a) explains
b) will explain
c) explained
9. He will not finish his work unless he _____ hard.
- a) will work
b) work
c) works
10. Students _____ their laboratory work by tomorrow evening.
- a) are finishing
b) will have finished
c) will be finishing

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. Chemistry deals with the composition of matter and its transformations.
- a) Хімія займається властивостями матерії і її перетвореннями.
b) Хімія має справу зі структурою матерії і її перетвореннями.
c) Хімія займається зі складом матерії і її перетвореннями.
2. Every chemical has its own chemical and physical properties.
- a) Кожен хімічний товар має певні хімічні і фізичні властивості.
b) Кожен хімічний продукт має власні хімічні і фізичні властивості.
c) Кожна хімічна речовина має власні хімічні і фізичні властивості.
3. Mendeleev placed the elements in the order of increasing atomic weight.
- a) Менделєєв розташував елементи у порядку збільшення атомної ваги.

- b)* Елементи розташовані Менделєєвом у порядку збільшення атомної маси.
- c)* Елементи у таблиці Менделєєва розміщуються у порядку зменшення атомної ваги
4. Substances such as phosphorus and sulphur are known as non-metals.
- a)* Речовини, такі як фосфор і сірка, відомі як неметали.
- b)* Сполуки, такі як фосфор і сірка, відомі як неметали.
- c)* Речовини, такі як фосфор і сірка, відомі як неметали.
5. Under the studied conditions oxygen can burn.
- a)* За визначених умов кисень може горіти.
- b)* За певних умов кисень горить.
- c)* За вивчених умов кисень горить.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Іонні зв'язки утворюються, коли атоми стають іонами, приймаючи, або віддаючи електрони.
- a)* Ionic bonds are formed when atoms become ions by gaining or losing electrons.
- b)* Ionic bonds are formed when atoms become ions by taking or losing electrons.
- c)* Ionic bonds are formed when atoms become ions by obtaining or losing electrons.
2. Гідроген зустрічається у вільному стані у вулканічних і деяких природних газах.
- a)* Hydrogen occurs in the free state in volcanic gases and some natural gases.
- b)* Hydrogen can be found in the free state in volcanic and some natural gases.
- c)* Hydrogen appears in the free state in volcanic and some natural gases.
3. Усі форми матерії складаються з одного або більше елементів.

- a)* All forms of matter are consisted of one or more elements.
 - b)* All forms of matter are formed from one or more elements.
 - c)* All forms of matter are composed of one or more elements.
- 4. Мимовільна реакція не завжди виділяє енергію у помітній формі.
 - a)* Energy is not usually given off in visible form in spontaneous reaction.
 - b)* A spontaneous reaction does not always liberate energy in recognizable form.
 - c)* A spontaneous reaction does not produce visible energy.
- 5. Оксиген – найбільш поширений елемент на цій планеті.
 - a)* Oxygen has been the most common element on this planet.
 - b)* Most abundant element on this planet is oxygen.
 - c)* Oxygen is the most abundant element on this planet.

РОЗДІЛ 3.
**КОМПЛЕКСНА КОНТРОЛЬНА РОБОТА ДЛЯ СТУДЕНТІВ ХІМІКО-
ТЕХНОЛОГІЧНОГО ФАКУЛЬТЕТУ 2 КУРСУ НАВЧАННЯ ЗА
НАПРЯМОМ ПІДГОТОВКИ 6.051301 ХІМІЧНА ТЕХНОЛОГІЯ**

Варіант 1

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Prior to 1940 the periodic table ended at uranium, element number 92. Since that time, no scientist has had a greater effect on the periodic table than Glenn Seaborg. Seaborg became a faculty member in the chemistry department at the University of California, Berkeley in 1937. In 1940 he and his colleagues Edwin McMillan, Arthur Wahl, and Joseph Kennedy succeeded in isolating plutonium (Pu) as a product of the reaction between uranium and neutrons.

During the period 1944 through 1958, Seaborg and his coworkers also identified various products of nuclear reactions as being the elements having atomic numbers 95 through 102. All these elements are radioactive and are not found in nature; they can be synthesized only via nuclear reactions. For their efforts in identifying the elements beyond uranium (the transuranium elements), McMillan and Seaborg shared the 1951 Nobel Prize in chemistry.

In 1994, to honour Seaborg's many contributions to the discovery of new elements, the American Chemical Society proposed that element number 106 be named 'seaborgium', with a proposed symbol of Sg. After several years of controversy about whether an element should be named after a living person, the IUPAC officially adopted the name seaborgium in 1997. Seaborg became the first person to have an element named after him while he was still alive.

1. Uranium is the last element in the periodic table.
2. Glenn Seaborg successfully collaborated with his colleagues in one of the biggest universities of Europe.

3. In 1951 Glen Seaborg and Edwin McMillan were awarded the Nobel Prize in chemistry.
4. Glen Seaborg and his coworkers obtained transuranium elements from the transuranium ores.
5. Element 106 was named after Glen Seaborg while he was still alive.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

During the twentieth century, the great increase in use of fossil fuels caused a significant rise in the concentration of carbon dioxide, CO₂, in the atmosphere. Scientists believe that the concentration of atmospheric CO₂ could double by early in the 21st century, compared with its level just before the Industrial Revolution. During the last 200 years, the CO₂ concentration has increased by 25%. Energy from the sun reaches the earth in the form of light. Neither CO₂ nor H₂O vapour absorbs the visible light in sunlight, so they do not prevent it from reaching the surface of the Earth. The energy given off by the earth in the form of lower-energy infrared radiation, however, is readily absorbed by both CO₂ and H₂O (as it is by the glass or plastic of greenhouses). Thus, some of the heat, the earth must lose to stay in thermal equilibrium, can be trapped in the atmosphere, causing the temperature to rise. This phenomenon, called the greenhouse effect, has been the subject of much discussion among scientists and the topic of many articles in the popular press. The anticipated rise in average global temperature by the year 2050 due to the increased CO₂ concentration is predicted to be 2 to 5°C. This is thought to be enough to cause a dramatic change in climate, transforming now productive land into desert and altering the habitats of many animals and plants beyond their ability to adapt.

1. Last century the concentration of CO₂ in the atmosphere...
 - a) greatly decreased.
 - b) significantly increased.
 - c) slightly increased.

2. During the last two centuries the CO₂ concentration...
 - a) has grown by 25%.
 - b) has almost doubled.
 - c) has fallen short of 25%.
3. Carbon dioxide and water vapour...
 - a) easily reflect the visible light.
 - b) cannot absorb the visible light.
 - c) prevent the visible light from reaching the surface of the Earth.
4. The greenhouse effect is a natural phenomenon concerned with...
 - a) the changes of colour of green plants.
 - b) building of eco-friendly houses.
 - c) the rise of temperature.
5. The rise in average global temperature by 2 to 5 °C...
 - a) will not cause any climate changes.
 - b) may lead to irreversible climate changes.
 - c) will make the productive land even more fertile.

