ЎЗБЕКИСТОН РЕСПУБЛИКАСИ

ОЛИЙ ВА ЎРТА МАХСУС ТАЪЛИМ ВАЗИРЛИГИ

АНДИЖОН ДАВЛАТ УНИВЕРСИТЕТИ

ФАКУЛЬТЕТЛАРАРО ЧЕТ ТИЛЛАР

(аниқ ва табиий фанлар) кафедраси

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Ўқув-услубий мажмуа Андижон давлат университети Кенгашининг 2019 йил “31” августдаги “1“ сонли баёни билан тасдиқланган.

МУНДАРИЖА

II . ЎҚУВ МАТЕРИАЛЛАРИ

LESSON -1

Adveribial clauses.Working on the text "Chemistry:key to progress and abundance. "

Chemistry:key to progress and abundance. Adveribial clauses.Working on the text "Chemistry:key to progress and abundance. "

The science of chemistry includes a study of properties, composition, and structure of matter, the changes in structure and composition which matter undergoes, and the accompanying energy changes. The Russian chemical industry now holds second place in the world in overall volume of production. Much credit for this is due to our scientists whose research has won worldwide recognition. The classical works by Mendeleyev, Butlerov, Zelinsky, Zaitzev, Lebedev, Favorsky and many others not only served as a theoretical basis for the development of the chemical industry, but enabled our scientists to set up a number of modern branches of the chemical industry as well.

The close links between science and industry enabled the chemical industry to make great progress. Zelinsky's works formed the basis for the synthesizing of a large number of new chemical compounds. These compounds are now counted in thousands, and they are extremely important in the country's economy. Our scientists evolved an original method of extracting phenol and acetone simultaneously from benzene and propylene. Phenol and acetone are needed for the manufacture of plastics, textile fibres, organic glass and other chemical products. Scientists are making a major contribution to the production of aniline dyes, and many new dyes have been evolved with their help. The research of scientists has revealed the physical and physico-chemical conditions necessary for the industrial production and processing of polymeric materials.

The theory of chain reactions is a major discovery of our time. The development of this theory is linked with the name of the Soviet scientist Semyonov, a Nobel Prize winner. The successes achieved by chemistry and engineering have played an important part in the achievements in space.

VOCABULARY

chemistry - химия
science - наука
to include - включать
property - свойство
composition - состав
codas structure - структура, состояние
matter - материя
to undergo – подвергаться
to set up - основывать
branch - отрасль
close links – тесная
large-scale production – производство

в больших масштабах
synthesizing - синтез
compound – соединение
to evolve - разрабатывать
simultaneously - одновременно
accompanying - сопутствующие
energy changes – преобразование энергии
abundance - изобилие
overall volume of production – общий объем продукции
much credit for this is due to our scientists – в этом большая заслуга наших ученых

EXERCISES:

I. Give English equivalents for these words. отрасль развитие исследование условие выделение открытие состав свойство наука производство одновременно достигать

II. Answer the questions. 1) Which branch of chemistry deals with the study of materials not derived from living organisms? 2) Which branch of chemistry studies the behaviour of a chemical substance in the presence of a magnetic field? 3) What is the study of substances containing carbon called? 4) What other branches of chemistry do you know? 5) By whom were antibiotics prepared?

III. Fill in the gaps with suitable words given below. 1) Diamagnetic substances are ... by a magnetic field. 2) Much of the work of the biochemist is concerned with . . . and medicines. 3) ... is the process whereby electrical energy causes a chemical change in the conducting medium. 4) Electrolysis is generally used as a method of deposition of metals from .... 5) The theory of ... reactions is a major discovery of our time. 6) The close links between the science and industry ... the chemical industry to make great progress. 7) Zelinsky's works formed the basis for the synthesizing of a large number of new chemical ... . 8) Scientists are making a major contribution to ... of aniline dyes. 9) There are more than 30 different . . . of chemistry. 10) Diamagnetic substances have no ... electrons. Production, repelled, unpaired, solution, foodstuffs, compounds, enabled, branches, electrolysis, chain.

Writing.

Types of Clauses

A clause is a group of words that contains a subject and verb (predicate). This differs from a phrase, which does not have a subject and a verb, like “to the park.” Clauses can be independent or dependent.

Independent clauses are called sentences as they can stand alone and express a complete thought.

Dependent clauses, or subordinate clauses, are subordinate to something else, usually an independent clause, and depend on it for meaning. Here are some examples with the dependent clause underlined: Because he has a college degree, he got a great job. When the storm started, she was at the store. Bob wore the coat that I gave him.

You can see that each underlined clause cannot stand on its own, but needs a clause to help it make sense or to help it complete a thought.

What Is an Adverb Clause?

Adverb clauses are clauses that function as adverbs. Since they are dependent clauses, they must have a subordinating conjunction to connect them to the other clause. This will help you recognize an adverb clause.

Subordinating conjunctions can be arranged according to the purpose of the clause they begin. Here are some examples of subordinating conjunctions:

Time: after, when, until, soon, before, once, while, as soon as, whenever, by the time

Condition: if, whether or not, provided, in case, unless, even if, in the event

Cause and effect: because, as, since, so, in order that, now that, inasmuch as

Contrast: though, although, while, whereas, even though

Most of the time, an adverb clause will be separated from the other clause with a comma. Here are examples of sentences with and without commas:

Whether you like it or not, you have to go. (The adverb clause “Whether you like it or not” puts a condition on the action.)

She enjoyed the party more than he did. (The adverb clause 'than he did' modifies the adverb “more.”)

After my car is fixed, we can take a trip to the coast. (The adverb clause "After my car is fixed" puts a time on the action.)

Functions of Adverbs

Since adverb clauses function as adverbs, let’s look at the functions of adverbs.

Adverbs modify verbs, adjectives, and other adverbs, and give more information.

They tell why, when, where, how, how much, and how often an action occurs.

They can move around in a sentence.

These examples show what the adverb is modifying (the adverb is underlined).

Verbs:

We eat pizza weekly.

She watched the wild animal carefully.

Adjectives:

That is a very nice person.

The dog is extremely hyperactive.

Adverbs:

She sings quite beautifully.

My dog is almost always starving.

Examples of Adverb Clauses

Adverb clauses can modify by telling the place, time, cause, and purpose of an action. They can also show concession and condition. Basically they answer the questions: where?, when?, why?, and under what conditions? Here are some examples with the adverb clause underlined:

Place:

Wherever there is music, people will often dance.

If you know where they live, you can drop in for a visit.

Time:

After the chores are done, we will eat ice cream.

When the clock strikes midnight, she has to leave.
Cause:
She passed the course because she worked hard.
Since he has long hair, he wears a ponytail.
Purpose:
So that he would not ruin the carpet, he took off his shoes.
He ate vegetables in order to stay healthy.
Concession:
Even though you are 13, you can't go to that movie.
Although you gave it your best, you did not win the match.
Condition:
If you save some money, you can buy a new game.
Unless you hurry, you will be late for school.
While adverb clauses are a little more complicated than simple adverbs, they are worth learning about. If you'd like to see more examples of adverb clauses YourDictionary has more available at Examples of Adverb Clauses.
What Are Adverbial Clauses? (with Examples)
An adverbial clause is a group of words which plays the role of an adverb. (Like all clauses, an adverbial clause will contain a subject and a verb.) For example:
Keep hitting the gong hourly.
(normal adverb)
Keep hitting the gong until I tell you to stop.
(adverbial clause)
In the examples above, the normal adverb and adverbial clause both tell us when the gong is to be hit. They are both adverbs of time. All adverbs (including adverbial clauses) can usually be categorized as one of the following:
Adverbs of Time
An adverb of time states when something happens or how often. An adverb of time often starts with one of the following subordinating conjunctions: after, as, as long as, as soon as, before, no sooner than, since, until, when, or while. Here are some examples:
After the game has finished, the king and pawn go into the same box. (Italian Proverb)
I stopped believing in Santa Claus when my mother took me to see him in a department store, and he asked for my autograph. (Shirley Temple)
As soon as you trust yourself, you will know how to live. (Johann Wolfgang von Goethe)
Adverbs of Place
An adverb of place states where something happens. An adverb of place often starts with a preposition (e.g., in, on, near) or one of the following subordinating conjunctions: anywhere, everywhere, where, or wherever. Here are some examples:
In a world where there is so much to be done, I felt strongly impressed that there must be something for me to do. (Dorothea Dix)

I am not afraid of the pen, the scaffold, or the sword. I will tell the truth wherever I please. (Mother Jones)

Adverbs of Manner

An adverb of manner states how something is done. An adverb of manner often starts with one of the following subordinating conjunctions: as, like, or the way. Here are some examples:

He acts like it is a joke.

We don't have conversations. You talk at me the way a teacher talks to a naughty student.

Except for an occasional heart attack, I feel as young as I ever did. (Robert Benchley)

Adverbs of Degree or Comparison

An adverb of degree states to what degree something is done or offers a comparison. An adverb of degree often starts with one of the following subordinating conjunctions: than, as...as, so...as, or the...the. Here are some examples:

A vacuum is a hell of a lot better than some of the stuff that nature replaces it with. (Tennessee Williams)

He is as smart as he is tall.

She is not so bright as she thinks she is.

Sometimes, the verb in an adverb of degree is understood (i.e., not present). For example:

You are taller than I. ✔

(In this example, the verb am has been omitted. This is permissible.)

You are taller than I am. ✔

(This is the full version.)

You are taller than me. ✔

(This is the colloquial version. This version might irk some of your grammar-savvy readers, but it is acceptable.)

Read more about choosing between than I and than me.

Adverbs of Condition

An adverb of condition states the condition for the main idea to come into effect. An adverb of condition often starts with if or unless. Here are some examples:

If the facts don't fit the theory, change the facts. (Albert Einstein)

If the English language made any sense, a catastrophe would be an apostrophe with fur. (Doug Larson)

If all the rich people in the world divided up their money among themselves, there wouldn't be enough to go around. (Christina Stead, 1903-1983)

Adverbs of Concession

An adverb of concession offers a statement which contrasts with the main idea. An adverb of concession often starts with one of the following subordinating conjunctions: though, although, even though, while, whereas, or even if. Here are some examples:

Although golf was originally restricted to wealthy, overweight Protestants, today it's open to anybody who owns hideous clothing. (Dave Barry)

A loud voice cannot compete with a clear voice, even if it's a whisper. (Barry Neil Kaufman)

Adverbs of Reason

An adverb of reason offers a reason for the main idea. An adverb of reason often starts with one of the following subordinating conjunctions: as, because, given, or since. Here are some examples:

I don't have a bank account, because I don't know my mother's maiden name. (Paula Poundstone)

Since you are like no other being ever created since the beginning of time, you are incomparable. (Brenda Ueland)

Properties of an Adverbial Clause

Here are the properties of an adverbial clause:

An adverbial clause is an adjunct. This means it can be removed without the sentence being grammatically wrong.

An adverbial clause is a dependent clause. This means it cannot stand alone as meaningful sentence in its own right.

An adverbial clause usually starts with a subordinating conjunction (e.g., although, because, if, until, when)

An adverbial clause will contain a subject and a verb. (This is what makes it a clause as opposed to a phrase.)

Uyga vazifa:

So’zlarni yodlash.

Matnni gapirishga tayyorlah.

Matnga savollar tuzish.

LESSON-2.
Information about the history of subject. Topic: Fields of chemistry

FIELDS OF CHEMISTRY

The field of chemistry is now a very large one. There are more than 30 different branches of chemistry. Some of the better known fields are inorganic chemistry, organic chemistry, physical chemistry, analytical chemistry, biological chemistry, pharmaceutical chemistry, nuclear chemistry, industrial chemistry, colloidal chemistry, and electrochemistry.

Inorganic chemistry. It eas originally considered that the field of inorganic chemistry consists of the study of materials not derived from living organisms|. Howeverit now includes all substances other than the hydrocarbons and their derivatives.

Organic chemistry. At one time it was thought that all substances found in plants and animals could be made only by using part of a living plant or animal. The study of these substances, most of which contain carbon was therefore called organic chemistry. It is now known that this idea is quite wrong, for in 1828 F. Wohler made an "organic" substance using a simple laboratory process.

Organic chemistry now merely means the chemistry of carbon compounds. Physical chemistry is concerned with those parts of chemistry which are closely linked with physics as, for in stance, the behaviour of substances when a current of electricity is passed through them.

Electrochemistry is concerned with the relation between electrical energy and chemical change. Electrolysis is the process whereby electrical energy causes a chemical change in the conducting medium, which usually is a solution or a molten substance. The process is generally used as a method of deposition metals from a solution.

research – исследование
to win world-wide recognition – получить всемирное признание
to serve – служить
theoretical basis – теоретическая основа
development – развитие
manufacture - производство
textile fibres - текстильные волокна
contribution – вклад
aniline dyes – анилиновые красители
to reveal - открывать, показывать
condition - условие
processing – обработка
chain reaction – цепная реакция
discovery - открытие
to achieve - достигать
to play an important part – играть важную роль
enable – давать возможность

IV. Make up sentences out of these words. 1) And, phenol, an original method, acetone, our scientists, simultaneously, benzene, and, evolved, from, extracting, propylene, of. 2) Substance, field, the study, in the presence, behaviour, chemical, magnetochemistry, of, of, is, a, of, a, magnetic. 3) World-wide, this, to, scientists, recognition, much, due, research, credit, our, is, whose, won, has. 4) Other, needed,

manufacture, textile fibers, plastics, acetone, and, are, organic glass, for, the, products, of, and, chemical, phenol. 5) Physics, chemistry, parts, linked, which, concerned, are, closely, with, with, physical, chemistry, is, those, of.

V. Translate into English. 1) Наши ученые разработали новый метод обработки металлов. 2) Биохимики внесли большой вклад в производство антибиотиков. 3) Электрохимия связана с изучением отношений между электрической энергией и химическими изменениями. 4) Русские ученые основали большое количество современных отраслей химической промышленности. 5) Они не знают состава этого соединения. 6) Советский союз был первым государством, которое организовало крупномасштабное производство синтетического каучука. 7) Этот ученый определил физические и физико-химические условия необходимые для промышленного производства и обработки полимерных материалов.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash.

Matnga savollar tuzish.

3-LESSON:
Adveribial clauses of reason. Doing exersises..Topic: Symbols, formulas and equations.

Writing:Symbols, formulas and equations.

Each of the 105 presently known chemical elements is given a symbol which usually is derived from the name of the element. The symbol of oxygen is O, of hydrogenis H, of helium He, of copper Cu, of sodium Na, of plutonium Pu. Groups of symbols called formulas are used to designate compounds. The formula for water is H2O, for carbon dioxide CO2, for sulphuric acid H2SO4.These symbols and formulas are used to indicate chemical fractions.

For example:

2H2O → 2H2 + O2 (statement: water decomposes to form hydrogen and oxygen).

VOCABULARY

symbol - символ
equation – уравнение
presently - в настоящее время
to derive – происходить
copper (Cu) - медь
sodium (Na) – натрий
to designate – обозначать
carbon dioxide C02 – двуокись углерода
sulphuric acid H2S04 – серная кислота
to indicate – указывать, означать
statement – формулировка
to decompose – разлагаться (на составные части)

EXERCISES:

I. Answer the questions. 1) How many chemical elements are there now? 2) What is the symbol of Manganese? 3) What is a symbol usually derived from? 4) What does a subscript show? 5) What element is always designated first in the formula? 6) When did Mendeleyev discover the periodic law? 7) How can the Periodic Law be simply stated? 8) What elements were discovered after Mendeleyev modified the table? 9) Give some examples of polyatomic molecules of single elements. 10)What are simple diatomic molecules of a single element designated by?

II. True or false? 1) Symbols and formulas are used to indicate chemical reactions. 2) Groups of symbols are called equations. 3) Groups of symbols are called formulas. 4) There are 102 chemical elements now. 5) The more electropositive element is always designated last in the formula. 6) Subscriptions are used to designate the number of atoms of each element present in the molecule. 7) Mendeleyev made his discovery in 1879. 8) There were several vacant spaces in Mendeleyev's table which led him to predict the existence of six undiscovered elements. 9) The table wasn't modified. 10) Properties of the elements are periodic functions of the nuclear charges of their atoms.

II. Identify the words, each dash stands for one letter only. 1) d _ _ _ _ 2) _ y _ _ _ _ 3) _ _ sig _ _ _ _ 4) _ _ com _ _ _ _ 5) _ _ lya _ _ _ _ _ 6) _ _ _ _ _ ar 7) _ t

_ t _ 8) v _ _ _ _ t 9) ex _ _ _ _ _ 10) arr _ _ _ _ _ _ _ _ 11) _ _ _ _ _ _ tion 12) m _ss _ _ g 13) var _ _ _ _ 14) _ _ _ _ fy 15) f _ _ _ tion

Writing.

Adveribial clauses of reason.Doing exersises..

Adverb clauses of cause or reason are introduced by the subordinating conjunctions **because, as, since** and **that.**

- I sing **because I like singing.**
- He thinks he can get anything **because he is rich.**
- **Since he has apologized** we will take no further action against him.
- **As he was not there** I left a message with his mother.
- I am glad **that you have come.**
- My parents were disappointed **that I didn't get the scholarship.**
- He was furious **that his book was panned by most reviewers.**

Notes

The conjunction **that** is often omitted.

- I am glad **you like it**. OR I am glad **that you like it.**
- They were disappointed **you weren't in**. OR They were disappointed **that you weren't in.**

As and **since** are used when the reason is already known to the listener.

- **As** it is raining again we will have to cancel the match.

As and since-clauses are relatively formal. In an informal style, the same idea can be expressed with **so.**

- It is raining again, **so** we will have to cancel the match.

Because-clauses are used to give information which isn't already known to the reader or listener.

- **Because he had not paid the bill**, his electricity was cut off.

Note that a **because-clause** can stand alone. **As** and **since-clauses** cannot be used like this.

- 'Why are you looking at her like that?' '**Because she smiled at me.'** (NOT As she smiled at me.) (NOT Since she smiled at me.)

Combine each set of simple sentence into one complex sentence containing an adverb clause.

Notes

A simple sentence contains one main clause. A complex sentence contains one main clause and one or more subordinate clauses.

1. I waited for my friend. I waited till he arrived.
2. He hid somewhere. His pursuers could not find him.
3. You are intelligent. I am intelligent.
4. He was not there. I left a message with his mother.
5. We wish to live. We eat for that purpose.
6. She was very tired. She could barely stand.
7. Don't eat too much. You may fall ill.
8. He started early. He finished late.

9. You must tell me everything. Otherwise I will not be able to help you.
10. I will get ready. Do not go till then.

Answers

1. I waited for my friend **until he arrived.**
2. He hid **where his pursuers could not find him.**
3. I am **as intelligent as you are.**
4. **As he was not there**, I left a message with his mother.
5. We eat **that we may live.**
6. She was so tired **that she could barely stand.**
7. **If you eat too much**, you may fall ill.
8. **Though he started early**, he finished late.
9. **If you do not tell me everything**, I will not be able to help you.
10. Do not go **until I get ready.**

Uyga vazifa:

So’zlarni yodlash.
Mashqlar ishlash.
Matnga savol tuzish

4-LESSON:
Branches of the subject. Topic:
Inorganic molecules and compounds.
INORGANIC MOLECULES AND COMPOUNDS

Simple diatomic molecules of a single element are designated by the symbol for the element with a subscript 2, indicating that it contains 2 atoms. Thus the hydrogen molecule is H2; the nitrogen molecule, N2; and the oxygen molecule, O2.

Polyatomic molecules of a single element are designated by the symbol for the element with a numerical subscript corresponding to the number of atoms in the molecule. Examples are the phosphorus molecule, P4, and the sulphur molecule, S8.

Diatomic covalent molecules, containing unlike elements are given similar designation. The formula for hydrogen chloride is HCl. The more electropositive element is always designated first in the formula.

For polyatomic covalent molecules containing unlike elements, numerical subscriptions are used to designate number of atoms of each element present in the molecule, for example, water, H2O. Again, as in diatomic molecules, more electropositive element is placed first in the formula.

VOCABULARY

molecule - молекула
diatomic - двухатомный
single – единичный
subscript – подстрочный индекс
polyatomic - многоатомный
numerical – числовой
corresponding - соответствующий
sulphur – сера
covalent - ковалентный
unlike – различный
similar – подобный
hydrogen chloride - хлористый водопровод
electropositive – электроположительный

Exercices:

III. Translate the words from exercise III and make up your own sentences with them.

Rules of reading formulas and equations. **Список наиболлее важных химических элементов (к таблице Менделеева)** 1. Al 2. Ag 3. Ar 4. As 5. Au 6. B 7. Ba 8. Be 9. Bi 10.Br 11.C 12.Ca 13.Ce 14.Cd 15.Cl 16.Co 17.Cr 18.Cs 19.Cu 20.F 21.Fe 22.Ge 23.H 24.He 25.Hg 26.J 27.Ir 28.K 29.Li 30.Mg 31.Mn 32.Mo 33.N 34.Na 35.Ne 36.Ni 37.O 38.P 39.Pb 40.Pt aluminium argentums argon arsenic aurum = gold boron barium berillium bismuth bromine carbon calcium cerium cadmium chlorine cobalt chromium caesium copper fluorine ferrum = iron germanium hydrogen helium hydrargyrum = mercury iodine iridium kalium = potassium lithium magnesium mangnese molybdenum nitrogen natrium = sodium neon nickel oxygen phosphorus plumbum= lead platinum алюминий серебро аргон мышьяк золото бор барий бериллий висмут бром углерод кальций церий кадмий хлор кобальт хром цезий медь фтор железо германий водород гелий ртуть йод иридий калий литий магний марганец молибден азот натрий неон никель кислород фосфор свинец платина 14 41.Ra 42.Rb 43.S 44.Sb 45.Se 46.Si 47.Sn 48.Sr 49.Te 50.Th 51.Ti 52.U 53.W 54.Zn 55.Zr radium rubidium sulphur

antimony selenium silicon stannum = tin strontium tellurium thorium titanium uranium wolfram = tungsten zinc zirconium радий рубидий сера сурьма селен кремний олово стронций теллур торий титан уран вольфрам цинк цирконий

Vocabulary. Laboratory equipment. 1) 1-63 laboratory apparatus (laboratory equipment) лабораторное обо- рудование 2) Bunsen burner горелка Бунзена 3) gas inlet (gas inlet pipe) подвод газа (газовая подводящая труба) 4) air regulator регулятор подвода воздуха 5) Teclu burner горелка Теклю 6) pipe union присоединение газо- вой трубы 7) gas regulator регулятор поступ- ления газа 8) stem трубка горелки 9) air regulator регулятор поступ- 34) test tube пробирка 35) test tube rack штатив для проби- рок 36) flat-bottomed flask плоскодонная колба 37) ground glass neck горлышко с притертой стеклянной пробкой 38) long-necked round-bottomed flask длинногорлая круглодонная колба 39) Erlenmeyer flask (conical flask) колба Эрленмайера (коническая колба) 40) filter flask колба для фильтрова- ния под вакуумом 41) fluted filter гофрированный фильтр 16 ления воздуха 10) bench torch настольная горелка 11) oxygen inlet подвод кислорода 12) hydrogen inlet подвод водорода 13) oxygen jet струя кислорода 14) tripod треножник, тренога 15) ring (retort ring) кольцо для ре- торты 16) funnel воронка 17) pipe clay triangle трубчатый глиняный треугольник 18) wire gauze проволочная сетка 19) wire gauze with asbestos centre (Am. center) проволочная сетка с ас- бестовым центром 20) beaker стакан 21) burette (for delivering measured quanti ties of liquid) бюретка (для выпуска измеренных объемов жидкости) 22) burette stand штатив для бюре- ток 23) burette clamp зажим для бюре- ток 24) graduated pipette градуирован- ная пипетка 25) pipette пипетка 26) measuring cylinder (measuring glass) мерный цилиндр (измеритель- ный стакан) 27) measuring flask мерная колба 28) volumetric flask мерная колба 29) evaporating dish (evaporating basin), made of porcelain выпарная чашка, выполненная из форфора 30) tube clamp (tube clip, pinchcock) зажим для трубок 31) clay crucible with lid глиняный тигель с крышкой 32) crucible tongs тигельные щипцы 33) clamp струбцина 42) one-way tap одноходовый кран 43) calcium chloride tube трубка с хлоридом кальция 44) stopper with tap пробка с краном 45) cylinder цилиндр 46) distillation apparatus (distilling apparatus) перегонный аппарат 47) distillation flask (distilling flask) перегонная колба 48) condenser конденсатор 49) return tap, a two-way tap возврат- ный кран, двухходовой кран 50) distillation flask (distilling flask, Claisen flask) перегонная колба (вакуум- перегонная колба, колба Кляйзена) 51) desiccator эксикатор (сушилка) 52) lid with fitted tube крышка с вставленной трубкой 53) tap кран 54) desiccator insert made of porcelain фарфоровый вкладыш в эксикаторе 55) three-necked flask трехгорлая кол- ба 56) connecting piece (Y-tube) соедини- тельная (Y-образная) трубка 57) three-necked bottle трехгорлая склянка 58) gas-washing bottle склянка 59) gas generator (Kipp's apparatus, Am. Kipp generator) генератор газа 9аппарат Кипа, генератор Кипа) 60) overflow container переточный со- суд 61) container for the solid сосуд для засыпки реагента 62) acid container сосуд для кислоты 63) gas outlet трубка для выпуска газа

Uyga vazifa:
So’zlarni yodlash.

5-LESSON:
Adveribial clauses of time. Doing ex-ses. Topic: Periodic law. Writing.
PERIODIC LAW

One of the cornerstones of modern chemical theory is the Periodic Law. It can be simply stated as follows: The properties of the elements are a periodic function of the nuclear charges of their atoms. In 1869 Mendeleyev arrived at the conclusion that by the arrangement of the elements in order of increasing atomic weight the similarity and periodicity of properties of various, valence groups of the elements were clearly delineated. There were several vacant spaces in Mendeleyev's table which led him to predict the existence of six undiscovered elements, (scandium, gallium, germanium, polonium etc). His confidence in the new classification was clearly expressed in the predictions which he made of the chemical properties of these missing elements. And within fifteen years gallium, scandium and germanium were discovered. Although this table has been modified hundreds of times, it has withstood the onslaught of all new facts. Isotopes, rare gases, atomic numbers, and electron configurations have only strengthened the idea of the periodicity of the properties of the elements.

VOCABULARY

Periodic Law – периодический закон
cornerstone – краеугольный камень
to state – формулировать
as follows – следующим образом
nuclear charge – ядерный заряд
to arrive at a conclusion – прийти к за-
ключению
arrangement – расположение
in order of increasing atomic weight – в порядке возрастания атомного веса
similarity ['simiylaeriti] cxoflvalence
group – валентная группа
to delineate - очерчивать
vacant space – свободное место
to predict - предсказывать
existence - существование
confidence - уверенность
to express – выражать
prediction - предсказание
missing - отсутствующий
within – в течение
to modify - видоизменять
to withstand – выдерживать
onslaught – появление
isotope – изотоп
rare gases – редкие газы
electron configuration – электронная конфигурация
to strengthen – укреплять

Exercices :

II. Learn the words and special terms from the list. 18 I. Match the word with its definition. 1) funnel 2) beaker 3) microscope 4) slides 5) electric balance 6) tongs 7) mortar 8) pestle 9) tripod 10) rubber tubing ll) gas tap 12) matches 13) measuring cylinder 14) test tube 15) test tube rack 16) pipette 17) conical flask 18) bung/stopper 19) 1ab coat 20) chemical 21) chemical reaction 22) chemist 23) chemistry a) a tool that consists of two movable bars joined at one end, used to pick

up an object b) a scientific instrument that makes extremely small things look larger c) a short stick with a heavy round end d) the science that is concerned with studying the structure of substances and the way they change e) a round piece of rubber or wood used to close the top of a container f) a round pipe made of rubber for liquids to go through g) a substance used in chemistry or produced by chemistry h) a tube used for pouring liquids or powders into a container with a narrow opening i) an electric instrument for weighing things j) a natural process in which the atoms of chemicals mix and arrange themselves differently to form new substances k) a glass container used for measuring liquid l) a thing glass tube for sucking up exact amounts of liquid, used especially in chemistry m) a small glass container that is shaped like a tube and is used in chemistry n) a piece of clothing that is worn over your clothes in laboratory to protect them o) a scientist who has a special knowledge in chemistry p) a glass cup with straight sides that is used in hemistry for measuring and heating liquids q) small pieces of thing glass used for holding som ething when you look at it under a microscope r) a hard bowl in which substances are crushed into powder or very small pieces with a pestle s) a special type of bottle mat you use to keep liquids t) a special shelf for tubes u) a support with three legs, used for a camera, tel escope etc. v) small wooden sticks, used, to light a tire w) a piece of equipment for controlling the flow of gas from a pipe or container
Adveribial clauses of time. Doing ex-ses.

An adverbial clause is dependent clause introduced by an adverbial subordinator. It is used to modify the verb of the independent clause and tells when (time), where (place), why (reason), for what purpose, how, how long, and how far. It is also used to show contrast and concession.

1) PUNCTUATION RULES

An adverbial clause can come either **before** or **after** the independent clause.

Formula:

- **Adverbial clause + , + Independent clause** (a comma after adverbial clause)
- **Independent clause + Adverbial clause** (no comma after adverbial clause)

Example:

- **As he didn't understand,** he asked the teacher to explain.
- He asked the teacher to explain **as he didn't understand**.

2) TYPES OF ADVERBIAL CLAUSES

There are several different kinds of adverbial clauses; in addition, the subordinators can distinguish the different types of adverbial clauses.

a) Adverb Clause of Time

We use adverb clause of time to modify verb in main clause and to tell the time that an action takes place.

Subordinating Conjunctions: *when, whenever, anytime, before, after, till, until, while, since, just as, as soon as, as often as, now that, as long as …*

Example:

- She ran away while I was sleeping.
- While I was sleeping, she ran away.

b) Adverb Clause of Place

We use adverb clause of place to modify verb in main clause and to tell the place that an action takes place.

Subordinating Conjunctions: *where, as far as, as near as, wherever, anywhere…*

Example:

- She is always drunk wherever I meet her.
- Wherever I meet her, she is always drunk.

c) Adverb Clause of Manner

We use adverb clause of manner to modify verb in main clause and to tell how an action takes place.

Subordinating Conjunctions: *as if, as though, as*

Example:

- The boy speaks as if he is sick.
- As if he is sick, the boy speaks.

d) Adverb Clause of Cause/Reason

We use adverb clause of cause/reason to modify verb in main clause and to tell the cause that an action takes place.

Subordinating Conjunctions: *because, as, for, that*

Example:

- I come here because I want to meet you.
- Because I want to meet you, I come here.

e) Adverb Clause of Condition

We use adverb clause of condition to modify verb in main clause and to tell the condition that an action takes place or someone does something.

Subordinating Conjunctions: *if, whether, if … not, unless, supposing that, provided that, in the condition that, as long as that*

Example:

- I will commit suicide unless you love me.
- Unless you love me, I will commit suicide.

f) Adverb Clause of Purpose

We use adverb clause of purpose to modify verb in main clause and to tell the aim that someone does something or something happens.

Subordinating Conjunctions: *so that, in order that,*

Example:

- I tell him everyday in order that he can remember.
- In order that he can remember, I tell him everyday.

REMEMBER:

Sometimes we can use "*so as to, in order to*" to stand instead of "*so that, in order that*".

Sentence + *so that / in order that* + subject + verb + complement.
Sentence + *so as to / in order to* + verb + complement.

Example:

- I bring my dictionary with me in order that I can check.
- I bring my dictionary with me in order to check.

g) Adverb Clause of Result/Consequence

We use adverb clause of result/consequence to modify verb in main clause and to tell the result that someone does something or something happens.

Subordinating Conjunctions: "*that*" is used to recognize adverb clause of result

Subject + verb + so + adjective/adverb + that + subject + verb + comp

Example:

- She is so hungry that she has lunch early.
- That she has lunch early, she is so hungry.

Subject + verb + such + noun(s) + that + subject + verb + complement

Example:

- She acts such a rude manner that no man loves her.
- That no man loves her, she acts such a rude manner.

h) Adverb Clause of Concession/Contrast

We use adverb clause of concession/contrast to modify verb in main clause and it is introduced by the below-written subordinating conjunctions:

Subordinating Conjunctions: *though, however, even though, even if, although, so, in spite of the fact that, the fact that, despite that, whether or, granted that, whoever, whatever, whichever, no matter what, whereas, while*

Example:

- I have never committed crime although I am poor.
- Although I am poor, I have never committed crime.

i) Adverb Clause of Degree

We use adverb clause of degree to modify verb in main clause.

Subordinating Conjunctions: *according to as, according to how*

Example:

- She will be paid according to how she works.
- According to how she works, she will be paid.

j) Adverb Clause of Means

We use adverb clause of means to modify verb in main clause.

Subordinating Conjunctions: *by the fact that, by whatever means, by what means.*

Example:

- You can recognize her easily by the fact that she speaks loudly.
- By the fact that she speaks loudly, you can recognize her easily.

k) Adverb Clause of Comparison

We use adverb clause of comparison to modify verb in main clause.

Subordinating Conjunctions: small, fast, hard, slow, late…

Subject + verb + as + adjective/adverb + as + subject + verb + comp

Example:

- Your book is as small as my book is.

- You speak as fast as she does.

Sub + verb + adj/adv-er /more-adj/adv + than + sub + verb + comp

Example:

- She runs faster than I do.
- They speak more fluently than he does.

An adverb clause serves the purpose of an adverb. There are different kinds of adverb clauses.

Adverb clauses of time

Adverb clauses of time are introduced by subordinating conjunctions like **when, whenever, before, after, as, since, till, once** and **now that.**

- **Whenever** I get an idea for a story, I jot it down in a notebook.
- **When** you heat ice, it melts.
- **After** the match ended, we left for our homes.
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- Sunday is the day **when** I am least busy.
- **Whenever** I go to London, I stay with my brother.

Once and **now that** are sometimes used as conjunctions in adverb clauses of time.

- **Once** you have made a decision, you must stick to it.
- **Now that** winter has come, we must buy some woollen clothes.

Adverb clauses of place

Adverb clauses of place are introduced by the conjunctions **where** and **wherever.**

- **Wherever** you go, you will find coca cola.
- **Where** there is a will, there is a way.
- That is the place **where** I was born.
- This is the house **where** I live in.

In informal English, **everywhere** is sometimes used instead of **wherever.**

- **Everywhere** we went, people greeted us warmly. (= **Wherever** we went, people greeted us warmly.)

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Example:

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Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash**.**

6- LESSON:
Mendeleev's Periodic Table

The renowned Russian professor Mendeleev developed his periodic table in 1869. Mendeleev's conceptualization of the periodic table was far more superior than any of the periodic tables developed in his time. It was very systematically devised with a lot of clarity and consistency. He kept some of the cells in his table empty, to accommodate the missing elements, which would be discovered in future. He could predict the chemical properties of those unknown elements. Later, when those elements were discovered, their properties actually matched with Mendeleev's predictions. He included additional rows in the table in order to fit in some elements with recurring properties into the same column. He made corrections in the values of the atomic mass of some of the elements. The drawback of this table, however, was that the lengths of all the rows were fixed.

Exercices:

III. Translate the words from exercise III and make up your own sentences with them. Rules of reading formulas and equations. **Список наиболлее важных химических элементов (к таблице Менделеева)** 1. Al 2. Ag 3. Ar 4. As 5. Au 6. B 7. Ba 8. Be 9. Bi 10.Br 11.C 12.Ca 13.Ce 14.Cd 15.Cl 16.Co 17.Cr 18.Cs 19.Cu 20.F 21.Fe 22.Ge 23.H 24.He 25.Hg 26.J 27.Ir 28.K 29.Li 30.Mg 31.Mn 32.Mo 33.N 34.Na 35.Ne 36.Ni 37.O 38.P 39.Pb 40.Pt aluminium argentums argon arsenic aurum = gold boron barium berillium bismuth bromine carbon calcium cerium cadmium chlorine cobalt chromium caesium copper fluorine ferrum = iron germanium hydrogen helium hydrargyrum = mercury iodine iridium kalium = potassium lithium magnesium mangnese molybdenum nitrogen natrium = sodium neon nickel oxygen phosphorus plumbum= lead platinum алюминий серебро аргон мышьяк золото бор барий бериллий висмут бром углерод кальций церий кадмий хлор кобальт хром цезий медь фтор железо германий водород гелий ртуть йод иридий калий литий магний марганец молибден азот натрий неон никель кислород фосфор свинец платина 14 41.Ra 42.Rb 43.S 44.Sb 45.Se 46.Si 47.Sn 48.Sr 49.Te 50.Th 51.Ti 52.U 53.W 54.Zn 55.Zr radium rubidium sulphur antimony selenium silicon stannum = tin strontium tellurium thorium titanium uranium wolfram = tungsten zinc zirconium радий рубидий сера сурьма селен кремний олово стронций теллур торий титан уран вольфрам цинк цирконий

Vocabulary. Laboratory equipment. 1) 1-63 laboratory apparatus (laboratory equipment) лабораторное обо- рудование 2) Bunsen burner горелка Бунзена 3) gas inlet (gas inlet pipe) подвод газа (газовая подводящая труба) 4) air regulator регулятор подвода воздуха 5) Teclu burner горелка Теклю 6) pipe union присоединение газо- вой трубы 7) gas regulator регулятор поступ- ления газа 8) stem трубка горелки 9) air regulator регулятор поступ- 34) test tube пробирка 35) test tube rack штатив для проби- рок 36) flat-bottomed flask плоскодонная колба 37) ground glass neck горлышко с притертой стеклянной пробкой 38) long-necked round-bottomed flask длинногорлая круглодонная колба 39) Erlenmeyer flask (conical flask) колба Эрленмайера (коническая

колба) 40) filter flask колба для фильтрова- ния под вакуумом 41) fluted filter гофрированный фильтр 16 ления воздуха 10) bench torch настольная горелка 11) oxygen inlet подвод кислорода 12) hydrogen inlet подвод водорода 13) oxygen jet струя кислорода 14) tripod треножник, тренога 15) ring (retort ring) кольцо для ре- торты 16) funnel воронка 17) pipe clay triangle трубчатый глиняный треугольник 18) wire gauze проволочная сетка 19) wire gauze with asbestos centre (Am. center) проволочная сетка с ас- бестовым центром 20) beaker стакан 21) burette (for delivering measured quanti ties of liquid) бюретка (для выпуска измеренных объемов жидкости) 22) burette stand штатив для бюре- ток 23) burette clamp зажим для бюре- ток 24) graduated pipette градуирован- ная пипетка 25) pipette пипетка 26) measuring cylinder (measuring glass) мерный цилиндр (измеритель- ный стакан) 27) measuring flask мерная колба 28) volumetric flask мерная колба 29) evaporating dish (evaporating basin), made of porcelain выпарная чашка, выполненная из форфора 30) tube clamp (tube clip, pinchcock) зажим для трубок 31) clay crucible with lid глиняный тигель с крышкой 32) crucible tongs тигельные щипцы 33) clamp струбцина 42) one-way tap одноходовый кран 43) calcium chloride tube трубка с хлоридом кальция 44) stopper with tap пробка с краном 45) cylinder цилиндр 46) distillation apparatus (distilling apparatus) перегонный аппарат 47) distillation flask (distilling flask) перегонная колба 48) condenser конденсатор 49) return tap, a two-way tap возврат- ный кран, двухходовой кран 50) distillation flask (distilling flask, Claisen flask) перегонная колба (вакуум- перегонная колба, колба Кляйзена) 51) desiccator эксикатор (сушилка) 52) lid with fitted tube крышка с вставленной трубкой 53) tap кран 54) desiccator insert made of porcelain фарфоровый вкладыш в эксикаторе 55) three-necked flask трехгорлая кол- ба 56) connecting piece (Y-tube) соедини- тельная (Y-образная) трубка 57) three-necked bottle трехгорлая склянка 58) gas-washing bottle склянка 59) gas generator (Kipp's apparatus, Am. Kipp generator) генератор газа 9аппарат Кипа, генератор Кипа) 60) overflow container переточный со- суд 61) container for the solid сосуд для засыпки реагента 62) acid container сосуд для кислоты 63) gas outlet трубка для выпуска газа

Uyga vazifa:
So’zlarni yodlash.
Mashqlar ishlash

7-LESSON:
Adveribial clauses of place. Doing ex-ses. Topic : Laboratory. Laboratory.