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. In 1811 Amedeo Avogadro suggested that equal _____ of gases, under equal conditions, contain equal numbers of molecules.
 - a) number
 - b) volumes
 - c) ratio
2. Reactants (or starting materials) are _____ into products (new materials).
 - a) transferred
 - b) converted
 - c) transmuted
3. Most inorganic compounds are solid crystalline substances that are quite

- _____ when heated.
- a)* stable
 - b)* sustainable
 - c)* repellent
4. Some reactions are usually _____ in inert organic solvents.
- a)* maintained
 - b)* carried out
 - c)* produced
5. The ability to _____ electricity is a common example of the physical properties of a substance.
- a)* lead
 - b)* flow
 - c)* conduct
6. It is interesting to know that the _____ of animal origin are in the red colour range.
- a)* dyes
 - b)* detergents
 - c)* bleaching agents
7. Chemical substances are characterized by the physical properties, such as solubility, melting _____, density etc.
- a)* stage
 - b)* point
 - c)* condition
8. Most matter exists as compounds, i.e. the combinations of atoms or oppositely _____ ions.
- a)* allocated
 - b)* bonded
 - c)* charged
9. Mixture, on the other _____, is a combination of two or more pure substances.
- a)* way

- b)* hand
 - c)* part
10. Element is a pure substance which cannot be broken into simple substances by ordinary chemical _____.
- a)* change
 - b)* equation
 - c)* equilibrium

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. Mike went to the laboratory _____ some experiments.
 - a)* conduct
 - b)* to conduct
 - c)* conducting
2. Some scientists would like _____ in the international exchange program.
 - a)* to participate
 - b)* participating
 - c)* participate
3. I hope you have a good excuse for _____ late for the exam.
 - a)* being
 - b)* to be
 - c)* have been
4. There's no point in _____ at the final exam.
 - a)* to cheat
 - b)* cheat
 - c)* cheating
5. The reaction _____ by this compound last time.
 - a)* catalysed
 - b)* wascatalysed

- c)* was being catalysed
6. The diluted acid _____ into a test tube at the moment.
- a)* is being poured
b) is poured
c) is pouring
7. This method of nitration _____ by several research groups recently.
- a)* has studied
b) studied
c) has been studied
8. I wish I _____ more attention at the lecture last time.
- a)* paid
b) had paid
c) would have paid
9. If I were you, I _____ for the MA programme next year.
- a)* applied
b) would apply
c) would have applied
10. The atmosphere of the planet consists _____ different gases.
- a)* from
b) in
c) of

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. Ethane gas (C_2H_6) burns in air, producing carbon dioxide gas and water vapor.
- a)* Газ етан (C_2H_6) згорає у повітрі з виділенням з'єднань вуглецю і водяної пари.
- b)* Газ етан (C_2H_6) горить у повітрі з продукуванням вуглекислого газу й води.
- c)* Газ етан (C_2H_6) згорає у повітрі з утворенням вуглекислого газу й

водяної пари.

2. Copper and gold have comparatively high boiling points.
 - a) Срібло і золото мають доволі високі температури плавлення.
 - b) Мідь і золото мають порівняно високі температури кипіння.
 - c) Сплави і золото мають суттєво високі точки плавлення.
3. This skeleton equation shows that carbon reacts with sulfur to produce carbon disulfide, which is in the liquid state.
 - a) Схема реакції показує, що карбон реагує із сульфуром, в результаті чого утворюється рідкий карбон дисульфід.
 - b) Рівняння показує, що карбон взаємодіє із сульфуром, в результаті чого утворюється рідкий карбон дисульфід.
 - c) Рівняння реакції показує, що карбон сполучається із сульфуром, в результаті чого утворюється розчин карбон дисульфіду.
4. Rutherford concluded that there was a tiny, dense region centrally located within the atom, which he called the nucleus.
 - a) Резерфорд дійшов висновку, що існує надзвичайно мала щільна область, розташована у центрі атома, яку він назвав ядром.
 - b) Резерфорд стверджував, що існує надзвичайно мала щільна зона, розташована у центрі атома, яку він назвав ядром.
 - c) Резерфорд зазначив, що існує дуже мала щільна частинка, розташована у центрі атома, яку він назвав ядром.
5. A solid produced during a chemical reaction in a solution is called a precipitate.
 - a) Порошок, що утворюється у результаті хімічної реакції, називається осадом.
 - b) Тверда речовина, що утворюється у результаті хімічної реакції у розчині, називається осадом.
 - c) Тверді продукти хімічної реакції називаються осадом.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Внутрішнє ядро – це тверда сфера, що складається з двох металів: заліза й нікелю.
 - a) The outer crust is a solid layer made of two metals – iron and nickel.
 - b) The internal nucleus is a solid shape made of two metals – iron and nickel.
 - c) The inner core is a solid ball made of two metals – iron and nickel.
2. Лужні метали легко реагують із киснем.
 - a) Alkali metals readily react with oxygen.
 - b) Alkaline metals vigorously react with oxygen.
 - c) Nonferrous metals easily react with oxygen.
3. Для прикладу розглянемо атом натрію, що містить 11 протонів у ядрі.
 - a) As an example, consider a sodium atom, which has 11 protons in its nucleus.
 - b) As an example, consider a natrium atom, which possess 11 protons in its nuclei.
 - c) As an example, consider a potassium atom, which contains 11 protons in its core.
4. Ізотопи – це атоми з однаковою кількістю протонів, але різною кількістю нейтронів.
 - a) Isotopes are atoms with the similar amount of protons but a varying number of neutrons.
 - b) Isotopes are atoms with the same number of protons but a different number of neutrons.
 - c) Isotopes are atoms with the equal number of protons and an approximate number of neutrons.
5. Сполуки – електронейтральні, тобто сума зарядів аніонів і катіонів у них повинна дорівнювати нулю.
 - a) Substances are electrically neutral, so the amount of the charges on the anions and cations in them must be zero.
 - b) Compounds are electrically neutral, so the total of the charges on the anions and cations in them must exceed zero.

- c) Compounds are electrically neutral, so the sum of the charges on the anions and cations in them must equal zero.

Вариант 2

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Gold has been known since the earliest records of human existence. The physical and chemical properties of gold serve to make it a special metal. First, its intrinsic beauty and rarity make it precious. Second, gold is soft and can be easily formed into artistic objects, jewellery, and coins. Third, gold is one of the least active metals. It is not oxidized in the air and does not react with water. It is unreactive toward basic solutions and nearly all acidic solutions. As a result, gold can be found in nature as a pure element rather than combined with oxygen or other elements, which accounts for its early discovery.

Many of the early studies of the reactions of gold arose from the practice of alchemy, in which people attempted to turn cheap metals, such as lead, into gold. Alchemists discovered that gold can be dissolved in a 3:1 mixture of concentrated hydrochloric and nitric acids, known as aqua regia ("royal water").

Gold is used mainly in jewellery (73%), coins (10%), and electronics (9%). Its use in electronics relies on its excellent conductivity and its corrosion resistance. Gold is used, for example, to plate contacts in electrical switches, relays, and connections. A typical touch-tone telephone contains 33 gold-plated contacts. Gold is also used in computers and other microelectronic devices where line gold wire is used to link components.

1. Gold is a newly discovered substance with only few properties being investigated.
2. Gold reacts with oxygen and water, forming compounds widely used in jewellery.
3. Gold does not react with the basic solutions.
4. Aqua regia ('royal water') is a mixture of concentrated HCl and HNO₃.
5. Gold is used mainly in jewellery, but it also has several applications in other spheres.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

Our home in the universe is the planet Earth. It is one of eight planets that orbit, or circle, the sun. The sun is a star, that is, a giant ball of hot gases. It is the centre of our solar system. There are billions of other stars in the sky, but the sun is the star closest to the Earth. Our solar system also includes moons, which orbit planets. The moon we see in the night sky orbits Earth.