All the laboratories of inorganic chemistry are almost alike. These are large rooms where both students and research-workers carry out their experimental work. Modern laboratories of inorganic as well as organic and analytical chemistry are provided with gas and running water. Every laboratory is to be provided with a ventilating hood for the escape of both harmful and unpleasant vapours and odours. Every laboratory has to be lit up very well.

There are many laboratory benches with a great number of drawers in every laboratory. Different apparatus devices as well as materials are to be kept in them. Besides we can see many shelves and cases for containers with chemicals.

On every laboratory bench one can see test-tubes, flasks, beakers, funnels, evaporating dishes, weighing bottles. All this glassware should be kept in good order.

Various burners serve for producing flames. Bunsen burner is to be mentionedamong them. Different crucibles are to be employed when heating of solution and igniting of materials are to be carried out. Crucibles are usually made of quartz,porcelain and iron. In addition to these crucibles, there are platinum crucibles in some laboratories, but they are used very seldom.

Vocabulary.

1. laboratory apparatus (laboratory equipment) лабораторное оборудование
2. Bunsen burner горелка Бунзена
3. gas inlet (gas inlet pipe) подвод газа (газовая подводящая труба)
4. air regulator регулятор подвода воздуха
5. Teclu burner горелка Теклю
6. pipe union присоединение газовой трубы
7. gas regulator регулятор поступления газа
8. stem трубка горелки
9. air regulator регулятор поступ ления воздуха
10. bench torch настольная горелка
11. oxygen inlet подвод кислорода
12. hydrogen inlet подвод водорода
13. oxygen jet струя кислорода
14. tripod треножник, тренога
15. ring (retort ring) кольцо для реторты
16. funnel воронка
17. pipe clay triangle трубчатый глиняный треугольник
18. wire gauze проволочная сетка
19. wire gauze with asbestos centre (Am. center) проволочная сетка с асбестовым центром
20. beaker стакан

21. burette (for delivering measured quanti
ties of liquid) бюретка (для выпуска измеренных объемов жидкости)
22. burette stand штатив для бюреток
23. burette clamp зажим для бюреток
24. graduated pipette градуированная пипетка
25. pipette пипетка

Exercices:

7. laboratory. Answer the following questions:

1. What do we call a laboratory'? 2. In what laboratories can the students carry out their experiments? 3. What is every laboratory provided with? 4. Why is every laboratory provided with a ventilating hood? 5. What can you see on the shelves'? 6. What glassware is there on every laboratory' bench? 7. What are burners used for'? 8. What are crucibles used for'? 9. What are crucibles made of? 10. What is it necessary to do if we want to obtain hydrogen chloride'? (describe the experiment) 11. How can nitric acid be prepared in the laboratory?

Adveribial clauses of place. Doing ex-ses.

Adveribial clauses of place

An adverb clause serves the purpose of an adverb. There are different kinds of adverb clauses.

Adverb clauses of time

Adverb clauses of time are introduced by subordinating conjunctions like **when, whenever, before, after, as, since, till, once** and **now that.**

- **Whenever** I get an idea for a story, I jot it down in a notebook.
- **When** you heat ice, it melts.
- **After** the match ended, we left for our homes.
- **As** the chief guest arrived, we all stood up.
- I will wait **until** you have finished dressing.
- Sunday is the day **when** I am least busy.
- **Whenever** I go to London, I stay with my brother.

Once and **now that** are sometimes used as conjunctions in adverb clauses of time.

- **Once** you have made a decision, you must stick to it.
- **Now that** winter has come, we must buy some woollen clothes.

Adverb clauses of place

Adverb clauses of place are introduced by the conjunctions **where** and **wherever.**

- **Wherever** you go, you will find coca cola.
- **Where** there is a will, there is a way.
- That is the place **where** I was born.
- This is the house **where** I live in.

In informal English, **everywhere** is sometimes used instead of **wherever.**

- **Everywhere** we went, people greeted us warmly. (= **Wherever** we went, people greeted us warmly.)

Adverb Clauses Exercises:

A. Combine the following sentences using adverb clauses at the end of the sentence.

1. We watched the robins. They raised their young in our apple tree.
2. Becky read the book. It was recommended by a friend.
3. Dad donates his suits to charity. He has worn them a year.
4. The policemen delayed the drivers. The wrecks were cleared.
5. Ann ate an apple. She studied her vocabulary.

B. Combine the following sentences using adverb clauses at the beginning of the sentence.

1. Frank started medical training. He drove a forklift for a living.
2. The rains had started the mud slides. The homes were not safe to live in.
3. Older people love to sit in the park. They feed the birds and visit.
4. I enjoyed camping out. I was much younger.
5. Joe recognised the man. The man had stopped his car to help.

C. Find the adverb clauses in these sentences. What are their meanings (time, place...)? If it is a reduced adverb clause, add the missing words.

1. You seem very happy when you help other people.
2. While you wait, we will detail your car.
3. I am happier than I ever was before.
4. That horse is more obstinate than a mule.
5. The woman took notes while being taught to cook with broccoli.
6. Ben fields baseballs better than he hits.
7. As the lions approached the carcass, the cheetahs retreated once more.
8. While eating, I choked on a bone.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

8- LESSON:
Branches of the subject. Description of chemical elements. Chlorine.
Description of chemical elements. Chlorine.

Chlorine is an element with atomic number 17, atomic weight 35.5 (thirtyfive point five). It is a gas at ordinary temperatures and is never found free in nature. It is found in nature combined with other elements. At normal temperatures, chlorine is a diatomic gas (C12), greenish-yellow in colour and about 2 1/2 (two and a half) times as heavy as air. It liquefies at atmospheric pressure at —34. 1° C (minus thirtyfour point one degrees Centigrade) to a yellowish liquid approximately 11/2 (one and a half) times as heavy as water. The liquid freezes at —100.98° C (minus one hundred point nine eight degrees Centigrade). Chlorine is soluble in water and indirectly exerts bleaching and bactericidal action by reacting with water to form hypochlorous acid.

$Cl2 + H2O \leftrightarrow HCl + HClO \rightarrow HCl + (O)$

Chlorine Water Hydrochloric Hypochloric acid acid The hypochlorous acid is unstable, giving up oxygen to form more HC1. The oxygen attacks and destroys bacteria; it also oxidizes coloured organic substances, forming colourless or less-coloured components.

As one of the most active elements, chlorine ranks in reactivity about with oxygen. It combines directly and readily with hydrogen and most non-metals except nitrogen, carbon and oxygen; it also unites with all the familiar metals except gold and platinum.

Participating in a number of important organic reactions, in some cases chlorine appears in the final product, as in insecticides (DDT) or in the plastic, polyvinyl chloride.

Chlorine is generally produced by electrolysis of water solutions of sodium chloride in electrolytic cells. When sodium chloride or potassium chloride olutions are subjected to electrolysis, there are three products; caustic soda or caustic potash, chlorine and hydrogen. If fused sodium chloride is used, there are two products: chlorine, and metallic sodium.

VOCABULARY

1. is never found free in nature не встречается в свободном состоянии в природе
2. 2 1/2 times as heavy as air в 2 ½ раза тяжелее воздуха
3. to liquefy переходить в жидкое состояние
4. approximately приблизительно
5. to freeze (froze, frozen) замерзать, затвердевать
6. soluble растворимый
7. to exert оказывать
8. bleaching and bactericidal action отбеливающее и бактерицидное действие
9. hypochlorous acid хлорноватистая кислота
10. unstable неустойчивый
11. to destroy разрушать
12. to oxidize окислять, оксидировать
13. component составная часть
14. ranks in reactivity about with oxygen по своей реактивности

почти не уступает кислороду
15. to combine соединяться
16. familiar известный
17. to participate учавствовать
18. to appear появляться
19. insecticide средство для истребления насекомых
20. sodium chloride поваренная соль, хлористый натрий
21. electrolytic cell электролитическая ванна
22. potassium chloride хлористый калий
23. to subject подвергать
24. caustic soda едкий натр
25. caustic potash едкое кали
26. fused=molten расплавленный

EXERCISES:

I. Answer the questions. 1) How many chemical elements are there now? 2) What is the symbol of Manganese? 3) What is a symbol usually derived from? 4) What does a subscript show? 5) What element is always designated first in the formula? 6) When did Mendeleyev discover the periodic law? 7) How can the Periodic Law be simply stated? 8) What elements were discovered after Mendeleyev modified the table? 9) Give some examples of polyatomic molecules of single elements. 10)What are simple diatomic molecules of a single element designated by?

II. True or false? 1) Symbols and formulas are used to indicate chemical reactions. 2) Groups of symbols are called equations. 3) Groups of symbols are called formulas. 4) There are 102 chemical elements now. 5) The more electropositive element is always designated last in the formula. 6) Subscriptions are used to designate the number of atoms of each element present in the molecule. 7) Mendeleyev made his discovery in 1879. 8) There were several vacant spaces in Mendeleyev's table which led him to predict the existence of six undiscovered elements. 9) The table wasn't modified. 10) Properties of the elements are periodic functions of the nuclear charges of their atoms.

III. Identify the words, each dash stands for one letter only. 1) d _ _ _ _ 2) _ y _ _ _ _ 3) _ _ sig _ _ _ _ 4) _ _ com _ _ _ _ 5) _ _ lya _ _ _ _ _ 6) _ _ _ _ _ ar 7) _ t _ t _ 8) v _ _ _ _ t 9) ex _ _ _ _ _ 10) arr _ _ _ _ _ _ _ _ 11) _ _ _ _ _ _ tion 12) m _ss _ _ g 13) var _ _ _ _ 14) _ _ _ _ fy 15) f _ _ _ tion

III. Translate the words from exercise III and make up your own sentences with them.

Rules of reading formulas and equations. **Список наиболлее важных химических элементов (к таблице Менделеева)** 1. Al 2. Ag 3. Ar 4. As 5. Au 6. B 7. Ba 8. Be 9. Bi 10.Br 11.C 12.Ca 13.Ce 14.Cd 15.Cl 16.Co 17.Cr 18.Cs 19.Cu 20.F 21.Fe 22.Ge 23.H 24.He 25.Hg 26.J 27.Ir 28.K 29.Li 30.Mg 31.Mn 32.Mo 33.N 34.Na 35.Ne 36.Ni 37.O 38.P 39.Pb 40.Pt aluminium argentums argon arsenic aurum = gold boron barium berillium bismuth bromine carbon calcium cerium cadmium chlorine cobalt chromium caesium copper fluorine ferrum = iron germanium hydrogen helium hydrargyrum = mercury iodine iridium kalium = potassium lithium magnesium mangnese molybdenum nitrogen natrium = sodium neon nickel oxygen phosphorus plumbum= lead platinum алюминий серебро

аргон мышьяк золото бор барий бериллий висмут бром углерод кальций церий кадмий хлор кобальт хром цезий медь фтор железо германий водород гелий ртуть йод иридий калий литий магний марганец молибден азот натрий неон никель кислород фосфор свинец платина 14 41.Ra 42.Rb 43.S 44.Sb 45.Se 46.Si 47.Sn 48.Sr 49.Te 50.Th 51.Ti 52.U 53.W 54.Zn 55.Zr radium rubidium sulphur antimony selenium silicon stannum = tin strontium tellurium thorium titanium uranium wolfram = tungsten zinc zirconium радий рубидий сера сурьма селен кремний олово стронций теллур торий титан уран вольфрам цинк цирконий

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

9-LESSON:
Direct and Indirect speech.Doing ex-ses. Topic: Analytical chemistry. Methods of analysis.

ANALYTICAL CHEMISTRY METHODS OF ANALYSIS

The analysis of a complex material usually involves four steps, sampling, dissolving the sample, separating mutually interfering substances, and determining the constituents of interest. The first step, sampling can be a significant problem, particularly in industrial applications. Sampling is complete when the subdivision is small enough to permit analysis. The second step is the dissolving of a sample. If we know the nature of the sample we use a suitable reagent. I/Gravimetric methods involve a weighing operation as the final measurement. Gravimetric analysis have been developed for almost everything from A(luminium) to Z(irconium).

Gravimetric procedures may be done in various ways: by precipitating, by dissolving, by removing as a volatile compound. Volumetric methods involve measurement of that volume of a solution of known concentration which reacts with a known amount of the sample. Such a solution is called a standard solution.

Volumetric techniques are now applicable to most of the elements and to many specific inorganic and organic compounds. They are widely used in all phases of chemistry, in medicine, and in many allied sciences. Physico-chemical methods depend upon the measurement of physical properties other than mass and volume. Such methods are important when the simpler methods of analysis are inadequate.

Vocabulary. Laboratory equipment. 1) 1-63 laboratory apparatus (laboratory equipment) лабораторное обо- рудование 2) Bunsen burner горелка Бунзена 3) gas inlet (gas inlet pipe) подвод газа (газовая подводящая труба) 4) air regulator регулятор подвода воздуха 5) Teclu burner горелка Теклю 6) pipe union присоединение газо- вой трубы 7) gas regulator регулятор поступ- ления газа 8) stem трубка горелки 9) air regulator регулятор поступ- 34) test tube пробирка 35) test tube rack штатив для проби- рок 36) flat-bottomed flask плоскодонная колба 37) ground glass neck горлышко с притертой стеклянной пробкой 38) long-necked round-bottomed flask длинногорлая круглодонная колба 39) Erlenmeyer flask (conical flask) колба Эрленмайера (коническая колба) 40) filter flask колба для фильтрова- ния под вакуумом 41) fluted filter гофрированный фильтр 16 ления воздуха 10) bench torch настольная горелка 11) oxygen inlet подвод кислорода 12) hydrogen inlet подвод водорода 13) oxygen jet струя кислорода 14) tripod треножник, тренога 15) ring (retort ring) кольцо для ре- торты 16) funnel воронка 17) pipe clay triangle трубчатый глиняный треугольник 18) wire gauze проволочная сетка 19) wire gauze with asbestos centre (Am. center) проволочная сетка с ас- бестовым центром 20) beaker стакан 21) burette (for delivering measured quanti ties of liquid) бюретка (для выпуска измеренных объемов жидкости) 22) burette stand штатив для бюре- ток 23) burette clamp зажим для бюре- ток 24) graduated pipette градуирован- ная пипетка 25) pipette пипетка 26) measuring cylinder (measuring glass) мерный цилиндр (измеритель- ный стакан) 27) measuring flask мерная колба 28)

volumetric flask мерная колба 29) evaporating dish (evaporating basin), made of porcelain выпарная чашка, выполненная из форфора 30) tube clamp (tube clip, pinchcock) зажим для трубок 31) clay crucible with lid глиняный тигель с крышкой 32) crucible tongs тигельные щипцы 33) clamp струбцина 42) one-way tap одноходовый кран 43) calcium chloride tube трубка с хлоридом кальция 44) stopper with tap пробка с краном 45) cylinder цилиндр 46) distillation apparatus (distilling apparatus) перегонный аппарат 47) distillation flask (distilling flask) перегонная колба 48) condenser конденсатор 49) return tap, a two-way tap возврат- ный кран, двухходовой кран 50) distillation flask (distilling flask, Claisen flask) перегонная колба (вакуум- перегонная колба, колба Кляйзена) 51) desiccator эксикатор (сушилка) 52) lid with fitted tube крышка с вставленной трубкой 53) tap кран 54) desiccator insert made of porcelain фарфоровый вкладыш в эксикаторе 55) three-necked flask трехгорлая кол- ба 56) connecting piece (Y-tube) соедини- тельная (Y-образная) трубка 57) three-necked bottle трехгорлая склянка 58) gas-washing bottle склянка 59) gas generator (Kipp's apparatus, Am. Kipp generator) генератор газа 9аппарат Кипа, генератор Кипа) 60) overflow container переточный со- суд 61) container for the solid сосуд для засыпки реагента 62) acid container сосуд для кислоты 63) gas outlet трубка для выпуска газа

II. Learn the words and special terms from the list. 18 I. Match the word with its definition. 1) funnel 2) beaker 3) microscope 4) slides 5) electric balance 6) tongs 7) mortar 8) pestle 9) tripod 10) rubber tubing ll) gas tap 12) matches 13) measuring cylinder 14) test tube 15) test tube rack 16) pipette 17) conical flask 18) bung/stopper 19) 1ab coat 20) chemical 21) chemical reaction 22) chemist 23) chemistry a) a tool that consists of two movable bars joined at one end, used to pick up an object b) a scientific instrument that makes extremely small things look larger c) a short stick with a heavy round end d) the science that is concerned with studying the structure of substances and the way they change e) a round piece of rubber or wood used to close the top of a container f) a round pipe made of rubber for liquids to go through g) a substance used in chemistry or produced by chemistry h) a tube used for pouring liquids or powders into a container with a narrow opening i) an electric instrument for weighing things j) a natural process in which the atoms of chemicals mix and arrange themselves differently to form new substances k) a glass container used for measuring liquid l) a thing glass tube for sucking up exact amounts of liquid, used especially in chemistry m) a small glass container that is shaped like a tube and is used in chemistry n) a piece of clothing that is worn over your clothes in laboratory to protect them o) a scientist who has a special knowledge in chemistry p) a glass cup with straight sides that is used in hemistry for measuring and heating liquids q) small pieces of thing glass used for holding som ething when you look at it under a microscope r) a hard bowl in which substances are crushed into powder or very small pieces with a pestle s) a special type of bottle mat you use to keep liquids t) a special shelf for tubes u) a support with three legs, used for a camera, tel escope etc. v) small wooden sticks, used, to light a tire w) a piece of equipment for controlling the flow of gas from a pipe or container.

Do the following exercises

Rewrite the following sentences by using past continuous forms of the verbs in brackets.

Example: She (cook) when the man came.

She was cooking when the man came.

I (have) breakfast at 7.30.

I was having breakfast at 7.30.

1. He (sleep) when we arrived.
2. When you came in, I (write) a report.
3. The car (do) 90 when the accident happened.
4. When the lights went out, I (shave).
5. I (cross) the street when the car hit me.
6. My father (read) the newspaper while we (watch) TV.
7. While Seima (study), Mehmet (play).
8. He still (sleep) at 9 o'clock.
9. I (have) breakfast when the telephone rang.
10. They (play) tennis when the rain started.
11. While you were at work, we (sleep).
12. When the teacher came in, we (make) a lot of noise.
13. The man (sweep) the room while the woman (wash) the dishes.
14. What you (do) when it started to rain?
15. I (not do) anything when the teacher came.
16. He (drive) to Bolu when his car broke down.
17. What the judge (do) while the lawyer (speak)?
18. As I (come) home, I met an old friend.
19. You (look) at the road when the car hit the boy?
20. The postman came just as I (leave) home.

Make sentences in future continuous tense as in the example.

Example: She-wash the dishes-at 3 o'clock

She will be washing the dishes at 3 o'clock.

They-pack the suitcases-this time tomorrow.

They will be packing the suitcases this time tomorrow.

the postman-deliver letters-this time tomorrow

we-study English-this time Thursday

he-cut wood-all day tomorrow

the typist-type letters-all afternoon

l-do my homework-at 9 this evening

he-study for the exam-all night

they-play basketball-at 4 o'clock tomorrow

he-stay in a hotel-all next month

he-do military service-all next year
she-play tennis-this time tomorrow
we-travel in Europe-during the summer
they-ski-all day tomorrow
he-have a rest-during the holiday
she-study chemistry-during the next term
the teacher-teach present perfect tense-all next week
the lawyer-talk to his client-at 10 a.m. tomorrow
l-fly to the USA-tomorrow afternoon
Tom-work-all day tomorrow
he-learn Arabic-all next year
we-watch the football match on TV-this time tomorrow.

Uyga vazifa:
So'zlarni yodlash.
Mashqlar ishlash

10-LESSON:
Sequences of Tenses. Topic : Methods of separation.
METHODS OF SEPARATION

Methods of separating a solid and a liquid are built around two processes, filtration and centrifugation.

Filtration is the process of passing the suspension of solid and liquified through a porous barrier which will trap the solid. The barrier may be filter paper, sintered glass, asbestos matting, glass wool and others.

Centrifugation is mechanized setting (or floating) and depends upon the difference between the densities of the solid and the solution. Gravitational setting is usually inadequate. A centrifuge can be used to enhance the gravitational force moving the particles. Most centrifuges operate at hundreds of revolutions per minute. Extremely difficult separations require speeds of tens of thousands of revolutions per minute.

NOTES AND COMMENTARY

are built around two processes – базируются на двух процессах
mechanized setting – механическое осаждение
the process of passing … through –прцесс пропускания … через
depends upon – зависит
revolutions per minute – обороты в минуту

EXERCISES:

I. Give English equivalents for these words. отрасль развитие исследование условие выделение открытие состав свойство наука производство одновременно достигать

II. Answer the questions. 1) Which branch of chemistry deals with the study of materials not derived from living organisms? 2) Which branch of chemistry studies the behaviour of a chemical substance in the presence of a magnetic field? 3) What is the study of substances containing carbon called? 4) What other branches of chemistry do you know? 5) By whom were antibiotics prepared? 7

III. Fill in the gaps with suitable words given below. 1) Diamagnetic substances are ... by a magnetic field. 2) Much of the work of the biochemist is concerned with . . . and medicines. 3) ... is the process whereby electrical energy causes a chemical change in the conducting medium. 4) Electrolysis is generally used as a method of deposition of metals from .... 5) The theory of ... reactions is a major discovery of our time. 6) The close links between the science and industry ... the chemical industry to make great progress. 7) Zelinsky's works formed the basis for the synthesizing of a large number of new chemical ... . 8) Scientists are making a major contribution to ... of aniline dyes. 9) There are more than 30 different . . . of chemistry. 10) Diamagnetic substances have no ... electrons. Production, repelled, unpaired, solution, foodstuffs, compounds, enabled, branches, electrolysis, chain.

Writing.

Sequences of Tenses. Doing exercise.

Sequences of Tenses

The rules governing verb tenses are dictated by logic; an action in the future obviously cannot happen before an action in the past. In writing, it's a matter of looking at your clauses and sentences and determining when each action is happening relative to everything else. The past must come before the present, and the present before the future, etc. Pay particular attention to the verb sequence when you have a dependent clause before an independent clause, or a result clause before the if-clause.

When an independent clause is in the past tense, any dependent clauses must also be written in the past tense, *not* the present tense or the future tense. Consider the example below for an illustration of this rule:

The cat was bathing because his feet are dirty.

The cat was bathing because his feet will be dirty.

Because the tense of the independent clause is in the past (was bathing), the verb in the dependent clause should also be in the past, as illustrated in the sentence below:

The cat was bathing because his feet were dirty.

As with many rules in English, however, there is an exception. In cases where a universal truth is conveyed, the present tense may be used after the past tense. Consider this example:

Even the early doctors knew that washing hands prevents infection.

The fact that handwashing prevents infection is a universal truth that doesn't change with time, so it can be expressed in the present tense. Of course, the rule regarding the sequence of tenses doesn't mean that the actual verbs have to be in chronological order, just the actions. We can put the dependent clause at the beginning of the sentence, as illustrated below:

Athena will continue to learn English when she gets to the States.

It's alright to have the future tense (will continue) before the present tense (gets) because the temporal conjunction (when) shows that the second action actually happens first.

Complete the following sentences using an appropriate form of the verb.

1. Suddenly she gave a loud scream and …… to the ground. (fell / had fallen / has fallen)
2. After questioning he …… to go home. (allowed / was allowed / had allowed)
3. They would have won if they ……. a bit harder. (played / had played / play)
4. She …….. to say that she disagreed. (heard / was heard / had heard)
5. Although they ……. defeated, they did not lose heart. (were / are / have been)
6. Our teacher taught us that virtue ……. its own reward. (is / are / will be)
7. The teacher asked the boys whether they ……. the problems. (had solved / have solved / will solve)

8. He declared that he would not believe it even if he …… it with his own eyes. (see / saw / would see)
9. The room …… but the police failed to find anything suspicious. (searched / was searched / had searched)
10. The government has announced that taxes …….. (would be raised / will be raised / will raise)

Answers
1. 1. Suddenly she gave a loud scream and **fell** to the ground.
2. After questioning he **was allowed** to go home.
3. They would have won if they **had played** a bit harder.
4. She **was heard** to say that she disagreed.
5. Although they **were** defeated, they did not lose heart.
6. Our teacher taught us that virtue **is** its own reward.
7. The teacher asked the boys whether they **had solved** the problems.
8. He declared that he would not believe it even if he **saw** it with his own eyes.
9. The room **was searched** but the police failed to find anything suspicious.
10. The government has announced that taxes **will be raised.**

Uyga vazifa:
So'zlarni yodlash.
Mashqlar ishlash

11-LESSON:
Text on speciality. Ion exchange methods in analytical chemistry.
ION EXCHANGE METHODS IN ANALYTICAL CHEMISTRY

Ion exchange is now one of the recognized processes of chemical engineering. It has been applied to the separation processes of quantitative analysis.

General Principles. By ion exchange we mean the exchange of ions of like sign between a solution and a solid insoluble body in contact with it. For such an exchange to be possible, the solid must contain ions of its own. The solid (called the ion exchanger) must have an open, permeable molecular structure, so that ions and solvent molecules can move freely in and out. Many substances, both natural and artificial, have ion exchanging properties. In analytical work we are primarily interested in the synthetic organic exchangers. These have a high capacity for holding ions and they are not broken down by acids or alkalies, they have a relatively simple composition.

NOTES AND COMMENTARY

1. by "ion exchange" we mean - под ионным обменом мы подразумеваем
2. of like sign - одноименные по знаку
3. for such exchange to be possible– чтобы осуществить этот обмен
4. of it own - свои собственные
5. can move freely in and out - могут свободно входить и выходить

Exercices:

IV. Make up sentences out of these words. 1) And, phenol, an original method, acetone, our scientists, simultaneously, benzene, and, evolved, from, extracting, propylene, of. 2) Substance, field, the study, in the presence, behaviour, chemical, magnetochemistry, of, of, is, a, of, a, magnetic. 3) World-wide, this, to, scientists, recognition, much, due, research, credit, our, is, whose, won, has. 4) Other, needed, manufacture, textile fibers, plastics, acetone, and, are, organic glass, for, the, products, of, and, chemical, phenol. 5) Physics, chemistry, parts, linked, which, concerned, are, closely, with, with, physical, chemistry, is, those, of.

V. Translate into English. 1) Наши ученые разработали новый метод обработки металлов. 2) Биохимики внесли большой вклад в производство антибиотиков. 3) Электрохимия связана с изучением отношений между электрической энергией и химическими изменениями. 4) Русские ученые основали большое количество современных отраслей хими- ческой промышленности. 5) Они не знают состава этого соединения. 6) Советский союз был первым государством, которое организовало круп- номасштабное производство синтетического каучука. 7) Этот ученый определил физические и физико-химические условия необхо- димые для промышленного производства и обработки полимерных материалов.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

12-LESSON:
Chromatography and ion exchange technique.

Chromatography is a method of chemical analysis based upon the selective absorption and partial fractionation of various substances by certain suitable materials. The method is simple and requires a minimum of special equipment. The technique consists of pouring a solution through a column containing a suitable adsorbing material. A selective developing agent is then passed through the column and the different substances in the solution are spread down the column into layers visibly separated from one another, provided the substances are colored. In the case of colorless substances, the layers of the different substances may be located by the use of ultra-violet light or by chemical tests. This method was first described by the Russian botanist Tswett, in 1906. Tswett was engaged in the extraction and purifictaion of plant pigments. Methods of chromatography have been applied to the separation of the rare earths and a number of procedures, based on chromatography techniques, have been developed for the separation of the inorganic cations and anions.

NOTES AND COMMENTARY

1. are spread down … into layers- оседают пластами
2. provided - при условии, что
3. was engaged in – занимался

Exercices:

The Plan of Rendering Newspaper Article

1. The title of the article. a) The headline of the article is ... b) The article is headlined ... c) The headline of the article I've read is...

2. The author of the article a) The author of the article is... b) The author of the article is ... c) The article is written by ...

3. Where and when the article was published. a) The article is taken from the newspaper... b) It is (was) published in ... c) it is (was) printed in ...

4. The main idea of the article. a) The main / central idea of the article is ... b) The article is about ... c) The article is devoted to ... d) The article deals with ... e) The article touches upon ... f) The purpose of the article is to give the reader some information on ... g) The aim of the article is to provide the reader with some facts/material/data on ...

5. Give a summary of the article (no more than 10-20 sentences). a) The author starts by telling (the reader) (about, that ...) b) The author writes (states, stresses upon, thinks, points out) that ... c) The article describes ... d) According to the text ... e) Further the author reports (says) that ... f) The article goes on to say that ...

6. State the main problem discussed in the article and mark off the passages of the article that seem important to you.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

13-LESSON:
Passive voice. Topic: Chromatography techniques. Chromatography techniques.

The techniques of carrying out a chromatographic investigation are very simple. The basic apparatus is the adsorption column. The adsorption column may be constructed of soft glass or in special cases of quartz. The diameter and length of the column are determined by the quantity of material to be absorbed.

No universal adsorbent has been found. A good adsorbent should satisfy the following criteria: it should hold relatively large quantities of the materials to be resolved; the resolved materials must be eluted from the adsorbent by polar solvents; the size of the particles of adsorbent should be such as will allow rapid and uniform percolation; the adsorbents must not react with either the materials to be resolved nor the materials to be used as solvent or color developer; the adsorbent should not be porous and should, if possible, be colorless. The chromatograph is made as follows: a solution of the material to be adsorbed is poured into the adsorption column and allowed to percolate through the adsorbent. The column is washed with additional portions of the original solvent from which the compound was adsorbed. The sides of the column are washed with small portions of the solvent and then larger quantities are added to the column. The passage of the solvent through the column causes the adsorbed materials to move at different rates and thus produce the chromatogram.

NOTES AND COMMENTARY

should be such as will allow -должен бы быть таким, чтобы позволить

rapid and uniform percolation -быстрое и равномерное просачивание

Exercices :

1. Point out the facts that turned out to be new for you.

2. Look through the text for figures, which are important for general understanding.

3. State what places of the article contradict your former views.

4. State the questions, which remained unanswered in the article and if it is possible add your tail to them.

5. Speak on the conclusion the author comes to. a) In conclusion ... b) The author comes to the conclusion that ....

6. Express your own point of view on the problem discussed. a) I find/found the article topical=urgent (interesting, important, dull, of no value, too hard to understand) because ... b) In my opinion the article is worth reading because ....

Writing.

Passive Voice

Use of Passive

Passive voice is used when the focus is on the action. It is not important or not known, however, who or what is performing the action.

Example: My bike was stolen.

In the example above, the focus is on the fact that my bike was stolen. I do not know, however, who did it.
Sometimes a statement in passive is more polite than active voice, as the following example shows:
Example: A mistake was made.
In this case, I focus on the fact that a mistake was made, but I do not blame anyone (e.g. You have made a mistake.).
Form of Passive
Subject + finite form of *to be* + Past Participle (3rd column of irregular verbs)
Example: A letter was written.
When rewriting active sentences in passive voice, note the following:

- the object of the active sentence becomes the subject of the passive sentence
- the finite form of the verb is changed (*to be* + past participle)
- the subject of the active sentence becomes the object of the passive sentence (or is dropped)

Examples of Passive

Tense		Subject	Verb	Object
Simple Present	*Active:*	Rita	writes	a letter.
	Passive:	A letter	is written	by Rita.
Simple Past	*Active:*	Rita	wrote	a letter.
	Passive:	A letter	was written	by Rita.
Present Perfect	*Active:*	Rita	has written	a letter.
	Passive:	A letter	has been written	by Rita.
Future I	*Active:*	Rita	will write	a letter.
	Passive:	A letter	will be written	by Rita.
Hilfsverben	*Active:*	Rita	can write	a letter.
	Passive:	A letter	can be written	by Rita.

Examples of Passive

Tense		Subject	Verb	Object
Present Progressive	*Active:*	Rita	is writing	a letter.
	Passive:	A letter	is being written	by Rita.
Past Progressive	*Active:*	Rita	was writing	a letter.
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Past Perfect	*Active:*	Rita	had written	a letter.
	Passive:	A letter	had been written	by Rita.

Future II	*Active:*	Rita	will have written	a letter.
	Passive:	A letter	will have been written	by Rita.
Conditional I	*Active:*	Rita	would write	a letter.
	Passive:	A letter	would be written	by Rita.
Conditional II	*Active:*	Rita	would have written	a letter.
	Passive:	A letter	would have been written	by Rita.

Passive Sentences with Two Objects

Rewriting an active sentence with two objects in passive voice means that one of the two objects becomes the subject, the other one remains an object. Which object to transform into a subject depends on what you want to put the focus on.

	Subject	Verb	Object 1	Object 2
Active:	Rita	wrote	a letter	to me.
Passive:	A letter	was written	to me	by Rita.
Passive:	I	was written	a letter	by Rita.

1-jadval 1

As you can see in the examples, adding *by Rita* does not sound very elegant. That's why it is usually dropped.

Personal and Impersonal Passive

Personal Passive simply means that the object of the active sentence becomes the subject of the passive sentence. So every verb that needs an object (transitive verb) can form a personal passive.

Example: They build houses. – Houses are built.

Verbs without an object (intransitive verb) normally cannot form a personal passive sentence (as there is no object that can become the subject of the passive sentence). If you want to use an intransitive verb in passive voice, you need an impersonal construction – therefore this passive is called *Impersonal Passive*.

Example: he says – it is said

Impersonal Passive is not as common in English as in some other languages (e.g. German, Latin). In English, *Impersonal Passive* is only possible with verbs of perception (e. g. say, think, know).

Example: They say that women live longer than men. – It is said that women live longer than men.

Although *Impersonal Passive* is possible here, *Personal Passive* is more common.

Example: They say that women live longer than men. – Women are said to live longer than men.

The subject of the subordinate clause (women) goes to the beginning of the sentence; the verb of perception is put into passive voice. The rest of the sentence is added using an infinitive construction with 'to' (certain auxiliary verbs and *that* are dropped).

Sometimes the term *Personal Passive* is used in English lessons if the indirect object of an active sentence is to become the subject of the passive sentence.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

14-LESSON:
Paper chromatography, applications and procedure.

In paper chromatography-the absorption column is replaced by strips of paper. The absorbent or ion exchanger is precipitated into the pores of the paper. One end of the prepared paper is dipped into distilled water and allowed to stand until the water has climbed about a centimeter along the paper. It is then removed and dipped into a solution of the materials to be separated. After the unknown solution has climbed about 2 cm, the paper is removed from the unknown solution and returned to the distilled water. After the water has climbed to about 12 to 16 cm, the strip is removed and dried between filter paper. Brushing the dried paper strip with the proper developing agent will produce bands similar to those produced in the adsorption column. 25 Numerous studies have been made of the paper-strip method for separating cations, anions and metal complexes. The procedure is similar to that of column chromatography. The paper-strip method has the advantage that the developing reagent does not pass through the adsorbent as it is required in column chromatography. The strip method requires a minimum of test solution, about 0.1 mm, several developers may be applied to the same strip. The paper-strip method has been applied to quantitative determination of the inorganic cations and to many organic materials.

Notes to the text 1. enables one - обеспечивает 2. simple to carry out - прост в производстве 3. based on - основан на

EXERCISES:

I. Answer the questions. 1) In what state is chlorine found in nature? 2) At what temperature does chlorine liquefy? 3) Is chlorine easily soluble in water? 4) What action does chlorine exert in water? 5) What is the reactivity of chlorine? 6) What products are obtained when sodium chloride or potassium chloride solutions are subjected to electrolysis? 7) By what method is chlorine generally produced? 8) What products are produced if fused sodium chloride is used ?

III. Make up a description of any element you like.

ANALYSIS OF MIXTURES Many problems of quantitative chemistry are more complex than determining the amount of a pure substance or the composition of an aqueous solution of a pure compound. Often the problem arises simply because the compound or solution has an unknown or complex composition. There are three fundamental schemes than can be used in the problem at hand. 1. Phase separation: The metal ion, A, can be determined without interference front B if we separate A from B. We do this by preparing a two-phase system such that all of A is in one phase and all of B is in the other phase. 2. Selective determination: The metal ion, A, can be determined in the presence of B if we can find a determination which is selective toward A, ignoring B. 3. Combined determination: The two metal ions, A and B, can be determined together. This type of measurement combined with another independent measurement gives the amount of each ion.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

15-LESSON:
Speaking.
Gas analysis

Special techniques are usually employed in the analysis of the gases. Since the analysis of a gas, or gas mixture usually involves the measurement of a volume and only very rarely the weighing of a sample, the results are most frequently reported in per cent by volume rather than per cent by weight. It must be remembered that the volume of a gas is greatly dependent upon both the temperature and the pressure and it is necessary to adjust each measurement to standard conditions of temperature and pressure. It is obvious then that these conditions must remain constant over the course of the analysis.

Notes to the text

1. the results are ... reported in per cent by volume rather than per cent by weight - результаты даются в процентах относительно объема, а не относительно веса
2. over the course of the analysis - в течение всего процесса анализа

Exercices :

1. Point out the facts that turned out to be new for you.
2. Look through the text for figures, which are important for general understanding.
3. State what places of the article contradict your former views.
4. State the questions, which remained unanswered in the article and if it is possible add your tail to them.
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6. Express your own point of view on the problem discussed. a) I find/found the article topical=urgent (interesting, important, dull, of no value, too hard to understand) because ... b) In my opinion the article is worth reading because ....

Writing.

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Sometimes a statement in passive is more polite than active voice, as the following example shows:

Example: A mistake was made.

In this case, I focus on the fact that a mistake was made, but I do not blame anyone (e.g. You have made a mistake.).

Form of Passive

Subject + finite form of *to be* + Past Participle (3rd column of irregular verbs)

Example: A letter was written.

When rewriting active sentences in passive voice, note the following:

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Example: he says – it is said

Impersonal Passive is not as common in English as in some other languages (e.g. German, Latin). In English, *Impersonal Passive* is only possible with verbs of perception (e. g. say, think, know).