We usually list the solar system's planets in order of their distance from the sun: the Mercury, the Venus, the Earth, the Mars, the Jupiter, the Saturn, the Uranus, and the Neptune. They can be divided into two groups: terrestrial planets and gas giant planets. Terrestrial, or Earth-like, planets have solid, rocky surfaces. The Mercury, the Venus, the Earth, and the Mars are terrestrial planets. The Earth is the only planet that has large amounts of liquid water, and it is the only planet that has life. Astronomers (scientists who study the stars and planets) believe that a long time ago, the Mars had rivers and oceans just like the Earth, but that now all the water is either frozen or underground.

The gas giant planets are much larger than terrestrial planets. All gas giant planets are made of gases, not solid rock. These planets have rings around them. The rings are made of tiny pieces of rock, dust, or ice. The Jupiter, the Saturn, the Uranus, and the Neptune are gas giant planets. The Jupiter is the largest planet. It is about a thousand times bigger than the Earth.

1. According to the text the solar system ...
 - a) consists of the sun and eight planets orbiting it.
 - b) is made up of the sun, nine planets and satellites.
 - c) consists of the sun, eight planets and satellites.
2. The terrestrial planets are those...
 - a) having rocky solid surface, such as Mercury, Venus and Neptune.
 - b) having solid surface and water, such as Earth.
 - c) having rocky solid surface; only four planets are defined as terrestrial.

3. The liquid water...
 - a) being a source of life, can be found on all the planets.
 - b) is believed to exist on Mars long time ago.
 - c) can be found only on the terrestrial planets.
4. The gas giant planets are not similar to the terrestrial planets because...
 - a) they are made of gas, rocky substances, ice particles and dust.
 - b) they are composed of ice and have gaseous rings.
 - c) they consist of gas and have rings made of small pieces of solid substances.
5. The planet Earth is...
 - a) 1000 times smaller than the Jupiter.
 - b) 100 times smaller than the Jupiter.
 - c) 1000 times smaller than the gas giant planets.

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. Pure water is colourless, _____ and tasteless.
 - a) odourless
 - b) scentless
 - c) flavourless
2. Water can exist in three physical states: _____, liquid or gas.
 - a) rigid
 - b) aqueous
 - c) solid
3. When water reacts with a metallic oxide a/an _____ or hydroxide is produced.
 - a) alloy
 - b) base
 - c) brass
4. Halogens are the elements that exist under normal _____ as diatomic molecules.

- a)* circumstances
 - b)* situation
 - c)* conditions
5. Students carry out investigations and _____ teaching and technical skills in sciences.
- a)* research
 - b)* acquire
 - c)* conduct
6. Use extreme _____ when handling toxic chemicals.
- a)* caution
 - b)* concern
 - c)* scrutiny
7. Education helps young people to meet _____ of life and to see the world with greater understanding.
- a)* challenges
 - b)* obstacles
 - c)* drawbacks
8. If you want to _____ your clothing, use a strong chlorine compound known as sodium hypochlorite.
- a)* lighten
 - b)* repair
 - c)* bleach
9. The atmosphere blocks out dangerous _____ from the sun.
- a)* lightning
 - b)* rays
 - c)* sparks
10. The _____ of a reaction depends on the concentrations of reactants, temperature and other factors.
- a)* volume
 - b)* rate
 - c)* amount

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. In his research he wants _____ on the science and applications of nanocrystals.
 - a)** to focus
 - b)** focusing
 - c)** being focused
2. Sean was talking about _____ a laboratory in New York.
 - a)** to establish
 - b)** establishing
 - c)** established
3. Martha came to the dean's office only _____ that it was closed.
 - a)** realizing
 - b)** realized
 - c)** to realize
4. I can't imagine you _____ at an industrial plant.
 - a)** to work
 - b)** working
 - c)** to have worked
5. Chapter 1 of Hawking's book focuses _____ different theories in physics.
 - a)** on
 - b)** at
 - c)** for
6. Have you arranged the conference yet? – Yes, all the invitations _____.
 - a)** are being sent
 - b)** have been sent
 - c)** sent
7. If only we _____ all the necessary reactants now!
 - a)** could buy
 - b)** could have bought

- c) could be bought
8. Organic chemists have to do a lot of work. – Yes, but they _____ well.
- a) be paid
 - b) are paid
 - c) paid
9. If we _____ more experienced, we would be more likely to win the scholarship.
- a) had been
 - b) were
 - c) are
10. The theory of double helix _____ by James Watson and Francis Crick.
- a) being formulated
 - b) formulated
 - c) was formulated

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. When exposed to air and moisture, iron will corrode.
- a) Якщо залізо помістити у вологе середовище, воно буде піддаватися корозії.
 - b) Коли залізо знаходиться під дією повітря з високою вологістю, воно буде піддаватися корозії.
 - c) Під дією повітря і вологи залізо буде піддаватися корозії.
2. From his point of view ammonium nitrate breaks down into dinitrogen monoxide and water when it is heated to high temperature.
- a) На його думку, нітрат амонію розпадається з утворенням оксиду азоту (I) й води, якщо його нагріти до високої температури.
 - b) У цей момент досліду нітрат амонію розкладається з виділенням оксиду азоту (I) й води, якщо його нагріти до високої температури.
 - c) Існує думка, що нітрат амонію розщеплюється з утворенням сполук

оксиду азоту (I) й води під час нагрівання до високої температури.

3. Aqueous solutions of potassium iodide and silver nitrate are mixed, forming the precipitate silver iodide.
 - a) Насичені розчини калію, йоду і нітрату срібла змішуються з утворенням сполуки йодиду срібла.
 - b) Водні розчини йодиду калію і нітрату срібла змішуються з утворенням осаду йодиду срібла.
 - c) Розбавлені розчини йодиду натрію і нітрату срібла змішуються з утворенням осажденного йодиду срібла.
4. The melting point of platinum is high compared to most metals but not as high as that of chromium.
 - a) Температура кипіння платини є високою на відміну від більшості металів, але нижчою ніж у хрому.
 - b) Температура плавлення платини є високою, як у більшості металів, але не такою високою, як у хрому.
 - c) Температура плавлення платини є високою у порівнянні з більшістю металів, але нижчою ніж у хрому.
5. According to Rutherford's new nuclear atomic model, most of an atom consists of electrons moving rapidly through empty space.
 - a) Згідно з новою ядерною моделлю атома Резерфорда більша частина атома складається із електронів, що швидко рухаються у просторі.
 - b) Стверджують, що за новою ядерною моделлю атома Резерфорда атом складається із електронів, що швидко рухаються у просторі.
 - c) Відомо, що за новою ядерною моделлю атома Резерфорда більша частина атома складається із електронів, що переміщуються у порожнечі.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Порівняно з іншими металами у цій таблиці, золото має найбільшу густину.
 - a) In contrast to the other metals on this table, gold has the highest density.
 - b) Compared to the other metals on this table, gold has the highest density.
 - c) Similarly to the other metals on this table, gold has the highest density.
2. Натрій, як і калій, є лужним металом.
 - a) Sodium, like potassium, is an alkali metal.
 - b) Natrium, just as kalium, is an alkaline metal.
 - c) Sodium, so as copper, is a basic metal.
3. Чисте срібло – відносно м'який метал.
 - a) Alloyed silver is a fairly ductile metal.
 - b) Clear silver is a definitely malleable metal.
 - c) Pure silver is a relatively soft metal.
4. Підвищення швидкості проходження реакції може бути спричинене зростанням температури.
 - a) A decrease in the speed of a chemical reaction can be induced by the temperature rise.
 - b) A decline in the velocity of a chemical reaction must be due to the temperature rise.
 - c) An increase in the rate of a chemical reaction may be caused by the temperature rise.
5. Вважають, що накопичення вуглекислого газу в повітрі нагріває Землю до небезпечного рівня.
 - a) Thinking that the storing of carbon dioxide in the air warms the Earth to a dangerous rate.
 - b) The accumulation of carbon dioxide in the air is believed to be warming the Earth to a dangerous level.