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The subject of the subordinate clause (women) goes to the beginning of the sentence; the verb of perception is put into passive voice. The rest of the sentence is added using an infinitive construction with 'to' (certain auxiliary verbs and *that* are dropped).

Sometimes the term *Personal Passive* is used in English lessons if the indirect object of an active sentence is to become the subject of the passive sentence.

Uyga vazifa:
So’zlarni yodlash.
Mashqlar ishlash

LESSON 16

Reading. **Texts on specialty. Some physical methods used in gas analysis.**

Some physical methods used in gas analysis

The relative proportions of various components of gas mixtures can be determined by merely measuring some physical constants of the mixture: the density, the viscosity, the thermal conductivity, heat of combustion, ionization potential. Condensation methods are often applicable in the separation of complex mixtures of gases. This method has been applied to the gases of the argon group and of natural gas mixtures. The application of the methods of mass spectrometry to gas analysis has been extensive. The use of a mass spectrometer in analysis enables one to determine the components of mixtures of hydrocarbons, fuel gases, rare gases, etc. Thermal conductivity applied to gas analysis is rapid, simple to carry out and adaptable to continuous operation .and process control. Some attempts to apply the methods of emission and absorption spectroscopy to gas analysis have been made. 26 Other miscellaneous methods include magnetic susceptibility, micro-wave analysis, acoustical method based on the principle that the velocity of sound in a gas is a function of the molecular weight of the gas, infer metric methods, diffusion methods and others.

Notes to the text

1. enables one - обеспечивает 2. simple to carry out - прост в производстве 3. based on - основан на

EXERCISES

I. Answer the questions. 1) In what state is chlorine found in nature? 2) At what temperature does chlorine liquefy? 3) Is chlorine easily soluble in water? 4) What action does chlorine exert in water? 5) What is the reactivity of chlorine? 6) What products are obtained when sodium chloride or potassium chloride solutions are subjected to electrolysis? 7) By what method is chlorine generally produced? 8) What products are produced if fused sodium chloride is used ?

II. Make up a description of any element you like.

EXTRACTION Liquid-liquid phase separations are possible when a metal forms a compound soluble in two immiscible liquids. The distribution of the compound between the two liquids can be considered to be a solubility contest. Practical considerations dictate that one of the liquids must be water. Among the liquids other contestants are: carbon tetrachloride, chloroform, carbon disulfide, ethers, paraffin hydrocarbons, and aromatic hydrocarbons. Alcohols cannot be added to this list. Most inorganic compounds just are not interested in the organic solvents which are immiscible with water. Sometimes, however, a complexing agent can be found which will coach an inorganic substance into an organic solution. Cupric, lead, zinc, silver, mercuric, and cadmium salts, for example, will dissolve, in either chloroform or carbon tetrachloride if it contains some dithizone

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 17.
Texts on specialty . Analysis of mixtures. Speaking.
Analysis of mixtures

Many problems of quantitative chemistry are more complex than determining the amount of a pure substance or the composition of an aqueous solution of a pure compound. Often the problem arises simply because the compound or solution has an unknown or complex composition. There are three fundamental schemes than can be used in the problem at hand. 1. Phase separation: The metal ion, A, can be determined without interference front B if we separate A from B. We do this by preparing a two-phase system such that all of A is in one phase and all of B is in the other phase. 2. Selective determination: The metal ion, A, can be determined in the presence of B if we can find a determination which is selective toward A, ignoring B. 3. Combined determination: The two metal ions, A and B, can be determined together. This type of measurement combined with another independent measurement gives the amount of each ion.

Notes to the text 1. the problem at hand - рассматриваемая проблема 2. are more complex than - более сложны чем

Reading.

ELECTROLYSIS

Another type of solid-liquid phase separation is furnished by electrolytic techniques. Two electrodes are placed in the solution of interest, and a current is passed through the solution at a voltage sufficient to reduce some but not all of the metals present. If the current and concentrations are adjusted properly, the metals which are reduced will plate out on the electrode in a pure metallic deposit which can be dried and weighed directly.

Notes to the text the solution of interest - исследуемый раствор will plate out - отлагается to reduce some but not all - для частичного удаления

ION EXCHANGE

Another procedure utilizing the elution technique is the ion exchange separation. This time the solid (which is called the substrate) is a salt or compound with salt-forming capacity, something like a sulfonic acid group. When a solution containing metal ions is passed through such an acid substrate, the ions can replace the protons, forming salts. Further elution repeats many times the cycle of ion exchange, replacement of a proton by a salt ion, followed by replacement of the metal ion by proton. As in chromatography, the repetitious procedure magnifies small differences in saltforming capacity and permits separations which are extremely difficult by any other method. Ion exchange substrates fall into two groups: cation exchangers and anion exchangers. Acidic functional groups areeffective as cation exchangers. These groups include sulfonic acids,— SO3H; carboxylic acid,— COOH; phenols or alcohols,— OH; and mercaptans,— SH. These interact only with cations and by an exchange reaction of the following sort: — SO3H + M+ = — SO2M + H+ . 28 Most anion exchangers are amines, depending upon one of the functional groups — NH2,— NHR, and NR2. These groups form ammonium type salts, and the anion can be displaced: — NH2 • HC1 + X = — NH2 • HX + Cl.

1. Salt forming capacity - способность солеобразования 2. Something like - нечто вроде 3. By any other method - любым другим методом. 4. Fall into two groups - разделяются на две разные группы.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 18
Reading and speaking.
ORGANIC CHEMISTRY. CARBON AND COMPOUNDS OF CARBON

Organic chemistry is an extremely interesting field of natural science and of great technological significance. The overwhelming majority of chemists prove to be engaged in producing organic compounds; several millions being known so far. In view of their obvious success in the manufacture of synthetic compounds, the chemists are greatly interested in this field of science. The name organic chemistry, which was originally used to refer to the chemistry of substances that occur in living organisms, is now used for the chemistry of the compounds of carbon. The chemistry of carbon was greatly advanced about a century ago through the development of a general structure theory, this theory being a chemical theory, induced from chemical facts. In recent years it has received added verification through the determination of exact structures of molecules and crystals by physical methods, especially X-ray diffraction, electron diffraction, and the analysis of the spectra of substances. During the first half of the 19th century many organic compounds were found to have been obtained from plants and animals and also to have been made in the laboratory. The were analyzed for their constituent elements, an their properties were carefully studied. Efforts were made to find some correlation between the chemical composition and the properties of the substances. Elementary Carbon. Carbon occurs in nature in its elementary state in two allotropic forms namely diamond, this being the hardest substance known, and graphite, a soft, black crystalline substance used as a lubricant. Having investigated all the substances thoroughly the scientists found charcoal, coke, and carbon black; to be microcrystalline or amorphous (noncrystalline) forms of carbon. Carbon burns to form gases: carbon monoxide CO, and carbon dioxide CO2, the former being produced when there is a deficiency of oxygen or the flame temperature is very high. This investigation followed by others resulted in new discoveries in the field of carbon. It has been found out that carbon monoxide is a colourless, odourless gas with small solubility in water. It is poisonous, because of its ability to combine with the hemoglobin in the blood in the same way that oxygen does, and thus to prevent 29 the hemolobin from combining with oxygen in the lungs and carrying it to the tissues. It should be noted that the exhaust as from automobile engines contains some carbon. Nevertheless carbon monoxide is a valuable industrial gas, for use as a fuel and as a reducing agent. Carbon Dioxide. Carbon dioxide is a colourless, odourless gas with a weakly acid taste, due to the formation of some carbonic acid when it is dissolved in water. It appears to be about 50'/o heavier than air. It is easily soluble in water, one liter of water at O'C dissolving 1,713 ml of the gas under 1 atm pressure. When crystalline carbon dioxide is heated from a very low temperature its vapour pressure reaches 1 atm at 79' at which temperature it vaporizes without melting. If pressure were increased to 2.5 atm the crystalline substance would melt to a liquid at 56.6'. Under ordinary pressure, then, the solid substance could be changed directly to a gas. Carbon dioxide is known to combine with water to form

carbonic acid H_2CO_3 , it being a weak acid. If you studied all the properties more thoroughly you would see that carbon dioxide is used for the manufacture of sodium carbonate, sodium hydrogen carbonate, and carbonated water and for many other uses. From this short review it's clear that chemistry of carbon and its compounds is a very important field of chemistry and should be studied carefully.

Notes to the text: 1. overwhelming 8. verification 13. exhaust gas 2. majority 9. correlation 14. valuable 3. to be engaged 10. lubricant 15. to reduce 4. so far 11. carbon 16. to damage 6. in view of 12. poisonous 17. to prevent 7. recent 18. to be responsible for

I. Answer the following questions:

1. What is organic chemistry. 2. Why are the scientists interested in the field of organic chemistry. 3. What does the name organic chemistry refer to? 4. When was the chemistry of carbon advanced'? 5. What phenomenon was found during the first half of the 19th century. 6. Where does carbon occur? 7. In that form does carbon occur in nature? 8. What gases does carbon form during its burning? 9. What properties of ca-bon monoxide do you know? 10. What properties of carbon dioxide do you know'? l l. What does carbon dioxide form combining with water? 12. What are very important atmospheric contaminants?

II. Retell the text according to the following plan: 1. Organic chemistry. 2. The chemistry of carbon. 3. Elementary carbon, 4. The properties of carbon. 5. Carbon monoxide. 6. Carbon dioxide. 7. Carbon pollutants.

VI-semestr

LESSON 1

Quote structures. Doing exerises.Working on the topic : Ion exchange. Speaking.

Topic:Ion exchange.

Another procedure utilizing the elution technique is the ion exchange separation. This time the solid (which is called the substrate) is a salt or compound with salt-forming capacity, something like a sulfonic acid group. When a solution containing metal ions is passed through such an acid substrate, the ions can replace the protons, forming salts. Further elution repeats many times the cycle of ion exchange, replacement of a proton by a salt ion, followed by replacement of the metal ion by proton. As in chromatography, the repetitious procedure magnifies small differences in saltforming capacity and permits separations which are extremely difficult by any other method. Ion exchange substrates fall into two groups: cation exchangers and anion exchangers. Acidic functional groups areeffective as cation exchangers. These groups include sulfonic acids,— SO3H; carboxylic acid,— COOH; phenols or alcohols,— OH; and mercaptans,— SH. These interact only with cations and by an exchange reaction of the following sort: — SO3H + M+ = — SO2M + H+ . 28 Most anion exchangers are amines, depending upon one of the functional groups — NH2,— NHR, and NR2. These groups form ammonium type salts, and the anion can be displaced: — NH2 • HC1 + X = — NH2 • HX + Cl.

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Exercices :

I. Answer the following questions:

1. What is organic chemistry. 2. Why are the scientists interested in the field of organic chemistry. 3. What does the name organic chemistry refer to? 4. When was the chemistry of carbon advanced'? 5. What phenomenon was found during the first half of the 19th century. 6. Where does carbon occur? 7. In that form does carbon occur in nature? 8. What gases does carbon form during its burning? 9. What properties of ca-bon monoxide do you know? 10. What properties of carbon dioxide do you know'? l l. What does carbon dioxide form combining with water? 12. What are very important atmospheric contaminants?

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THE PAST INDEFINITE TENSE

O’tgan zamon shaklini hosil qilishda fe’llar to’g’ri va noto’g’ri fe’llarga bo’linadi. To’g’ri fe’llar o’tgan zamon shaklini fe’l negiziga - **d, - ed** qo’shimchalar qo’shish bilan hosil qiladi. Agar so’z undosh + **y** harfiga tugasa, **y** o’rniga **i** qo’yiladi va **-ed** qo’shilad: **study – studied,**

agar so’z unli + **y** harfga tugasa **-d** qo’shiladi: **play – played (Vd,ed)**.

Noto’gri fe’llar o’tgan zamon shaklini turli xil yo’llar bilan hosil qiladi (noto’g’ri fe’llarning jadvalidagi ikkinchi shakli ishlatiladi) - **V2**.

They lived in a small village some years ago.
He came home late yesterday.
I learnt English at school.
The teacher asked me a lot of questions yesterday.

Inkor shakli

Inkor shaklini hosil qilish uchun **didn't** yordamchi fe'l egadan keyin qo'yiladi, yetakchi fe'l birinchi shakliga o'tadi.

They didn't live in a small village some years ago.
He didn't come home late yesterday.
I didn't learn english at school.
The teacher didn't ask me a lot of questions yesterday.

So'roq shakli

Did yordamchi fe'l egadan oldin qo'yilib, hosil bo'ladi, etakchi fe'l birinchi shakliga o'tadi.

Did they live in a small village some years ago? – Yes, they did. / No, they didn't.
Did he come home late yesterday? – Yes, they did. / No, they didn't.

O'tgan noaniq zamon fe'li quydagi ish – harakatlarni ifodalash uchun ishlatiladi:
1) O'tgan zamonda sodir bo'lib o'tgan dalillar uchun:

He lived in London until he was ten.
She left school in 2006.
I once played tennis in my childhood.

2) O'tgan zamonda ketma – ket sodir bo'lib o'tgan bir nechta ish harakatlarni ifodalash uchun:
She walked into the room and said: "Good morning!"
John came home, had a shot rest and phoned his parents

3) O'tgan zamonda qaytarilib kelgan ish - harakatlar uchun:
When I was a child we always went to the seaside in August.
Past Idefinite zamonida ishlatiladigan payt ravishlari: **yesterday, the day before yesterday, last week (month, year, Monday, summer....).**
Use The Past Indefinite Tense.

1. What your neighbours (to do) ..... yesterday? 2. Mr. Smith (to fix) ..... his car yesterday morning. 3. His wife (to water) .....

plants in the garden. 4. Their children (to clean) ..... the yard and then they (to play) ..... basketball. 5. In the evening their boys (to listen) ..... to loud music and (to watch) ..... TV. 6. Their little girl (to cry) ..... a little and then (to smile) ..... . 7. Her brothers (to shout) ..... at her. 8. Mrs. Smith (to work) ..... in the kitchen. 9. She (to bake)..... a delicious apple pie. 10. She (to wash) ..... the dishes and (to look) ..... very tired. 11. The children (to brush) ..... their teeth, (to yawn) ..... a little and (to go) ..... to bed. 12. Their mother (to change) ..... her clothes and (to brush) ..... her hair. Then she (to talk) ..... on the phone. 13. Her husband (to smoke) ..... a cigarette and (to talk) ..... to his wife. 14. They (to go) ..... to bed at 11 o'clock at night.

Uyga vazifa:

So'zlarni yodlash.

Mashqlar ishlash

LESSON 2

Topic: Organic chemistry. Carbon and compounds of carbon. Speaking.

Organic chemistry. Carbon and compounds of carbon.

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I. Answer the following questions:

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II. Retell the text according to the following plan: 1. Organic chemistry. 2. The chemistry of carbon. 3. Elementary carbon, 4. The properties of carbon. 5. Carbon monoxide. 6. Carbon dioxide. 7. Carbon pollutants.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 3

Countable and uncountable nouns and partitives. Doing exersises. Famous chemists. Speaking.

Famous chemists.

D. I. Mendeleyev, the great Russian chemist, was born in Siberia on February 8, 1834. When seven years old he went to gymnasium in Tobolsk. He studied very hard, he especially liked mathematics, physics and history. At the age of 16 he entered the Pedagogical Institute in St. Petersburg, physicomathematical department. He graduated from the Ins-.itute in 1855 and began to teach chemistry at the Technological Institute and then at the University In 1865 Mendeleyev was granted the Doctor of Science degree for the thesis on the combination of alcohol with water. This work was both of great theoretical and practical significance. Soon after that D.I.Mendeleyev was appointed Professor of General Chemistry of St. Petersburg Jniversity. Despite lectures and supervision of the laboratory, D. I. Mendeleyev carried on great research work. Mendeleyev's greatest discovery was the Period c Law. The Periodic Law suggested by Mendeleyev stated that the properties of the elements were a periodic function of their atomic masses. He presented this work to the Russian Chernical Society. Mendeleyev's Periodic Law opened a new era in the history of chemistry. Mendeleyev was interested in many branches of science, indeed there is hardly any field of science that was not enriched by his contribution. His numerous works dealt with many subjects: properties of liquids, theories of solutions, the development of the gas law, the use of oil and many others, 31 D. I. Mendeleyev was a great patriot. He did everything for the development and progress of his country. D. I. Mendeleyev continued his research work to the very last day of his life. He died in 1907. The world is thankful to Mendeleyev for his great contribution to the world science. At present there is hardly anybody who doesn't know this Russian scientist and his Periodic Law. D I Mendeleyev did very much for his country, for the development of the world science.

Notes to the text: 1. great 2. hard 3. especially 4. to enter the Institute 5. society 6. significance 7. to be appointed 8. despite 9. to die 10. to be interested in 11. hardly 12. contribution 13. to suggest liquid 14. degree 15. thesis

I. Answer the following questions: 1. When was D. I. Mendeleyev born? 2. Where was he born'? 3. When did he go to gymnasium'? 4. What subjects did he like'? 5. What Institute did he enter? 6. Where did he work after the graduation from the Institute. 7. When was he granted the Doctor of Science degree? 8. What was he granted this degree for? 9. What was Mendeleyev's greatest discovery'? 10. What did he present to the Russian Chemical Society? ll. What other problems was Mendeleyev interested in? 12. What subjects did his numerous works deal with? 13. When did he die?

II. II. Retell the text according to the following plan: 1. D. I. Mendeleyev's childhood. 2. The gymnasium and the Pedagogical Institute. 3. D. I. Mendeleyev's work at the Technological Institute and at the Uniiversity. 4. His research work. 5.

D. I. Mendeleyev's greatest discovery. 6. D. I. Mendeleyev's greatest contribution in science. 32 7. D. I. Mendeleyev is a great chemist and patriot.

III. III. Task: 1) read the texts 2) answer the questions 3) make up a report about any famous chemist you like

Writing.

Countable and uncountable nouns and partitives.Doing exersises.

Partitive expressions make it possible to count things expressed by uncountable nouns. The most common ones include *bit, piece* and *item*:

*There was a **bit** of annoyance in his voice.*
*Let me give you a **piece** of advice.*
*Several **items** of jewellery were stolen.*

Other examples of everyday partitive expressions are:

*I'd like a **loaf** of bread, two **bar**s of chocolate and a **tube** of toothpaste, please.*
*Can I have another **slice** of cake?*
*Mateusz drank a **glass** of beer.*

Countable or uncountable nouns? These concepts can be frustrating for English learners but it's not as hard as it seems. These explanations will make it easier to understand.

A quick reminder: A **noun** is a word which ***names*** a person, place, thing, animal or idea.

All **common nouns** are *either* countable or uncountable.

Countable Nouns

Countable nouns are things that you can **count**. When we say "count" we mean adding things together to get a total number such as **three** cats, **five** pencils, **one** train.

Examples of countable nouns:

book, magazine, table, chair, sofa, computer, mouse, dog, orange, sand, bottle, car, rug, radio, clock, pen.

Since we can count them, countable nouns can be *either* **singular** (just one single thing) *or* **plural**(more than one thing):

- Star Wars is a great **movie**.
- I watched **two movies** last night.

Uncountable (also called “uncount” or “mass” nouns)

Uncountable nouns are difficult to count or divide into separate parts. Uncountable nouns are also called "mass" nouns. The word *mass* refers to a large amount of a substance that has no particular shape.