- c) Consider that the accumulation of carbon dioxide in the air heats the Earth to a dangerous point.

Вариант 3

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

In the 5th century B.C., the Greek philosopher Democritus expressed the belief that all matter consists of very small, indivisible particles, which he named *atomos* (meaning indivisible). Although Democritus' idea was not accepted by many of his contemporaries (notably Plato and Aristotle), somehow it endured. Experimental evidence from early scientific investigations provided support for the notion of "atomism" and gradually gave rise to the modern definitions of elements and compounds. It was in 1808 that an English scientist and schoolteacher, John Dalton, formulated a precise definition of the indivisible building blocks of matter that we call atoms.

Dalton's work marked the beginning of the modern era of chemistry. The hypotheses about the nature of matter on which Dalton's atomic theory is based can be summarized as follows:

- Elements are composed of extremely small particles, called atoms.
 - All atoms of a given element are identical, having the same size, mass, and chemical properties. The atoms of one element are different from the atoms of all other elements.
 - Compounds are composed of atoms of more than one element. In any compound, the ratio of the numbers of atoms of any two of the elements present is either an integer or a simple fraction.
 - A chemical reaction involves only the separation, combination, or rearrangement of atoms; it does not result in their creation or destruction.
1. The concept of *atomos*, suggested by Democritus, was fully accepted by his contemporaries.
 2. John Dalton worked in the sphere of education.
 3. According to Dalton's theory, atoms are the constituents of elements.

4. All atoms are identical, having the same size, mass, and chemical properties.
5. As result of chemical changes atoms may combine, rearrange, and even be created.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

The ancient Greeks thought that air was one of the four fundamental elements from which all other substances were made. In fact, air is a combination of gases, such as nitrogen and oxygen, and particles, such as dust, water droplets, and ice crystals. These gases and particles form the Earth's atmosphere, which surrounds the Earth and extends from the Earth's surface to outer space.

About 99% of the atmosphere is composed of nitrogen (N_2) and oxygen (O_2). The remaining 1% consists of argon (Ar), carbon dioxide (CO_2), water vapour (H_2O), and other trace gases. The amounts of nitrogen and oxygen in the atmosphere are fairly constant over recent time. However, over Earth's history, the composition of the atmosphere has changed greatly. For example, the Earth's early atmosphere probably contained mostly helium (He), hydrogen (H_2), methane (CH_4), and ammonia (NH_3). Today, oxygen and nitrogen are continually being recycled between the atmosphere, living organisms, the oceans, and Earth's crust.

The concentrations of some atmospheric gases are not as constant over time as the concentrations of nitrogen and oxygen. Gases such as water vapour and ozone (O_3) can vary significantly from place to place. The concentrations of some of these gases, such as water vapour and carbon dioxide, play an important role in regulating the amount of energy the atmosphere absorbs and emits back to the Earth's surface.

1. It is suggested that air is a combination of ...
 - a) inert gases and particles, such as dust, water droplets, and ice crystals.
 - b) nitrogen and oxygen.
 - c) nitrogen, oxygen, and tiny particles of other substances.
2. Water vapour...

- a)* constitutes 1% of the atmosphere.
 - b)* is present in relatively small amount in the atmosphere.
 - c)* is the major constituent of the atmosphere.
- 3. The composition of the Earth's atmosphere...
 - a)* has never changed.
 - b)* has somewhat changed over time.
 - c)* has always been constant.
- 4. The Earth is...
 - a)* surrounded by the gaseous atmosphere, chiefly composed of nitrogen and oxygen.
 - b)* surrounded by the gaseous atmosphere, which main components are water vapour and oxygen.
 - c)* surrounded by the gaseous atmosphere, composed of nitrogen and oxygen only.
- 5. The concentrations of the atmospheric gases ...
 - a)* are always constant.
 - b)* may vary.
 - c)* have dramatically changed over last year.

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

- 1. Liquids flow and can be _____ from one container to another.
 - a)* poured
 - b)* dumped
 - c)* dropped
- 2. The dangerous _____ from the sun are blocked out by the atmosphere.
 - a)* emissions
 - b)* shine
 - c)* rays
- 3. A physical change is _____ and does not result in a formation of a new

substance.

- a)* sustainable
 - b)* constant
 - c)* reversible
4. Gases are _____ and diffuse readily.
- a)* compressible
 - b)* feasible
 - c)* squeezable
5. Most metals are _____, meaning that they can be pounded into thin sheets.
- a)* smooth
 - b)* malleable
 - c)* dull
6. Chemists use statements called _____ to represent chemical reactions.
- a)* solutions
 - b)* yields
 - c)* equations
7. Metals can _____ electricity and bend without breaking.
- a)* conduct
 - b)* penetrate
 - c)* lead
8. _____ affects the solubility of gaseous solutes and gaseous solutions.
- a)* Collision
 - b)* Tension
 - c)* Pressure
9. In a _____ reaction oxygen combines with a substance and releases energy in the form of heat and light.
- a)* burning
 - b)* displacement
 - c)* combustion
10. The extremely unreactive group 8A elements are commonly called

_____ gases.

- a) transition
- b) heavy
- c) noble

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. I am thinking of _____ for a postgraduate course at MIT.
 - a) to apply
 - b) apply
 - c) applying
2. Professor Cummins offered him _____ in a synthetic chemistry research project.
 - a) taking part
 - b) to take part
 - c) having taken part
3. A molecular beam-surface scattering experiment is too expensive _____.
 - a) to carry out
 - b) carrying out
 - c) being carried out
4. _____ experiments is a very challenging task.
 - a) Conduct
 - b) Is conducting
 - c) Conducting
5. I wouldn't have been able to carry put this research unless she _____ me.
 - a) had helped
 - b) helped
 - c) helps
6. In 1786 the electric battery _____ by Luigi Galvani.
 - a) was invented
 - b) has been invented

- c) invented
7. Students major _____ different fields of science and technology.
- a) at
b) in
c) of
8. If I were a world leader, I _____ to stop the destruction of the earth.
- a) will stop
b) would have stopped
c) would stop
9. The text book was written _____ the eminent scholar.
- a) by
b) with
c) -
10. A lecture _____ in the main hall at the moment.
- a) is given
b) being given
c) is being given

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. Aqueous solutions of aluminum chloride and sodium hydroxide are mixed, forming the precipitate aluminum hydroxide.
- a) При змішуванні насичених розчинів хлориду алюмінію й гідроксиду калію утворюється сполука гідроксид алюмінію.
- b) При змішуванні водних розчинів хлориду алюмінію й гідроксиду натрію утворюється осад гідроксиду алюмінію.
- c) При змішуванні концентрованих розчинів хлориду алюмінію й соди утворюється речовина гідроксид алюмінію.
2. A neutron has a mass nearly equal to that of a proton, but it carries no electrical charge.

- a) Нейтрон має масу, що приблизно дорівнює масі протона, але він є електронейтральним.
 - b) Нейтрон має масу, що є еквівалентною масі протона, але він не має заряду.
 - c) Нейтрон має масу, що відповідає масі протона, але він не має електричного заряду.
3. Why are electrons moving in a cathode ray tube deflected by magnetic and electric fields?
- a) Чому електрони, які летять у катодній трубці, відхиляються під дією магнітного та електричного полів?
 - b) Чому електрони, які рухаються у катодній трубці, прискорюються під дією магнітного та електричного полів?
 - c) Як електрони, які перебувають у катодній трубці, змінюють траєкторію руху під дією магнітного та електричного полів?
4. It is common knowledge, that sulfur-containing compounds are normally present in small quantities in the troposphere.
- a) Зазначають, що речовини, які містять сульфур, за нормальних умов присутні у невеликій кількості у тропосфері.
 - b) Стверджують, що сполуки, які містять сульфур, іноді присутні у невеликій кількості у тропосфері.
 - c) Відомо, що сполуки, які містять сульфур, зазвичай присутні у невеликій кількості у тропосфері.
5. Nitrogen and phosphorus are the elements found in household detergents, soaps, and fertilizers.
- a) Нітроген і фосфор – це елементи, з яких виготовляють домашні миючі засоби, мило й добрива.
 - b) Нітроген і фосфор – це елементи, що містяться у домашніх миючих засобах, милі й добривах.
 - c) Нітроген і фосфор – це елементи, що не входять до складу домашніх миючих засобів, мила й добрив.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Мантія рухається навколо зовнішнього ядра дуже повільно, цей рух спричиняє землетруси.
 - a) The mantle rotates around the external core very rapidly, this movement causes eruptions.
 - b) The crust moves around the inner core extremely slowly, this motion causes earthquakes.
 - c) The mantle flows around the outer core very slowly, this movement induces earthquakes.

2. Речовина, що присутня у найбільшій кількості, називається розчинником; речовини, що наявні у меншій кількості називаються розчиненими речовинами.
 - a) The liquid present in the largest amount is called the solubility; the liquid present in smaller amount is called solute.
 - b) The compound present in large amount is called the solution; the compounds present in smaller amounts are called solutes.
 - c) The substance present in the largest amount is called the solvent; the substances present in smaller amounts are called solutes.

3. Існує близько ста хімічних елементів, тоді кількість сполук і сумішей безмежна.
 - a) There are approximately 100 chemical elements, whereas the number of compounds and mixtures is unlimited.
 - b) There are nearly 100 chemical elements, on the other hand the number of compounds and mixtures is unlimited.
 - c) There are almost 100 chemical elements, nevertheless the number of combinations and mixtures is unlimited.

4. Збереження природних ресурсів, таких як ріки і ліси, є важливою проблемою сьогодення.
 - a) The prevention of natural resources, similarly to rivers and forests, is an important concern nowadays.

- b)* The conservation of natural resources, such as rivers and forests, is an important issue nowadays.
 - c)* The maintenance of natural resources, just as rivers and forests, is an important problem nowadays.
5. Оскільки пари ртуті досить токсичні, її необхідно зберігати у герметичних ємностях.
- a)* Because mercury vapor is quite toxic, it must be stored in sealed containers.
 - b)* Despite mercury vapor is highly toxic, it is allowed to be stored in sealed containers.
 - c)* If only mercury vapor is rather toxic, it could be stored in sealed containers.

Вариант 4

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Many ancient civilizations fashioned tools, jewellery, and weapons out of metal that they got from rocks around them. After a while, however, people discovered that they could create new materials with superior properties by mixing naturally occurring metals with other substances. Some of the oldest materials produced by man include mixtures (or more specifically solutions) of metals known as alloys. One of the earliest alloys ever discovered was bronze. Bronze can be made by heating chunks of tin and copper until they are liquid and then mixing the two pure metals together. Bronze was very important to early civilizations because it was more resistant to rust than iron, harder than copper, and could hold an edge and be sharpened to create tools and weapons. Another alloy, produced early in the history of civilization, is steel. Steel is an alloy of iron and carbon (or charcoal). Steel was especially strong, and could be fashioned into very sharp edges, perfect for swords. Another old material which production was known to early civilizations is brass. Again, brass is an alloy, made of two pure metals, copper, and zinc. Early Romans knew that if they melted copper and a zinc ore together, they could produce brass, which was both shiny like gold, and resistant to rust. Brass was a common material used to make coins.

1. Different tools, weapons and other objects were made of metal since the ancient times.
2. It was discovered that to obtain the new improved materials, one was to mix metals with other substances.
3. Bronze is made by mixing iron and copper together.
4. Bronze was used to create weapons because it was cheaper than copper.
5. Brass was obtained by alloying gold, copper and zinc, making it both shiny like gold and resistant to rust.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

Ancient astronomers assumed that the Sun, planets, and stars orbited a stationary Earth in the Earth-centred model of the solar system. They thought this explained the most obvious daily motion of the stars and planets rising in the east and setting in the west. This geocentric, or the Earth-centred, model could not readily explain some other aspects of planetary motion. That is why early astronomers kept searching for a better explanation for the design of the solar system.

In 1543, Polish scientist Nicolaus Copernicus suggested that the Sun was the centre of the solar system. In this Sun-centred, or heliocentric model, Earth and all the other planets orbit the Sun. In a heliocentric model, the increased gravity of proximity to the Sun causes the inner planets to move faster in their orbits than do the outer planets.

Within a century, the ideas of Copernicus were confirmed by other astronomers, who found evidence that supported the heliocentric model. For example, Tycho Brahe, a Danish astronomer, designed and built very accurate equipment for observing the stars. From 1576–1601, before the telescope was used in astronomy, he made accurate observations to within a half arc minute of the planets' positions. Using Brahe's data, German astronomer Johannes Kepler demonstrated that each planet orbits the Sun in a shape called an ellipse, rather than a circle.

1. The geocentric model of the solar system means that...
 - a)** the Sun, planets and stars rotate around the Earth.
 - b)** the Earth orbits the Sun.
 - c)** planets orbit the Sun.
2. The heliocentric model was suggested by...
 - a)** Nicolaus Copernicus and Johannes Kepler in the 15th century.
 - b)** the Polish astronomers inspired by Nicolaus Copernicus.
 - c)** Nicolaus Copernicus in the 16th century.
3. According to the heliocentric model the inner planets...

- a)* are affected by the outer planets.
 - b)* move independently in the outer space.
 - c)* orbit the Sun with higher speed than other planets.
- 4. The ideas of Nicolaus Copernicus...
 - a)* were accepted immediately.
 - b)* were proved by other scientists.
 - c)* were supported without any doubt.
- 5. Tycho Brahe is famous for ...
 - a)* designing a piece of equipment for observing astronomical objects.
 - b)* introducing a hypothesis that the planets' orbits have elliptical shape.
 - c)* collaborating with Johannes Kepler.

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

- 1. _____ of the departments of natural sciences can take industrial posts or choose the academic career both in teaching and research fields.
 - a)* Undergraduates
 - b)* Graduates
 - c)* Applicants
- 2. An indicator is a _____, weakly acidic solution which changes colour as the concentration of H_3O^+ and OH^- ions varies.
 - a)* dilute
 - b)* dissolved
 - c)* saturated
- 3. The major contribution of the Bohr theory was the concept of _____ energy levels for the electrons.
 - a)* allowed
 - b)* permitted
 - c)* emission
- 4. Financial aid is awarded in the form of grants, loans, and _____.