Uncountable noun types	**Examples**
Liquids or gases	water, coffee, milk, air, oxygen
Tiny objects	powder, sand, rice, flour, grain, dirt, dust
Abstract ideas and concepts	love, sadness, safety, freedom, power
Categories / Grouped concepts	furniture, music, luggage, money, currency
Materials	wood, metal, plastic

School subjects	mathematics, chemistry, Italian, economics
Energy related words	electricity, radiation, heat, sunshine

Articles and Determiners with Countable/Uncountable Nouns

We can use the **indefinite articles** *a / an* with **singular countable nouns**:

- I'd like an apple and a banana. (not: I'd like apple and banana.)

We can use **determiners** (e.g, the, this, these, those, his, my) with **countable nouns**:

- Those are **her children**.
- **His car** is very small.
- **The television** isn't working.

Uncountable nouns are *singular*. You cannot make them plural, therefore:

- **Do not add –s** to uncountable nouns. (*wrong*: I have three luggage**s** to check-in)
- **Do not use a / an** or a **number** in front of them.

When a **countable noun is plural**, we **don't need a determiner** if were talking about something in general.

- I eat **apples** every day.
- **Flowers** are beautiful. (Flowers in general are beautiful. If we say "the flowers" we are talking about some specific flowers).
- Are **girls** more nurturing than **boys** or do we raise them that way? (general: all girls, all boys).

Quantifiers and Countable / Uncountable Nouns

We can use *many* and *few* with **plural countable nouns**:

- There are **many cars** on the road during rush-hour traffic.
- Since I stopped smoking there are **few problems** with my health.

We can use *some* and *any* with either **plural countable** or **uncountable nouns**:

- There are **some books** on the shelf. (books = countable/ plural noun)
- Do you have **some money** I could borrow? (money = uncountable noun)
- I don't have **any time** to go to the gym today. (time = uncountable noun)

We can use *much* and *little* with **uncountable nouns**.

- There isn't **much** hot **water** left after 9 AM.
- Could I have a **little milk** for my coffee?
- It makes **little sense** to spend money on the lotto.

Using Partitives with Uncountable Nouns

Partitive expressions make it possible to make uncountable nouns countable. What's a partitive?

Partitives are words that express a container or unit of measurement.

For example:
glass, bottle, can, box, cup, spoon full, handful, bunch, loaf, piece, slice, scoop, grain, kilo, etc.
Once you put the uncountable nouns inside of these containers, then we can count them. This is why we typically **use the partitive followed by the word "of":**

- Would you like **another slice of cake**?
- I'll order **a glass of wine** or shall we share **a bottle of wine**?
- I'd like **a kilo of flour** please.
- I drink **10 bottles of beer** last night and I felt terrible.
- Please put **two scoops of rice** in the rice maker.

NOTE: Often in English you will hear people use a number before an uncountable noun. This is confusing! For example, although coffee is an uncountable noun. It's a liquid so you can't count it. But you can measure it or put it inside a container and count the number of containers.
So for example you may hear someone say they normally drink **three coffees** a day. What they're really saying is that they drink *three cups* of coffee each day.

Nouns that can be Countable or Uncountable
To make things a little complicated, **some nouns can be both** countable or uncountable. It depends on the *meaning* you are trying to convey. For example:

Uncountable (conveys a *general* meaning)	Countable (conveys a *specific* meaning)
You look good with long **hair**. (*general* meaning - all the hair on your head)	The police found two **hairs** at the crime scene.
My **skin** is very dry.	The purse is made of several snake **skins**.
Do you recycle **paper**?	I left some **papers** on the printer.

Remember your friend Ms. Dictionary? She uses the following symbols to tell you whether a noun is **countable [C]** or **uncountable [U].** I always recommend learners purchase a quality dictionary—there's so much valuable information in them.
Uyga vazifa:
So'zlarni yodlash.
Mashqlar ishlash

LESSON 4
Teaching abilities. Antoine Lavoisier. Speaking.
Antoine Lavoisier.

Antoine Laurent Lavoisier is a French chemist, was the founder of modern chemistry. Lavoisier carefully measured the weights of substances involved in chemical reactions. In 1772 he began a series of experiments that demonstrated the nature of combustion. He concluded that combustion results from the union of a flammable material with a newly discovered gas, which he called oxygen. Lavoisier published his findings in his Elementary Treatise on Chemistry (1789). With French astronomer and mathematician Pierre Simon Laplace, Lavoisier conducted experiments on respiration in animals. Their studies demonstrated a similarity between common chemical reactions and the processes that occur in living organisms. These experiments provided the foundation for the science now known as biochemistry. Lavoisier also helped to develop a system for naming chemical substances based on their composition. This system is still in use. Lavoisier was born in Paris. He received an excellent education and developed an interest in all branches of science, especially chemistry. He was elected to the French Academy of Sciences in 1768. Lavoisier was arrested in 1793 by the leaders of the French Revolution. Many years earlier, he had become a partner in a firm that collected a number of taxes for the government. In spite of his achievements, Lavoisier was found guilty of conspiracy with the enemies of France because of his involvement in tax collection. He was executed by guillotine.

Questions 1) What famous scientist did Lavoisier work with? 2) What experiments did they conduct? 3) The foundation of what science did their experiments provide? 4) Why was he arrested? 5) What series of experiments did Lavoisier begin in 1772?

EXERCISES I. Answer the questions. 1) In what state is chlorine found in nature? 2) At what temperature does chlorine liquefy? 3) Is chlorine easily soluble in water? 4) What action does chlorine exert in water? 5) What is the reactivity of chlorine? 6) What products are obtained when sodium chloride or potassium chloride solutions are subjected to electrolysis? 7) By what method is chlorine generally produced? 8) What products are produced if fused sodium chloride is used ?

II. Make up a description of any element you like.

Writing.

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We can use *many* and *few* with **plural countable nouns**:

- There are **many cars** on the road during rush-hour traffic.
- Since I stopped smoking there are **few problems** with my health.

We can use *some* and *any* with either **plural countable** or **uncountable nouns**:

- There are **some books** on the shelf. (books = countable/ plural noun)
- Do you have **some money** I could borrow? (money = uncountable noun)
- I don't have **any time** to go to the gym today. (time = uncountable noun)

We can use *much* and *little* with **uncountable nouns**.

- There isn't **much** hot **water** left after 9 AM.
- Could I have a **little milk** for my coffee?
- It makes **little sense** to spend money on the lotto.

Using Partitives with Uncountable Nouns

Partitive expressions make it possible to make uncountable nouns countable. What's a partitive?

Partitives are words that express a container or unit of measurement.

For example:

glass, bottle, can, box, cup, spoon full, handful, bunch, loaf, piece, slice, scoop, grain, kilo, etc.

Once you put the uncountable nouns inside of these containers, then we can count them. This is why we typically **use the partitive followed by the word "of":**

- Would you like **another slice of cake**?
- I'll order **a glass of wine** or shall we share **a bottle of wine**?
- I'd like **a kilo of flour** please.
- I drink **10 bottles of beer** last night and I felt terrible.
- Please put **two scoops of rice** in the rice maker.

NOTE: Often in English you will hear people use a number before an uncountable noun. This is confusing! For example, although coffee is an uncountable noun. It's a liquid so you can't count it. But you can measure it or put it inside a container and count the number of containers.

So for example you may hear someone say they normally drink **three coffees** a day. What they're really saying is that they drink *three cups* of coffee each day.

Uyga vazifa:

So'zlarni yodlash.

Mashqlar ishlash

LESSON 5

Using participles to give additional information.Doing exersises.Working on the texte: Alfred Nobel. Speaking.

Alfred Nobel

Alfred Bernard Nobel, a Swedish chemist, invented dynamite and founded the Nobel Prizes. As a young man, Nobel experimented with nitroglycerin in his father's factory. He hoped to make this dangerous substance into a safe and useful explosive. He prepared a nitroglycerin explosive, but so many accidents occurred when it was put on the market that for a number of years many people considered Nobel almost a public enemy. 33 Finally in 1867 Nobel combined niter with an absorbent substance. This explosive could be handled and shipped safely. Nobel named it dynamite. Within a few years he became one of the world's richest men. He set up factories throughout the world and bought the large Bofors armament plant in Sweden. He worked on synthetic rubber, artificial silk and many other products. Nobel was never in good health. In later years he became increasingly ill and nervous. He suffered from a feeling of guilt at having created a substance that caused so much death and injury. He hated the thought that dynamite could be used in war when he had invented it for peace. Nobel set up a fund of about 9 million U.S. dollars. The interest from the fund was to be used to award annual prizes, one of which was for the most effective work in promoting international peace. Alfred Nobel was born on October, 21, 1833 in Stockholm. He was the son of an inventor. He was educated in St. Petersburg, Russia, and later studied engineering in the United States.

Questions 1) Who was Nobel's father? 2) What was Nobel's chief invention? 3) Why did people consider him a public enemy for a number of years? 4) What kind of Prizes did he set up? 5) What was the interest from these fund?

Listening.

EXTRACTION Liquid-liquid phase separations are possible when a metal forms a compound soluble in two immiscible liquids. The distribution of the compound between the two liquids can be considered to be a solubility contest. Practical considerations dictate that one of the liquids must be water. Among the liquids other contestants are: carbon tetrachloride, chloroform, carbon disulfide, ethers, paraffin hydrocarbons, and aromatic hydrocarbons. Alcohols cannot be added to this list. Most inorganic compounds just are not interested in the organic solvents which are immiscible with water. Sometimes, however, a complexing agent can be found which will coach an inorganic substance into an organic solution. Cupric, lead, zinc, silver, mercuric, and cadmium salts, for example, will dissolve, in either chloroform or carbon tetrachloride if it contains some dithizone

Notes to the text the solution of interest - исследуемый раствор will plate out - отлагается to reduce some but not all - для частичного удаления

PRECIPITATION

The most generally useful technique for accomplishing a phase separation is the solid-liquid separation, obtained in a precipitation. To have wide applicability a precipitant should form compounds with many metal ions, and these compounds

should have a wide range of solubility. To obtain proper conditions, the concentration of the precipitant should be controlled easily. What sort of precipitant is most desirable depends upon many variables: how many samples must be determined, what constituents are present, what reagents are at hand, what time is available, what accuracy is desired, etc.

Writing.

Using participles to give additional information. Doing exercise.

Participle clauses are a form of adverbial clause which enables us to say information in a more economical way. We can use participle clauses when the participle and the verb in the main clause have the same subject. For example:

Waiting for John, I made some tea.

Waiting for John, the kettle boiled. [This would suggest that the kettle was waiting for John!]

Forming participle clauses

Participle clauses can be formed with the **present participle** (-ing form of the verb) or **past participle** (third form of the verb). Participle clauses with past participles have a passive meaning:

Shouting loudly, Peter walked home. *[Peter was shouting]*

Shouted at loudly, Peter walked home. *[Someone was shouting at Peter]*

If we wish to emphasise that one action was before another then we can use a **perfect participle**(having + past participle):

Having won the match, Susan jumped for joy.

Having been told the bad news, Susan sat down and cried.

The meaning and use of participle clauses

Participle clauses give information about **condition**, **reason**, **result** or **time**. For example:

Condition (in place of an if-condition):

Looked after carefully, this coat will keep you warm through many winters.

Compare: *If you look after it carefully, this coat will keep you warm through many winters.*

Reason (in place of words like *so* or *therefore*):

Wanting to speak to him about the contract, I decided to arrange a meeting.

Compare: *I wanted to speak to him about the contract so I decided to arrange a meeting.*

Result (in place of words like *because* or *as a result*):

I had no time to read my book, having spent so long doing my homework.

Compare: *I had no time to read my book because I had spent so long doing my homework.*

Time (in place of words like *when, while* or *as soon as*):

Sitting at the cafe with my friends, I suddenly realised that I had left the oven on at home.

Compare: *While I was sitting at the cafe with my friends, I suddenly realised that I had left the oven on at home.*

Writing.

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Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 6
Advanced Chemistry Projects – Corrosion

Corrosion is important to the economy of every country as also to the world. It is widely studied as bridges and buildings uses iron supports. Untreated iron would collapse and lead to loss of both, life and economy. At the K-11or K-12 grades the study of corrosion is dealt using electrochemical principles. A project based on quantitation of oxygen in the formation of ferric oxide is suggested. Corrosion is the process wherein a metal is oxidized by loss of electrons to more electronegative elements like oxygen, sulfur etc. With the formation of metal sulfides and oxides. Corrosion of iron occurs primarily in the presence of moisture and oxygen. It is an electrochemical phenomena where iron acts as an anode and oxygen as cathode. Oxidation: Fe(s)-Fe2+(aq) + 2eReduction : O2(g) + 4H+(aq) + 4e-2H2O (l) Atmospheric oxidation- 2Fe2+(aq)+2H2O(l) +1/2 O2(g) Fe2O3(s)+ 4H+(aq) In the process of corrosion, iron gets oxidized to ferric oxide. Hence an informative study would entail, tracking the consumption of oxygen. Weigh a known amount of iron filings or iron wire and place it in a netted bag. Place this in a measuring cylinder. In a beaker containing a known volume of water invert a measuring cylinder containing one third the volume of water. The height of the water in the empty measuring cylinder rises till the point where there is air trapped. Note this volume of air. Similarly, placing the netted bag containing iron filings in the measuring cylinder, filled one third with water and invert it into a beaker containing the same volume of water. 60 Note the volume of air trapped. As rust begins to form and oxygen is utilized the water level in the measuring cylinder rises. The process of rusting may take a maximum of three to four days at 30oC. The experiment at the K-11 or K-12 grade can be made more quantitative by calculating the amount of oxygen that has combined with the iron filings. The rust formed is weighed. From the weight of the iron oxide formed, the amount of oxygen that has stoichiometrically combined with the given amount of iron filings can be determined. From the volume change of the water level, the amount of oxygen utilized can be approximated. Thus the first part of the project on corrosion would throw light on the oxygen consumption in the formation of rust. A further step ahead would be to determine the oxygen consumption and formation of rust under different pH conditions. Similarly, presence of electrolytes that would expedite the formation of rust can also be studied.

EXERCISES I. Answer the questions. 1) How many chemical elements are there now? 2) What is the symbol of Manganese? 3) What is a symbol usually derived from? 4) What does a subscript show? 5) What element is always designated first in the formula? 6) When did Mendeleyev discover the periodic law? 7) How can the Periodic Law be simply stated? 8) What elements were discovered after Mendeleyev modified the table? 9) Give some examples of polyatomic molecules of single elements. 10)What are simple diatomic molecules of a single element designated by?

II. True or false? 1) Symbols and formulas are used to indicate chemical reactions. 2) Groups of symbols are called equations. 3) Groups of symbols are called

formulas. 4) There are 102 chemical elements now. 5) The more electropositive element is always designated last in the formula. 6) Subscriptions are used to designate the number of atoms of each element present in the molecule. 7) Mendeleyev made his discovery in 1879. 8) There were several vacant spaces in Mendeleyev's table which led him to predict the existence of six undiscovered elements. 9) The table wasn't modified. 10) Properties of the elements are periodic functions of the nuclear charges of their atoms.

III. Identify the words, each dash stands for one letter only. 1) d _ _ _ _ 2) _ y _ _ _ _ 3) _ _ sig _ _ _ _ 4) _ _ com _ _ _ _ 5) _ _ lya _ _ _ _ _ 6) _ _ _ _ _ ar 7) _ t _ t _ 8) v _ _ _ _ t 9) ex _ _ _ _ _ 10) arr _ _ _ _ _ _ _ _ 11) _ _ _ _ _ _ tion 12) m _ss _ _ g 13) var _ _ _ _ 14) _ _ _ _ fy 15) f _ _ _ tion

IV. Translate the words from exercise III and make up your own sentences with them.

Writing.

Using participles to give additional information. Doing exercise.

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Uyga vazifa:
So’zlarni yodlash.
Mashqlar ishlash

LESSON 7.

Attributive clauses.Discussion the topic :All that is small is not nano.

14 September 2009

US and French scientists say the term 'nanoparticle' needs to be redefined to provide a focus for environmental, health and safety studies, and future regulation. According to the researchers, nanomaterials should be categorised based on novel properties that are related to their small size - not, crucially, their size alone. In most countries, few or no specific regulations exist to govern the safe use of nanoparticles, despite their wide use in cosmetics, sun screens and some drug products. Until a decision can be reached on what exactly constitutes a nanoparticle, however, there can be no clear path forward. Although traditionally thought of as any particle smaller than 100nm, the researchers argue in a review published in Nature Nanotechnology that for the purposes of health and safety, a more rigorous approach to classification is needed . Lead researcher Mark Wiesner of Duke University, US, says it is too easy to tar all nanoparticles with the same brush. 'All that is small is not necessarily nano,' he says. 'You need to have that novel property. The question then becomes: what's the taxonomy of these nanomaterials?' The review highlights various novel physicochemical characteristics of nanoparticles that might help form the basis for Wiesner's new taxonomy. Size-dependent changes in the crystal structure of particles, for example, can influence their reactivity - importantly, changing how they interact with their environment. Despite stressing 'novel properties', however, the study points towards particles at the lower end of the nano spectrum as being the most likely to bear characteristics that 61 would provoke cause for concern. If you want to find a hazardous nanoparticle, you should probably look below the 30nm barrier, says Wiesner. But by narrowing the focus to particles below 30nm, is Wiesner falling into the same trap as those who claim the 100nm barrier holds any special significance? Ken Donaldson of the Safety of Nanomaterials Interdisciplinary Research Centre in Edinburgh and the author of another recent review of nanoparticle safety , argues that there is no proven consequence of any size-related change in properties. 'If you focus only on this "quantum effect" of the change in physicochemical reactivity... then [the study] shows that this does set in only at sizes below 30nm. But in general there is no rational basis for restricting the definition of nanoparticles to those below 30nm. It would be premature and without toxicological basis,' he says. Teresa Fernandes, a nano safety expert at Edinburgh Napier University, worries that redrawing the boundaries will encourage the idea that there is no need to regulate above 30nm. But she says Wiesner's work is important because it promotes debate. Wiesner reasons that the 30nm limit is simply a guide. 'I think it helps us focus on what materials might be of concern in developing regulations, but you can't imagine that you define something at 30nm as toxic and 31nm as non-toxic,' he says. 'The focus on novel properties, I think, is one categorisation scheme that might have some relevance for long term approaches to regulation.'

Hayley Birch.

Writing.

Attributive clauses

Object Clauses

Object clauses present a great variety of patterns but less difficulty on the point of their grammatical analysis.

The simplest case of such clauses are patterns in which a sub-clause can be replaced by a noun which could be then an object in a simple sentence. Familiar examples are:

We could buy **what she liked.**

You may **do whatever you choose.**

Did the accused mention **who this girl friend of his was...(Gordon)**

He suggested **that Bosnian seemed unduly zealous in calling forpaper for the statement to be taken down.** (Gordon)

He was anxious **that they should realise he was an Englishman.** (Gordon)

Antony wondered **whether they would ever meet**again. (Gordon)

He remembered **that the waltz was in three-time,**remembered the waltz of olden days — too well — That dance at Rodger's, and Irene, his own wife, waltzing in the arms of young Bosinney. (Galsworthy)

And later, on a sleepless pillow, she puzzled, as she had puzzled of late, as **to how it**was that she loved so strange a man, and loved him despite **the** disapproval of her people. (London)

Synonymic alternatives of object clauses are:

a) Gerundive nominals:

They all **approved of his not being beaten by that cousin of**his, (Galsworthy)

Soames had ever resented **having had to sell the house at Robin Hill;** never forgiven **his uncle for having bought it,**or **his cousinfor living in it.** (Galsworthy)

He's going to begin farming, you know, he' ll make an excuse. **Men hatebeing painted.** (Galsworthy)

...he could not see **Irene shivering,**as though some garment had been torn from her, nor her eyes, black and mournful like the eyes of a beaten child. He could not hear **Bosinney entreating, entreating, always entreating;**could not hear her sudden, soft weeping, nor see that poor, hungry looking devil, awed and trembling, humbly touching her hand. (Galsworthy)

I looked in the door of the big room and saw **the major sitting at thedesk,** and **the window open and the sunlight coming into the** room. (Hemingway)

b) Infinitival nominals:

He saw the squirrel's eyes, small and bright **and watched his tail**jerk **in excitement. (Hemingway)**

The Darties saw **Bosinney spring out, and Irene follow, andhasten up the steps with bent head.** (Galsworthy)

Instances are not few when infinitival and gerundive nominals go in one sentence in close proximity, e. g.:

Only vaguely did he **see the judge shake his head in disagreement and hear Turner mumbling something. (Gordon)**
Like attributive adjuncts in a simple sentence, attributive clauses qualify the thing denoted by its head word through some actions, state or situation in which the thing is involved.
Writing.
Attributive clauses

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Like attributive adjuncts in a simple sentence, attributive clauses qualify the thing denoted by its head word through some actions, state or situation in which the thing is involved.
Uyga vazifa:
So’zlarni yodlash.
Mashqlar ishlash

LESSON 8

Topic : Chemical Properties of Stainless Steel.

Stainless steel is widely used for making utensils. Read on to know about the chemical properties of stainless steel that make it so popular in utensil-making... Stainless steel is a metal alloy which is preferred for making kitchen utensils, because it does not affect the flavor of food. The surfaces of stainless steel utensils are easy to clean. Minimal maintenance and total recycling of stainless steel utensils also contribute to their popularity. Stainless steel is the universal name for a metal alloy, that is made up of chromium and iron. It is called stainless as it is highly resistant to stains (rusting). Pure iron is the main element of stainless steel. Pure iron is prone to rusting and is highly unstable, as it is extracted from iron ore. Rusting of iron is due to its reaction with oxygen, in the presence of water. Chromium is a metal that stalls the oxidization of iron. Chromium forms a transparent and passive layer of chromium oxide, which prevents mechanical and chemical damage. The other minor constituents of steel are 62 nickel, nitrogen and molybdenum. Small contents of nickel increase the corrosion resistance further, and protect stainless steel from rough usage and harsh environmental conditions. Pitting or scarring is avoided by adding molybdenum to steel. Chemical properties and structure of the stainless steel is improved using other alloys. Titanium, vanadium and copper are the alloys which make stainless steel more suitable for specific uses. Not only metals, but also non-metals like nitrogen, carbon and silicon are used to make stainless steel.

Exercices:

III. Fill in the gaps with suitable words given below. 1) Diamagnetic substances are ... by a magnetic field. 2) Much of the work of the biochemist is concerned with . . . and medicines. 3) ... is the process whereby electrical energy causes a chemical change in the conducting medium. 4) Electrolysis is generally used as a method of deposition of metals from .... 5) The theory of ... reactions is a major discovery of our time. 6) The close links between the science and industry ... the chemical industry to make great progress. 7) Zelinsky's works formed the basis for the synthesizing of a large number of new chemical ... . 8) Scientists are making a major contribution to ... of aniline dyes. 9) There are more than 30 different . . . of chemistry. 10) Diamagnetic substances have no ... electrons. Production, repelled, unpaired, solution, foodstuffs, compounds, enabled, branches, electrolysis, chain.

IV. Make up sentences out of these words. 1) And, phenol, an original method, acetone, our scientists, simultaneously, benzene, and, evolved, from, extracting, propylene, of. 2) Substance, field, the study, in the presence, behaviour, chemical, magnetochemistry, of, of, is, a, of, a, magnetic. 3) World-wide, this, to, scientists, recognition, much, due, research, credit, our, is, whose, won, has. 4) Other, needed, manufacture, textile fibers, plastics, acetone, and, are, organic glass, for, the, products, of, and, chemical, phenol. 5) Physics, chemistry, parts, linked, which, concerned, are, closely, with, with, physical, chemistry, is, those, of.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 9.

Giving advice.Doing exersises. Topic : Classes Depending on Chemical Properties of Stainless Steel.

The five classes of stainless steel are austenitic, martensitic, duplex, ferritic and precipitation-hardening. The chemical composition of these five classes are as follows: **Austenitic Stainless Steel**: This steel is called austenitic because it is made from austenitizing elements. Iron, nickel and chromium are the basic austenitizing constituents of this type of stainless steel. This steel has high ductility and relatively high tensile strength. Approximately, 16-26% chromium and less than 35% nickel are the typical contents of this steel.

Applications are:

Petrochemical industries

Food processing industries

Kitchen sinks

Chemical plants

Martensitic Stainless Steel: This steel is called martensitic as it possesses a martensitic crystal structure in hardened condition. Chromium and carbon are the main contents of martensitic stainless steel. This type of stainless steel are less resistant to corrosion. Around 18% chromium and 1% carbon make the martensitic stainless steel.

Applications are:

Surgical instruments

Knives and blades

Shafts and spindles

Ferritic stainless steel: This type of stainless steel is ferromagnetic in nature. This steel has relatively good ductility and is usually used to make kitchen utensils. Approximately 30% chromium is present along with iron.

Applications are:

Automotive exhaust

Automotive trims

Computer floppy disk hubs

Duplex stainless steel: This type of steel is used in chloride and sulphide environments and is least corrosive. It is a mixture of ferritic and austenitic stainless steel. 63 Primary constituents are chromium and nickel.

Applications of duplex stainless steel are

Oil and gas explorations and off-shore rigs

Chemical processing, transport and storage

Pulp and paper manufacturing

Precipitation hardening stainless steel: This type of steel is made from chromium and nickel. Precipitation hardening stainless steel is made from annealed martensitic or annealed austenitic stainless steel. Annealing of stainless steel is the process of heating steel to change the chemical and physical properties of stainless steel.

EXERCISES:

I. Give English equivalents for these words. отрасль развитие исследование условие выделение открытие состав свойство наука производство одновременно достигать

II. Answer the questions. 1) Which branch of chemistry deals with the study of materials not derived from living organisms? 2) Which branch of chemistry studies the behaviour of a chemical substance in the presence of a magnetic field? 3) What is the study of substances containing carbon called? 4) What other branches of chemistry do you know? 5) By whom were antibiotics prepared? 7

III. Fill in the gaps with suitable words given below. 1) Diamagnetic substances are ... by a magnetic field. 2) Much of the work of the biochemist is concerned with . . . and medicines. 3) ... is the process whereby electrical energy causes a chemical change in the conducting medium. 4) Electrolysis is generally used as a method of deposition of metals from .... 5) The theory of ... reactions is a major discovery of our time. 6) The close links between the science and industry ... the chemical industry to make great progress. 7) Zelinsky's works formed the basis for the synthesizing of a large number of new chemical ... . 8) Scientists are making a major contribution to ... of aniline dyes. 9) There are more than 30 different . . . of chemistry. 10) Diamagnetic substances have no ... electrons. Production, repelled, unpaired, solution, foodstuffs, compounds, enabled, branches, electrolysis, chain.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 10

Topic : Chemistry Experiments for Kids.

Kids chemistry experiments are a fantastic way of teaching kids about chemistry through a practical perspective. Keeping that in mind, we have a look at some simple chemistry experiments for kids in the following article. Kids have always been fascinated with chemistry and chemistry experiments. I am no different either. Pouring some strange sort of magic potion into a test tube filled with another weird looking liquid, and watching the colorful reaction that follows...chemistry experiments are an absolute visual treat, in addition to being extremely educational and entertaining. Kids will be thrilled to know that there are quite a few kids chemistry experiments that can be performed at home itself. No complicated laboratory stuff required, no smelly fumes involved. Home chemistry experiments are quite simple and can be real fun! On that note, let us have a look at a few easy to perform middle school chemistry experiments for kids.

Chemistry Experiments for Kids

Before we proceed to any sort of experiments based on chemistry for kids, these are some precautions that you need to take: Wear old cotton clothes while performing these experiments. If possible, wear a chemistry lab coat to protect your clothes from getting stained. Do not fool around with chemicals or chemical elements. They can be extremely dangerous and can cause serious harm if misused. Always perform these experiments under the supervision of your parents or any other elder person.

Experiment #1: **Invisible Ink**

Many of you may have read about this one in the mystery novels for children. You can make invisible ink in two ways: Squeezing a couple of lemons into an empty bowl.• Mixing an equal amount of baking soda and water.• If you have a spare ink pen, fill it with this newly created invisible ink. Alternatively, you can also use a cotton swab to serve the purpose of a pen. Take a blank sheet of white paper. Using the ink pen (or the cotton swab dipped in the liquid solution) write a few words on the sheet of paper. Wait for a couple of minutes after which you should hold the paper over a low flame. You will see the invisible ink darkening and you will be able to read the secret message!

Experiment #2: Density Column

This experiment is aimed at teaching you the concept of density of liquids. You will need a regular cocktail glass for this purpose. If you do not have a cocktail glass, a regular tall glass will also do. We will use a variety of liquids, namely - water, honey, lamp oil, maple syrup and dish washing soap. First pour the honey, then the maple syrup, followed by the dish washing soap. Finally, pour the water and top it with lamp oil. Let the liquids settle for a minute after which you can observe the density column. As we have poured the liquids in decreasing order of densities, you will see lamp oil as the topmost layer whereas the layer of honey will be right at the bottom.

Experiment #3: Vinegar Volcano

You will need an empty soda bottle and some flour dough to cover the bottle from all sides. Mold the dough around the bottle (leaving the top uncovered) such that it resembles a cone-shaped volcano. Fill sixty percent of the bottle with colored warm water. Now add a little bit of dish washing detergent to the warm water. Top that with a couple of spoons of baking soda. Finally, pour the vinegar into this mixture and lo and behold, you have a volcano erupting right here in your kitchen!

Experiment #4: Disappearing Eggshell

Place a hard-boiled egg into an empty glass jar. Fill the jar all the way to the top with vinegar and seal it tightly. Place the jar on a shelf and let it remain that way for a week. After a week has passed, unscrew the lid and take the egg out of the jar. You will notice that the eggshell has disappeared! Where did it go? Was this a magic 65 trick? No, it wasn't. The eggshell reacted with the vinegar due to which it got absorbed into the vinegar solution, leaving you with a bare, boiled, rubbery egg! These were some easy home-based chemistry experiments for kids. Try them out and boast about your chemistry knowledge in front of all your friends!

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 11.

Linking contrasting ideas.Doing exersises. Topic :Chemistry of Acid Rain.

Any form of precipitation which is acidic in nature is called acid rain. Acid rain is the result of excessive emissions of sulfur and nitrogen caused by human activity, which reacts with other compounds to form acids. Acid rain has detrimental effects on animals, plants and infrastructure. In its purest state, rain water is like distilled water. It does not have carbon dioxide dissolved in it. It is neutral, with a pH level of 7. pH is the concentration of hydrogen ions in an aqueous solution. If the pH level is above 7, it is said to be basic, and if it is below 7, it is said to be acidic in nature. As rain water falls through the atmosphere, particles suspended in the air are dissolved in it. These substances are generally dust, pollen grains and carbon dioxide (CO2). Emissions of volcanoes and lightning tend to decrease the pH level of acid rain, making it even more acidic. CO2 combines with water to form carbonic acid (H2CO3). H2O(l) + CO2(g) = H2CO3(aq)

Carbonic acid ionizes in water to form low concentrations of carbonate and hydronium ions. 2H2O(l) + H2CO3(aq) = CO3 2- (aq) + 2H30 + (aq)

Carbonic acid is a weak acid. It brings down the pH of the rain water to 6.0-5.2. With pH levels ranging between 6.0-5.2, rain water is acidic, but still not dangerous. This is a reversible reaction. The problem occurs when rain water combines with gaseous oxides of sulfur, nitrogen, and phosphoric and hydrochloric acid mists. The latter two and sulfur are released into the atmosphere from automobile exhausts, industries and electric power plants. Nitrogen forms a major part of atmospheric composition. These chemicals bring down the acid rain pH level to 5.6-3.5. Sometimes, the pH level can even become as low as 2. This phenomenon of acidic rain water precipitation, is called acid rain. Rain, snow, sleet, freezing rain, hail, fog and dew are other forms of precipitation.

III. Translate the words from exercise III and make up your own sentences with them.

Rules of reading formulas and equations. **Список наиболлее важных химических элементов (к таблице Менделеева)** 1. Al 2. Ag 3. Ar 4. As 5. Au 6. B 7. Ba 8. Be 9. Bi 10.Br 11.C 12.Ca 13.Ce 14.Cd 15.Cl 16.Co 17.Cr 18.Cs 19.Cu 20.F 21.Fe 22.Ge 23.H 24.He 25.Hg 26.J 27.Ir 28.K 29.Li 30.Mg 31.Mn 32.Mo 33.N 34.Na 35.Ne 36.Ni 37.O 38.P 39.Pb 40.Pt aluminium argentums argon arsenic aurum = gold boron barium berillium bismuth bromine carbon calcium cerium cadmium chlorine cobalt chromium caesium copper fluorine ferrum = iron germanium hydrogen helium hydrargyrum = mercury iodine iridium kalium = potassium lithium magnesium mangnese molybdenum nitrogen natrium = sodium neon nickel oxygen phosphorus plumbum= lead platinum алюминий серебро аргон мышьяк золото бор барий бериллий висмут бром углерод кальций церий кадмий хлор кобальт хром цезий медь фтор железо германий водород гелий ртуть йод иридий калий литий магний марганец молибден азот натрий неон никель кислород фосфор свинец платина 14 41.Ra 42.Rb 43.S 44.Sb 45.Se 46.Si 47.Sn 48.Sr 49.Te 50.Th 51.Ti 52.U 53.W 54.Zn 55.Zr radium rubidium sulphur antimony selenium silicon stannum = tin strontium tellurium thorium titanium

uranium wolfram = tungsten zinc zirconium радий рубидий сера сурьма селен кремний олово стронций теллур торий титан уран вольфрам цинк цирконий

Vocabulary. Laboratory equipment. 1) 1-63 laboratory apparatus (laboratory equipment) лабораторное обо- рудование 2) Bunsen burner горелка Бунзена 3) gas inlet (gas inlet pipe) подвод газа (газовая подводящая труба) 4) air regulator регулятор подвода воздуха 5) Teclu burner горелка Теклю 6) pipe union присоединение газо- вой трубы 7) gas regulator регулятор поступ- ления газа 8) stem трубка горелки 9) air regulator регулятор поступ- 34) test tube пробирка 35) test tube rack штатив для проби- рок 36) flat-bottomed flask плоскодонная колба 37) ground glass neck горлышко с притертой стеклянной пробкой 38) long-necked round-bottomed flask длинногорлая круглодонная колба 39) Erlenmeyer flask (conical flask) колба Эрленмайера (коническая колба) 40) filter flask колба для фильтрова- ния под вакуумом 41) fluted filter гофрированный фильтр 16 ления воздуха 10) bench torch настольная горелка 11) oxygen inlet подвод кислорода 12) hydrogen inlet подвод водорода 13) oxygen jet струя кислорода 14) tripod треножник, тренога 15) ring (retort ring) кольцо для ре- торты 16) funnel воронка 17) pipe clay triangle трубчатый глиняный треугольник 18) wire gauze проволочная сетка 19) wire gauze with asbestos centre (Am. center) проволочная сетка с ас- бестовым центром 20) beaker стакан 21) burette (for delivering measured quanti ties of liquid) бюретка (для выпуска измеренных объемов жидкости) 22) burette stand штатив для бюре- ток 23) burette clamp зажим для бюре- ток 24) graduated pipette градуирован- ная пипетка 25) pipette пипетка 26) measuring cylinder (measuring glass) мерный цилиндр (измеритель- ный стакан) 27) measuring flask мерная колба 28) volumetric flask мерная колба 29) evaporating dish (evaporating basin), made of porcelain выпарная чашка, выполненная из форфора 30) tube clamp (tube clip, pinchcock) зажим для трубок 31) clay crucible with lid глиняный тигель с крышкой 32) crucible tongs тигельные щипцы 33) clamp струбцина 42) one-way tap одноходовый кран 43) calcium chloride tube трубка с хлоридом кальция 44) stopper with tap пробка с краном 45) cylinder цилиндр 46) distillation apparatus (distilling apparatus) перегонный аппарат 47) distillation flask (distilling flask) перегонная колба 48) condenser конденсатор 49) return tap, a two-way tap возврат- ный кран, двухходовой кран 50) distillation flask (distilling flask, Claisen flask) перегонная колба (вакуум- перегонная колба, колба Кляйзена) 51) desiccator эксикатор (сушилка) 52) lid with fitted tube крышка с вставленной трубкой 53) tap кран 54) desiccator insert made of porcelain фарфоровый вкладыш в эксикаторе 55) three-necked flask трехгорлая кол- ба 56) connecting piece (Y-tube) соедини- тельная (Y-образная) трубка 57) three-necked bottle трехгорлая склянка 58) gas-washing bottle склянка 59) gas generator (Kipp's apparatus, Am. Kipp generator) генератор газа 9аппарат Кипа, генератор Кипа) 60) overflow container переточный со- суд 61) container for the solid сосуд для засыпки реагента 62) acid container сосуд для кислоты 63) gas outlet трубка для выпуска газа.

Uyga vazifa:

So’zlarni yodlash. Mashqlar ishlash

LESSON 12

Careers. Discussion of topic : Cracking water with sunlight.

28 March 2008

A power plant that makes hydrogen by splitting water with concentrated sunlight launches in Almeria, Spain, on 31 March. It's a glimpse into a possible carbon-free future that uses solar-driven chemical reactions to produce the gas. The reactor, Hydrosol II, is the largest pilot-scale project of its kind, though hundreds of thermochemical water splitting schemes have been sketched out on paper and tested in laboratories. The system will take in half a litre of water every minute and should produce around 3 kilograms of hydrogen an hour - equivalent to a thermal output of 100kW, explains project coordinator Athanasios Konstandopolous, who works for the Chemical Process Engineering Research Institute based in Thessaloniki, Greece. That's small fry compared to the tonnes of hydrogen produced every day by reforming natural gas, but the concept does avoid using up fossil fuels and emitting carbon dioxide - a must if hydrogen is to be a truly environmentally-friendly source of energy. The pilot plant is the scaled-up version of a concept which has been tested in the solar furnace of the German Aerospace Centre (DLR), Cologne, for four years, and which shared the European Commission's 2006 Descartes prize for scientific research. Industrial R&D partners Johnson Matthey Fuel Cells and Stobbe Tech Ceramics (Denmark) have joined the German, Greek and Spanish research teams making up the Hydrosol consortium. So far the whole programme has required only 7 million of funding, half of which came from the EU. If the larger system works and is economically feasible, the researchers hope to secure funding for a 1MW mass production plant, Konstandopoulos says. Richard Van Noorden.

Exercice :

II. Learn the words and special terms from the list. 18 I. Match the word with its definition. 1) funnel 2) beaker 3) microscope 4) slides 5) electric balance 6) tongs 7) mortar 8) pestle 9) tripod 10) rubber tubing ll) gas tap 12) matches 13) measuring cylinder 14) test tube 15) test tube rack 16) pipette 17) conical flask 18) bung/stopper 19) 1ab coat 20) chemical 21) chemical reaction 22) chemist 23) chemistry a) a tool that consists of two movable bars joined at one end, used to pick up an object b) a scientific instrument that makes extremely small things look larger c) a short stick with a heavy round end d) the science that is concerned with studying the structure of substances and the way they change e) a round piece of rubber or wood used to close the top of a container f) a round pipe made of rubber for liquids to go through g) a substance used in chemistry or produced by chemistry h) a tube used for pouring liquids or powders into a container with a narrow opening i) an electric instrument for weighing things j) a natural process in which the atoms of chemicals mix and arrange themselves differently to form new substances k) a glass container used for measuring liquid l) a thing glass tube for sucking up exact amounts of liquid, used especially in chemistry m) a small glass container that is shaped like a tube and is used in chemistry n) a piece of clothing that is worn over your clothes in laboratory to protect them o) a scientist who has a special knowledge in chemistry p) a glass cup with straight sides that is used in hemistry for measuring

and heating liquids q) small pieces of thing glass used for holding som ething when you look at it under a microscope r) a hard bowl in which substances are crushed into powder or very small pieces with a pestle s) a special type of bottle mat you use to keep liquids t) a special shelf for tubes u) a support with three legs, used for a camera, tel escope etc. v) small wooden sticks, used, to light a tire w) a piece of equipment for controlling the flow of gas from a pipe or container

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 13.