- a)* scholarships
 - b)* tuition fees
 - c)* credits
5. The atom contains positively charged _____ surrounded by electrons.
- a)* nucleus
 - b)* core
 - c)* centre
6. _____ is a common example of the physical properties of a substance.
- a)* Breakdown
 - b)* Fracture
 - c)* Brittleness
7. Non-metals are poor _____ of heat and electricity.
- a)* examples
 - b)* conductors
 - c)* transmitters
8. A reaction _____ when one metal replaces another metal in a compound dissolved in water.
- a)* provides
 - b)* rearranges
 - c)* occurs
9. When reactants and products of a reaction are dissolved in water, they are said to be_____.
- a)* aqueous
 - b)* watery
 - c)* aquatic
10. Silicon and germanium are two of the most important metalloids, as they're used in computer chips and solar_____.
- a)* chips
 - b)* cells
 - c)* circuits

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. I can't imagine a first-year student _____ this experiment. It is very difficult!
 - a) conducting
 - b) to conduct
 - c) being conducted
2. The research advisor expected his student _____ all the necessary data.
 - a) collect
 - b) to collect
 - c) collecting
3. He is smart enough _____ this problem.
 - a) solve
 - b) solving
 - c) to solve
4. Mike was very excited about _____ in the foreign research program.
 - a) taking part
 - b) to take part
 - c) to have taken part
5. I _____ to carry out this experiment when I was a freshman.
 - a) being taught
 - b) am taught
 - c) was taught
6. In 1905 the concept of relativity _____ by Albert Einstein.
 - a) having been proposed
 - b) has been proposed
 - c) was proposed
7. Claire was shouted at _____ her research advisor.
 - a) with
 - b) to
 - c) by

8. If pollution levels had been controlled earlier, some animal species _____ extinct.
- a) wouldn't become
 - b) wouldn't have become
 - c) hadn't become
9. The article deals _____ the next-generation fuel cells and electrolizers.
- a) on
 - b) for
 - c) with
10. Do you think Mars _____ by humans one day?
- a) was colonised
 - b) has been colonised
 - c) will be colonised

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. Most of the sulfur dioxide in the troposphere is produced when coal and oil that contain high concentrations of sulfur are burned in power plants.
- a) Більша частина діоксиду сульфуру у тропосфері утворюється під час згорання на електростанціях вугілля і нафти, що містять високу концентрацію сульфуру.
 - b) Певна частина діоксину сульфуру у тропосфері вивільняється під час згорання на електростанціях вугілля і нафти, що містять високу концентрацію сульфуру.
 - c) Значна частина діоксиду сульфуру у тропосфері виділяється під час згорання на електростанціях вугілля і мастила, що мають високий вміст сульфуру.
2. Antoine Lavoisier proved that burning is simply the chemical combination of the combustible material with the oxygen of the air.
- a) Антуан Лавуазьє стверджував, що процес горіння – це лише процес

сполучення горючого матеріалу з киснем у повітрі.

- b)* Антуан Лавуазьє зазначив, що горіння – це лише процес комбінування горючого матеріалу з киснем у повітрі.
 - c)* Антуан Лавуазьє довів, що горіння – це лише процес сполучення горючого матеріалу з киснем у повітрі.
3. This, in turn, then allows additional experiments to produce materials with the improved properties.
- a)* Це, в свою чергу, дозволить експериментаторам проводити додаткові дослідження з метою отримання матеріалів із удосконаленими властивостями.
 - b)* Це, в свою чергу, дозволить проводити додаткові експерименти з метою отримання матеріалів із удосконаленими властивостями.
 - c)* Це, в свою чергу, дозволить проводити додаткові дослідження з метою отримання матеріалів із хорошими показниками.
4. However, fundamental research in chemistry is as exciting and important as ever.
- a)* З іншого боку, теоретичні дослідження у хімії є цікавими й важливими як ніколи.
 - b)* Як наслідок, теоретичні роботи з хімії є захопливими й важливими як ніколи.
 - c)* Проте, теоретичні дослідження у хімії є захопливими й важливими як ніколи.
5. Nevertheless, electrons in different orbitals have different average distances from the nucleus.
- a)* Тим не менш, електрони, що знаходяться на різних орбіталах, мають різну відстань від ядра.
 - b)* Навпаки, електрони, що розташовані на різних орбіталах, мають різну відстань від ядра.
 - c)* Тобто електрони, що містяться на різних орбіталах, мають різну відстань від ядра.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Кора – це відносно тонка оболонка, що утворена із доволі твердих гірських порід, і складає лише 1% від об'єму землі.
 - a) The crust is the relatively thin shell of fairly rigid rock and makes up only 1% of the earth's volume.
 - b) The core is a very thin shell of fairly rigid rock and makes up only 1% of the earth's volume.
 - c) The crescent is the relatively thin zone of fairly rigid rock and makes up only 1% of the earth.

2. Насичений розчин визначають як розчин, в якому розчинена речовина досягла максимальної концентрації і більше не розчиняється.
 - a) A dilute solution is defined as a solution in which the solute has exceeded its maximum point and does not dissolve at all.
 - b) A saturated solution is defined as a solution in which the solute has reached its maximum concentration and does not dissolve any more.
 - c) An aqueous solution is referred to as a solution in which the solvent has reached its maximum concentration and does not dissolve further.

3. Мінерал – це неорганічна тверда речовина природнього походження, що має певний хімічний склад та кристалічну внутрішню структуру.
 - a) A mineral is a naturally occurring inorganic solid with a particular chemical composition and crystalline internal structure.
 - b) A mineral is an inorganic rock of natural origin with a definite chemical composition and crystalline external structure.
 - c) A mineral is a natural inorganic solid having a predefined chemical composition and crystalline inner structure.

4. Елемент темно-синього кольору, схожий на графіт і має металічний блиск.
 - a) The element is dark-blue, being similar to graphite and reveals a metallic glow.

- b)* The element is dark-blue, reminds graphite and possesses a metallic shine.
 - c)* The element is dark-blue, resembles graphite and has a metallic lustre.
- 5. Плата за навчання варіює від 2 до 10 тисяч доларів за семестр.
 - a)* Student loans vary from 2 to 10 thousand dollars annually.
 - b)* Tuition fees vary from 2 to 10 thousand dollars per term.
 - c)* Academic payments vary from 2 to 10 thousand dollars per capita.

Вариант 5

I. Reading comprehension. Part 1

Read the text and decide whether the statements are true (T) or false (F).

Many people are familiar with common household chemicals, but few realize the size and importance of the chemical industry. Worldwide sales of chemicals and related products manufactured in the United States total approximately \$550 billion annually. The chemical industry employs more than 10% of all scientists and engineers and is a major contributor to the US economy.

Lots of chemicals are produced each year and serve as raw materials for a variety of uses, including the manufacture of metals, plastics, fertilizers, pharmaceuticals, fuels, paints, adhesives, pesticides, synthetic fibres, microprocessor chips, and numerous other products. People who have degrees in chemistry hold a variety of positions in industry, government, and academia. Those who work in the chemical industry find positions as laboratory chemists, carrying out experiments to develop new products (research and development), analysing materials (quality control), or assisting customers in using products (sales and service). Those with more experience or training may work as managers or company directors. A chemistry degree also can prepare you for alternate careers in teaching, medicine, biomedical research, information science, environmental work, technical sales, work with government regulatory agencies, and patent law.

1. Every year the sales of chemicals and related commodities produced in the USA reach up to \$550 billion.
2. Half of the American scientists and engineers work in the field of chemistry.
3. People who have degrees in chemistry work in the spheres of education, industry, and government.
4. Managers and company directors with a degree in chemistry are used to analysing new materials and developing new products.
5. Getting a degree in chemistry leads to further career as a laboratory chemist only.

II. Reading comprehension. Part 2

Read the text and answer the questions choosing the correct option (a, b, c).

Uranus was discovered accidentally in 1781, when a bluish object was observed moving relative to the stars. In 1986, *Voyager 2* flew by Uranus and provided detailed information about the planet, including the existence of new moons and rings. Uranus's average temperature is 58 K (-215°C).

Uranus is 4 times larger and 15 times more massive than Earth. It has a blue, velvety appearance, which is caused by methane gas in Uranus's atmosphere. Most of Uranus's atmosphere is composed of helium and hydrogen, which are colourless. There are few clouds, and they differ little in brightness and colour from the surrounding atmosphere contributing to Uranus's featureless appearance. The internal structure of Uranus is similar to that of Jupiter and Saturn; it is completely fluid except for a small, solid core. Uranus also has a strong magnetic field.

Uranus has at least 27 moons and a faint ring system. Many of Uranus's rings are dark – almost black and almost invisible. They were discovered only when the brightness of a star behind the rings dimmed as Uranus moved in its orbit and the rings blocked the starlight.

The rotational axis of Uranus is tipped so far that its north pole almost lies in its orbital plane. Astronomers hypothesize that Uranus was knocked sideways by a passing object, such as a large asteroid, early in the solar system's history.

1. According to the text, Uranus has ...
 - a) 27 moons and fully visible ring system.
 - b) almost invisible rings and at least 27 satellites.
 - c) 27 black, almost invisible, satellites that were discovered by *Voyager 2*.
2. In 1986 the spacecraft *Voyager 2* ...
 - a) supplied the important information about Uranus.
 - b) landed Uranus to collect samples of its rocky surface.
 - c) landed Uranus to investigate the composition of its atmosphere.
3. The mass of Uranus is ...

- a) 4 times greater than the mass of the Earth.
 - b) 15 times greater than the mass of the Earth.
 - c) 15 times greater than the mass of the Jupiter.
4. The bluish appearance of Uranus is caused by ...
- a) helium and hydrogen, that constitute its atmosphere.
 - b) methane, being a component of its crust.
 - c) methane in its atmosphere.
5. The internal structure of Uranus is...
- a) completely fluid.
 - b) almost liquid except its small solid core.
 - c) almost solid except its fluid upper layer.

III. English in Use: Vocabulary

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. _____ core is a solid ball made of iron and nickel.
- a) Surface
 - b) Inner
 - c) External
2. The _____ is a relatively thin shell of fairly rigid rock makes up only 1% of the earth's volume.
- a) core
 - b) crust
 - c) mantle
3. The latest theory for the atomic structure is purely mathematical and is referred to as the _____ -mechanical model.
- a) wave
 - b) tide
 - c) current
4. A substance that does not dissolve in a solvent is said to be ----___, in that solvent.

- a)* resistible
 - b)* sustainable
 - c)* insoluble
- 5. Three subatomic _____ are the fundamental building blocks from which all atoms are composed.
 - a)* particles
 - b)* elements
 - c)* cores
- 6. The most abundant _____ metals are sodium and potassium.
 - a)* alkaline
 - b)* coinage
 - c)* alkali
- 7. The branch of chemistry that studies the carbon _____ is called organic chemistry.
 - a)* compounds
 - b)* alloys
 - c)* ores
- 8. Sulphur dioxide released into the atmosphere reacts with water _____ to form one of the acids in acid rain.
 - a)* steam
 - b)* vapour
 - c)* cloud
- 9. Chlorine compounds are used as _____ agents by the textile and paper industries.
 - a)* whitened
 - b)* bleaching
 - c)* pale
- 10. In a _____ reaction a single compound breaks down into two or more elements or new compounds.
 - a)* combustion
 - b)* displacement

c) decomposition

IV. English in Use: Grammar

Read the sentences and fill in the gaps with the correct option (a, b, c).

1. If there were more trees, the air we breathe _____ cleaner.
 - a) would be
 - b) would have been
 - c) was
2. David is only fourteen. He's too young _____ the university.
 - a) to enter
 - b) entering
 - c) enter
3. If I were you, I _____ that software.
 - a) wouldn't install
 - b) hadn't installed
 - c) don't install
4. The tutor taught us _____ calculations using modern software.
 - a) perform
 - b) to perform
 - c) performing
5. It was nice of him _____ us with titration.
 - a) to help
 - b) helping
 - c) help
6. I wish I _____ his lecture last year.
 - a) attended
 - b) had attended
 - c) had been attended
7. _____ comparison _____ previous works on the semiconductors, this is a very substantial research.

- a) With...for
 - b) On...with
 - c) In...with
8. After _____ the Nobel Prize, he became a very famous scientist.
- a) being awarded
 - b) is awarded
 - c) had been awarded
9. The gas burner _____ at the moment, so we cannot do this experiment.
- a) is repaired
 - b) is repairing
 - c) is being repaired
10. Students can't stand _____ laboratory reports, because it takes a lot of time.
- a) to write
 - b) to have written
 - c) writing

V. Translation Practice. Part 1

Choose the appropriate Ukrainian translation (a, b, c) for the following sentences:

1. Mendeleev predicted the existence and properties of the undiscovered elements.
- a) Менделєєв передбачив застосування і властивості ще не досліджених елементів.
 - b) Менделєєв описав вигляд і властивості ще не відкритих елементів.
 - c) Менделєєв передбачив існування і властивості ще не відкритих елементів.
2. In this way, the understanding depends on knowledge of fundamental chemical properties and structures.
- a) З іншого боку, поняття засновані на знаннях фундаментальних хімічних властивостей і структур.
 - b) У цій області судження ґрунтуються на знаннях основних хімічних властивостей і структур.

- c) Таким чином, розуміння залежить від знань головних хімічних властивостей і структур.
3. A reaction occurs spontaneously only if the products are chemically more stable than the reactants.
- a) Реакція протікає спонтанно лише, якщо її продукти є хімічно більш стійкими ніж реагенти.
- b) Перетворення починається спонтанно лише, якщо її продукти є хімічно більш стійкими ніж реагенти.
- c) Реакція протікає спонтанно лише, але її продукти можуть бути хімічно більш стійкими ніж реагенти.
4. A practical application of oxidation-reduction reactions is in the electric cells or batteries.
- a) Практичне застосування окисно-відновних реакцій не обмежується елементами живлення або батарейками.
- b) Окисно-відновні реакції мають практичне використання у гальванічних елементах або батарейках.
- c) Практично окисно-відновні реакції використовуються у паливних комірках і батарейках.
5. Osmium is twice as heavy as lead.
- a) Осмій вдвічі легший за олово.
- b) Осмій вдвічі важчий за свинець.
- c) Осмій втричі важчий за літій.

VI. Translation Practice. Part 2

Choose the appropriate English translation (a, b, c) for the following sentences:

1. Земна кора складається із мінералів та гірських порід; вона є джерелом невідновних ресурсів.
- a) The earth's exterior is created of minerals and sand; it is a source of nonferrous resources.
- b) The earth's surface is made of minerals and stones; it is a resource of

- sustainable sources.
- c)* The earth's crust is composed of minerals and rocks; it is a source of nonrenewable resources.
2. Згідно з моделлю Резерфорда атом містить позитивно заряджене ядро, що оточене електронами.
- a)* According to Rutherford, an atom contains a positively charged nucleus that is surrounded by the electrons.
- b)* According to the Rutherford's model an atom contains a positively charged nucleus that is surrounded by the electrons.
- c)* Irrespectively to the Rutherford's model an atom contains a positively charged nucleus that is surrounded by the electrons.
3. Після складання випускних іспитів студенти отримують ступінь бакалавра.
- a)* After taking an aptitude test, students are granted a Bachelor's level.
- b)* After sitting an assessment examination, students are given a Bachelor's major.
- c)* After passing finals, students are awarded a Bachelor's degree.
4. У 1827 Велер був першим, хто отримав металічний алюміній у чистому вигляді та описав його властивості.
- a)* In 1827, Wohler was the first one to receive the aluminum metal in the clean form and describe some features.
- b)* In 1827, Wohler was the first to obtain the aluminum metal in the pure form and describe its properties.
- c)* By 1827, Wohler was the first to get the aluminum metal in the clear form and define their peculiarities.
5. Розчинник – це індивідуальна хімічна сполука, що здатна розчиняти різні речовини.
- a)* A solvent is an individual chemical compound that can dissolve different substances.
- b)* A solution is a particular chemical combination that must dissolve different liquids.
- c)* A solute is an individual chemical substance that can dissolve different

compounds.

Відповіді до комплексних контрольних робіт

1 курс

Варіант 1

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | F | 2. | F | 3. | F | 4. | T | 5. | T |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | b | 3. | a | 4. | a | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | a | 3. | b | 4. | b | 5. | c |
| 6. | a | 7. | a | 8. | c | 9. | b | 10. | b |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | c | 3. | a | 4. | b | 5. | a |
| 6. | b | 7. | c | 8. | c | 9. | a | 10. | b |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | a | 3. | b | 4. | c | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | c | 3. | c | 4. | a | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 2

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | F | 2. | F | 3. | F | 4. | T | 5. | T |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | a | 3. | c | 4. | b | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | b | 4. | a | 5. | c |
| 6. | b | 7. | a | 8. | c | 9. | a | 10. | b |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | a | 3. | b | 4. | c | 5. | b |
| 6. | a | 7. | a | 8. | b | 9. | c | 10. | a |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | b | 3. | b | 4. | a | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | c | 3. | c | 4. | b | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 3

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | F | 2. | T | 3. | T | 4. | F | 5. | T |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | a | 3. | b | 4. | c | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | a | 3. | c | 4. | c | 5. | b |
| 6. | a | 7. | a | 8. | b | 9. | c | 10. | a |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | a | 4. | c | 5. | b |
| 6. | a | 7. | c | 8. | c | 9. | a | 10. | b |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | c | 3. | b | 4. | b | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | a | 3. | c | 4. | b | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 4

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | F | 2. | F | 3. | T | 4. | T | 5. | T |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | b | 3. | c | 4. | a | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | b | 3. | b | 4. | a | 5. | c |
| 6. | a | 7. | b | 8. | b | 9. | c | 10. | a |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | b | 4. | c | 5. | c |
| 6. | a | 7. | b | 8. | a | 9. | c | 10. | b |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | c | 3. | a | 4. | a | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | b | 3. | a | 4. | c | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 5

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | T | 2. | F | 3. | F | 4. | T | 5. | F |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | a | 3. | b | 4. | a | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | a | 3. | c | 4. | b | 5. | c |
| 6. | c | 7. | a | 8. | b | 9. | c | 10. | b |

Total ____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | b | 3. | b | 4. | a | 5. | c |
| 6. | a | 7. | a | 8. | b | 9. | c | 10. | b |

Total ____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | b | 3. | a | 4. | c | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | a | 3. | c | 4. | b | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

Total ____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

2 курс

Вариант 1

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | f | 2. | f | 3. | t | 4. | f | 5. | t |
|----|---|----|---|----|---|----|---|----|---|

_____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | a | 3. | b | 4. | c | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

_____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | b | 3. | a | 4. | b | 5. | c |
| 6. | a | 7. | c | 8. | c | 9. | b | 10. | a |

_____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | a | 4. | c | 5. | b |
| 6. | a | 7. | c | 8. | b | 9. | b | 10. | c |

_____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | b | 3. | a | 4. | a | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

_____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | a | 3. | a | 4. | b | 5. | c |
|----|---|----|---|----|---|----|---|----|---|

_____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 2

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | f | 2. | f | 3. | t | 4. | t | 5. | t |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | c | 3. | b | 4. | c | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | c | 3. | b | 4. | c | 5. | b |
| 6. | a | 7. | a | 8. | c | 9. | b | 10. | b |

____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | b | 3. | c | 4. | b | 5. | a |
| 6. | b | 7. | a | 8. | b | 9. | b | 10. | c |

____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | a | 3. | b | 4. | c | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | a | 3. | c | 4. | c | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 3

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | f | 2. | t | 3. | t | 4. | f | 5. | t |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | b | 3. | b | 4. | a | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | c | 3. | c | 4. | a | 5. | b |
| 6. | c | 7. | a | 8. | c | 9. | c | 10. | c |

____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | c | 2. | b | 3. | a | 4. | c | 5. | a |
| 6. | a | 7. | b | 8. | c | 9. | a | 10. | c |

____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|--|----|---|----|---|
| 1. | b | 2. | a | 3. | | 4. | c | 5. | b |
|----|---|----|---|----|--|----|---|----|---|

____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | c | 3. | a | 4. | b | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 4

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | t | 2. | t | 3. | f | 4. | f | 5. | f |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | c | 3. | c | 4. | b | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | a | 3. | b | 4. | a | 5. | a |
| 6. | c | 7. | b | 8. | c | 9. | a | 10. | b |

____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | b | 3. | c | 4. | a | 5. | c |
| 6. | c | 7. | c | 8. | b | 9. | c | 10. | c |

____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | c | 3. | b | 4. | c | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | a | 2. | b | 3. | a | 4. | c | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Вариант 5

I.«Reading comprehension. Part 1» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | t | 2. | f | 3. | t | 4. | f | 5. | f |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

II.«Reading comprehension. Part 2» (15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | b | 2. | a | 3. | b | 4. | c | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

III. English in Use: Vocabulary (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | b | 2. | b | 3. | a | 4. | c | 5. | a |
| 6. | c | 7. | a | 8. | b | 9. | b | 10. | c |

____ / 20points

IV. English in Use: Grammar (20 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|-----|---|
| 1. | a | 2. | a | 3. | a | 4. | b | 5. | a |
| 6. | b | 7. | c | 8. | a | 9. | c | 10. | c |

____ / 20points

V. Translation Practice. Part 1(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | c | 3. | a | 4. | b | 5. | b |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

VI. Translation Practice. Part 2(15 points)

| | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 1. | c | 2. | b | 3. | c | 4. | b | 5. | a |
|----|---|----|---|----|---|----|---|----|---|

____ / 15 points

| | |
|---------------|--------------------|
| TOTAL: | _____ / 100 points |
|---------------|--------------------|

Список рекомендованої літератури для самостійної підготовки студентів до комплексної контрольної роботи

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