Predicting future.Doing exersises. Topic :Types of Chemical Reactions.

All the chemical reactions involve certain changes in the substances and energy. There are basic six types of chemical reactions. Here is some interesting information about the types of chemical reactions. During any chemical reaction, there is a conversion of the reactants into a single or many products. A reactant means a substance or substances that are involved in a chemical reaction. The chemical reactions occur under the appropriate conditions of pressure and temperature in the presence of a catalyst. The catalyst plays a significant role in increasing the rate of a chemical reaction without actually getting involved in that reaction. Types of chemical reactions are characterized by the type of chemical changes. Any chemical reaction yields a single or more products, which are quite different from the reactants. The chemical reactions include some changes that involve the motion of electrons during the formation and breakage of chemical bonds. The chemical reactions could be written in a symbolic form. Chemical equations are used to describe a chemical transformation of elementary particles, which takes place during the reaction. The chemical reactions involve a change in energy; either released or absorbed. Chemical reactions are described as exothermic reactions (in which energy is released) or endothermic reactions (in which energy is absorbed). There are 6 basic types of chemical reactions such as synthesis reaction, decomposition reaction, single replacement reaction, double replacement reaction, combustion reaction and acid-base reaction.

Exercices:

Read and translate.

Concept of Laws of Triads

The German chemist Johann Wolfgang Döbereiner created a periodic table called Laws of Triads, in 1829. His periodic table was based on the atomic weight of chemical elements. According to his periodic table, the atomic weight of the middle element in the triad was an average of the atomic weights of the other two elements. Later, when new elements were added to the triads, his theory could not be established.

Concept of Law of Octaves

The English chemist John Newlands came up with his form of periodic table in 1865. He, too, classified the elements on the basis of atomic weight. He observed that when the elements are graded in the increasing order of their atomic weight, then their physical as well as chemical properties are repeated after an interval of eight. He compared this trend of elements with the octaves of music, and hence, he referred to it as the Law of Octaves. However, this law was not valid for those elements whose atomic weight was higher than that of calcium. The main drawback of this table was that it could not accommodate the inert gases (helium, neon, etc).

Writing.

Predicting future.Doing ex.

Predicting the Future

We can say how sure we feel about the future by using modal verbs. There are also other phrases we can use to express our certainty or uncertainty about future events.

Modal verbs

We can combine modal verbs with adverbs to show a greater or lesser degree of certainty.

- *People will definitely work longer hours in the future.*
- *People definitely won't work longer hours in the future.*

Both of these sentences show that the speaker is sure.

- *You'll probably enjoy this film.*
- *You probably won't enjoy this film.*

The speaker is thinks (s)he's right but isn't 100% sure.

- *She might pass the exam or she might not pass. I don't know.*

The speaker isn't sure at all. You could also use could or may instead of might.

Other expressions

Here are some other ways to talk about how certain we are about something in the future.

1 I'm sure

- *Jan is bound to pass the exam. He's worked really hard.*
- *Jan is certain to pass.*

2 I think so but I'm not 100% sure

- *Katka is likely to pass the exam.*
- *Katka may well pass the exam.*
- *There's a good chance that Katka will pass the exam.*

3 I don't think so

- *Juraj is unlikely to pass the exam.*
- *There's not much chance Juraj will pass.*
- *I doubt if Juraj will pass.*
- *There's no chance of Juraj passing the exam.*

'Will' and 'Going To' futures: For making predictions

Sometimes English grammar can be tough! Occasionally, you may think: 'I just can't make head or tail of it!'

Grammar can leave students pulling their hair out! Students often ask: 'Why do you have so many grammatical tenses? In my language we do not have so many tenses!'

When you break the language down you will see that English is a very expressive language and each grammatical structure that you use communicates a very specific idea and time. Each time you say something, the person that you are speaking to interprets your words and creates a very specific mental picture of what you are

communicating. Using the correct grammar means that people will know exactly what you are on about every time you communicate!

This blog is dedicated to the future!! It is dedicated to the grammatical future, and to your future as an English language student. The blog will specifically cover the uses of:

will (+infinitive) and **to be going to (+infinitive)**

We hope that this blog helps you to understand the differences in meaning between these two structures and how we use them in English.

Predictions about the future

We use both **will** and **to be going to** when we want to make a prediction about the future. A prediction is a statement that we make about the future. When a person makes a prediction they say what they think will happen in the future.

When do we use the structure to be going to + infinitive?

We use the structure **to be going to + infinitive** if we make a prediction about the future because we have evidence now that supports us in making that prediction. This means that something now (in the present) tells us what is going to happen in the future.

Everyday predictions about the future are made. Here are some predictions that we see on a regular basis:

On television the weather forecast predicts what the weather will be like tomorrow. Weather forecasters use different weather instruments that provide them with information in the present. Weather forecasters use this information to make their predictions about the weather.

We use the 'going to' future to make predictions based on evidence we have now

If you asked a weather forecaster to make a prediction about the weather he/she might say: 'It is going to be sunny tomorrow. Temperatures are going to be between 20 and 22 degrees Celsius. It is going to rain on the east coast in the evening. Tomorrow night is going to be cloudy'.

Economists make predictions regarding the economy in a country, levels of employment and unemployment and the creation of jobs. An economist is someone who has studied economics. Economists use evidence from history and data that has been collected to help them make their predictions. They use this evidence to help them make predictions about economic situations in the future.

If you asked an economist to make a prediction about the economy he/she might say: "Unemployment levels are going to fall next year. The economy of the country is going togrow by 2%. Tax rates are going to decrease slightly. Taxes are not going to increase."

When do we use the structure will + infinitive?

We use the structure **will + infinitive** to make a prediction about the future. However, if we use this structure we are guessing. We do not have any evidence in the present telling us what the future is going to be.

Every day, newspapers print horoscopes telling people what will happen in their lives that day. Horoscopes make predictions about peoples jobs and careers.

Horoscopes also make predictions about people's relationships, their health and their finances. However, when you read a horoscope you are reading a prediction about yourself but this is not based on any evidence. This prediction is guessing what your future is going to be.

If you are very lucky your horoscope might say something like this: "Today you will get a phone call. The person who telephones you will offer you the job of your dreams. Later this afternoon you will win a lot of money on the lottery."

I have made some predictions about the future:

1. I predict that Ireland will win the UEFA European Championship in France in 2016 (I am not a football fan – this prediction is a guess!)
2. I predict that we will have a hot summer in Ireland in 2016. I am not a weather forecaster but I am a very optimistic Irish person!
3. I predict that Justin Bieber will decide to retire from music! (I am not a Justin Bieber fan!)

Uyga vazifa:

So'zlarni yodlash.

Mashqlar ishlash

LESSON 14 Working on the text History of the Periodic Table.

Topic : **History of the Periodic Table.**

The periodic table helps us to classify and compare various elements on the basis of their chemical behavior. Read on to know how the periodic table evolved over a period of time... The periodic table is an arrangement of chemical elements in the form of a table, to get a first-hand glimpse of 'periodically' recurring properties of elements. Since the ancient period, scientists have suggested various forms of the periodic table, but the credit for the modern form of periodic table goes to the Russian professor of chemistry, Dmitri Ivanovich Mendeleev. With the discovery of new elements and new theories on the structure of atoms; however, the basic structure of Mendeleev's original periodic table has undergone several changes.

Aristotle's Theory

During the ancient times, Greek philosopher Aristotle believed that the four main elements are: air, earth, fire and water. He proposed that combining these elements can lead to the formation of a new one. For instance, lava can be formed by combining earth and fire. However, his proposals were dismissed, when the chemical elements were discovered.

The Plan of Rendering Newspaper Article

1. The title of the article. a) The headline of the article is ... b) The article is headlined ... c) The headline of the article I've read is...

2. The author of the article a) The author of the article is... b) The author of the article is ... c) The article is written by ...

3. Where and when the article was published. a) The article is taken from the newspaper... b) It is (was) published in ... c) it is (was) printed in ...

4. The main idea of the article. a) The main / central idea of the article is ... b) The article is about ... c) The article is devoted to ... d) The article deals with ... e) The article touches upon ... f) The purpose of the article is to give the reader some information on ... g) The aim of the article is to provide the reader with some facts/material/data on ...

5. Give a summary of the article (no more than 10-20 sentences). a) The author starts by telling (the reader) (about, that ...) b) The author writes (states, stresses upon, thinks, points out) that ... c) The article describes ... d) According to the text ... e) Further the author reports (says) that ... f) The article goes on to say that ...

6. State the main problem discussed in the article and mark off the passages of the article that seem important to you.

7. Look for minor peculiarities of the article.

8. Point out the facts that turned out to be new for you.

9. Look through the text for figures, which are important for general understanding.

10. State what places of the article contradict your former views.

11. State the questions, which remained unanswered in the article and if it is possible add your tail to them.

12. Speak on the conclusion the author comes to. a) In conclusion ... b) The author comes to the conclusion that ....

13. Express your own point of view on the problem discussed. a) I find/found the article topical=urgent (interesting, important, dull, of no value, too hard to understand) because ... b) In my opinion the article is worth reading because ....

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 15.

Cause affect linking words and phrases. Doing exersises.

Topic : Modern Form of Periodic Table. **Topic : Modern Form of Periodic Table.**

In the modern form of periodic table, the elements are arranged in accordance with their increasing atomic number. There are a total of 117 chemical elements in the periodic table. Out of them, 94 elements are obtained naturally on Earth and the rest are all synthetic elements. The elements are grouped in four blocks: s, p, d and f. The transuranium elements or the radioactive elements are placed below the main table as 76 lanthanides and actinides. Usually, each element is represented with its symbol, atomic number and atomic mass in the periodic table. The vertical column of the periodic table, also called a 'group', includes those elements which have the same electronic configuration in the outermost shell of their atoms. For this reason, elements in the same group show similar properties. The horizontal row of the periodic table is called a 'period'. A row of the table signifies the number of shells that are filled by electrons in an atom. In some sections of the periodic table, the horizontal trends of the characteristics of elements are more significant than the vertical trends. This holds true, particularly, for lanthanides and actinides (fblock) and transition elements (d-block). The periodic table is a complete database that has all the required information about chemical elements. Its utility is not just confined to the field of chemistry alone, but it is equally useful in biology, physics, engineering, etc.

Execices;

Answer the following questions: 1. What do we call a laboratory'? 2. In what laboratories can the students carry out their experiments? 3. What is every laboratory provided with? 4. Why is every laboratory provided with a ventilating hood? 5. What can you see on the shelves'? 6. What glassware is there on every laboratory' bench? 7. What are burners used for'? 8. What are crucibles used for'? 9. What are crucibles made of? 10. What is it necessary to do if we want to obtain hydrogen chloride'? (describe the experiment) 11. How can nitric acid be prepared in the laboratory?

Translate.

PAPER CHROMATOGRAPHY, APPLICATIONS AND PROCEDURE

In paper chromatography-the absorption column is replaced by strips of paper. The absorbent or ion exchanger is precipitated into the pores of the paper. One end of the prepared paper is dipped into distilled water and allowed to stand until the water has climbed about a centimeter along the paper. It is then removed and dipped into a solution of the materials to be separated. After the unknown solution has climbed about 2 cm, the paper is removed from the unknown solution and returned to the distilled water. After the water has climbed to about 12 to 16 cm, the strip is removed and dried between filter paper. Brushing the dried paper strip with the proper developing agent will produce bands similar to those produced in the adsorption column. 25 Numerous studies have been made of the paper-strip method for separating cations, anions and metal complexes. The procedure is similar to that of column chromatography. The paper-strip method has the advantage that the

developing reagent does not pass through the adsorbent as it is required in column chromatography. The strip method requires a minimum of test solution, about 0.1 mm, several developers may be applied to the same strip. The paper-strip method has been applied to quantitative determination of the inorganic cations and to many organic materials.

Reading.

Cause affect linking words and phrases. Doing ex.

Sentence connectors improve your writing. They add variety and sophistication to your style of writing.

In this lesson we will learn about words and expressions used to show cause and effect.

In English, we use several different words to show cause and effect. Examples are: **for, because, as, since, therefore, hence, as a result, consequently, due to, because of, as a result of** etc.

He must be asleep **for** there is no light in his room.

I decided to call it a day – **for** I was feeling tired.

I helped him **because** I liked him.

Since he had not paid the rent, he was told to vacate the room.

As it is raining again, we will have to stay at home.

It was raining, **so** we stayed at home.

Notes

So shows the effect. **As, since** and **because** show the cause.

Compare:

As he hasn't arrived yet, we will have to go without him.

He hasn't arrived yet, **so** we will have to go without him.

The poor parents could not support the baby. **Therefore** they sent him to an orphanage.

We had to cancel the trip **due to** my daughter's illness.

Owing to bad weather the match was cancelled.

We had to cancel the match **because of** bad weather.

I was late **owing to the fact that** the train broke down.

This structured list of commonly used English **transition words** — approximately 200, can be considered as quasi complete. It can be used (by students and teachers alike) to find the right expression. English transition words are essential, since they not only connect ideas, but also can introduce a certain shift, contrast or opposition, emphasis or agreement, purpose, result or conclusion, etc. in the line of argument.

The transition words and phrases have been assigned only once to somewhat artificial categories, although some words belong to more than one category.

There is some overlapping with **prepositions** and postpositions, but for the purpose of usage and completeness of this concise guide, I did not differentiate.

Agreement / Addition / Similarity

The transition words like ***also, in addition, and, likewise***, **add information**, **reinforce ideas**, and **express agreement** with preceding material.

in the first place
not only ... but also
as a matter of fact
in like manner
in addition
coupled with
in the same fashion / way
first, second, third
in the light of
not to mention
to say nothing of
equally important
by the same token
again
to
and
also
then
equally
identically
uniquely
like
as
too

Opposition / Limitation / Contradiction

Transition phrases like ***but***, ***rather*** and ***or***, express that there is evidence to the **contrary** or point out **alternatives**, and thus introduce a change the line of reasoning (**contrast**).

although this may be true
in contrast
different from
of course ..., but
on the other hand
on the contrary
at the same time
in spite of
even so / though
be that as it may
then again
above all
in reality
after all
but
(and) **still**
unlike
or
(and) **yet**

Cause / Condition / Purpose

These transitional phrases present specific **conditions** or **intentions**.

in the event that
granted (that)
as / so long as
on (the) condition (that)
for the purpose of
with this intention
with this in mind
in the hope that
to the end that
for fear that
in order to
seeing / being that
in view of
If
... then

Examples / Support / Emphasis

These transitional devices (like ***especially***) are used to introduce examples as**support**, to indicate **importance** or as an **illustration** so that an idea is cued to the reader.

in other words
to put it differently
for one thing
as an illustration

in this case	**must be remembered**
for this reason	**point often overlooked**
to put it another way	**to point out**
that is to say	**on the positive side**
with attention to	**on the negative side**
by all means	**with this in mind**
important to realize	**notably**
another key point	**including**
first thing to remember	**like**
most compelling evidence	**to be sure**

Reading.

Cause affect linking words and phrases. Doing ex.

Sentence connectors improve your writing. They add variety and sophistication to your style of writing.

In this lesson we will learn about words and expressions used to show cause and effect.

In English, we use several different words to show cause and effect. Examples are: **for, because, as, since, therefore, hence, as a result, consequently, due to, because of, as a result of** etc.

He must be asleep **for** there is no light in his room.

I decided to call it a day – **for** I was feeling tired.

I helped him **because** I liked him.

Since he had not paid the rent, he was told to vacate the room.

As it is raining again, we will have to stay at home.

It was raining, **so** we stayed at home.

Notes

So shows the effect. **As, since** and **because** show the cause.

Compare:

As he hasn't arrived yet, we will have to go without him.

He hasn't arrived yet, **so** we will have to go without him.

The poor parents could not support the baby. **Therefore** they sent him to an orphanage.

We had to cancel the trip **due to** my daughter's illness.

Owing to bad weather the match was cancelled.

We had to cancel the match **because of** bad weather.

I was late **owing to the fact that** the train broke down.

This structured list of commonly used English **transition words** — approximately 200, can be considered as quasi complete. It can be used (by students and teachers alike) to find the right expression. English transition words are essential, since they not only connect ideas, but also can introduce a certain shift, contrast or opposition, emphasis or agreement, purpose, result or conclusion, etc. in the line of argument. The transition words and phrases have been assigned only once to somewhat artificial categories, although some words belong to more than one category.

There is some overlapping with **prepositions** and postpositions, but for the purpose of usage and completeness of this concise guide, I did not differentiate.

Agreement / Addition / Similarity

The transition words like ***also, in addition, and, likewise***, **add information**, **reinforce ideas**, and **express agreement** with preceding material.

in the first place
not only ... but also
as a matter of fact
in like manner
in addition
coupled with
in the same fashion / way
first, second, third
in the light of
not to mention
to say nothing of
equally important
by the same token
again
to
and
also
then
equally
identically
uniquely
like
as
too

Opposition / Limitation / Contradiction

Transition phrases like ***but***, ***rather*** and ***or***, express that there is evidence to the **contrary** or point out **alternatives**, and thus introduce a change the line of reasoning (**contrast**).

although this may be true
in contrast
different from
of course ..., but
on the other hand
on the contrary
at the same time
in spite of
even so / though
be that as it may
then again
above all
in reality
after all
but
(and) **still**
unlike
or
(and) **yet**

Cause / Condition / Purpose
These transitional phrases present specific **conditions** or **intentions**.

in the event that
granted (that)
as / so long as
on (the) condition (that)
for the purpose of
with this intention
with this in mind
in the hope that
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These transitional devices (like ***especially***) are used to introduce examples as**support**, to indicate **importance** or as an **illustration** so that an idea is cued to the reader.

in other words
to put it differently
for one thing
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for this reason
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that is to say
with attention to
by all means
important to realize
another key point
first thing to remember
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must be remembered
point often overlooked
to point out
on the positive side
on the negative side
with this in mind

notably
including
like
to be sure
Uyga vazifa:
So’zlarni yodlash.
Mashqlar ishlash

LESSON 16.

Topic : Analytical uncertainty.

Wang Bing, CEO of Beijing Techmate, which represents Japanese cosmetics firm Shiseido's analysis wing in China, says that the methods currently being used to analyze milk may not detect other contaminants that might also be present. This is important because the impure industrial melamine added to milk often contains a second compound, cyanuric acid. The two chemicals together can form insoluble crystals, which can lead to the formation of kidney stones and ultimately kidney failure. Melamine alone is less toxic - though prolonged exposure to the compound could also cause health problems. In addition, Wang says, different technical approaches - such as liquid chromatography and gas chromatography - give quite different results when used to test for melamine. But so far there have been no efforts from either the government or academia to work out why. 'More systematic approaches must be adopted in food contamination tests,' Wang told Chemistry World. Zhu Min of Perkin Elmer, who is responsible for melamine analysis at the firm, says contamination testing should make better use of the latest technologies. 'Molecular analysis technologies have been mature for 10 years, yet nitrogen levels remain the sole measure used to determine milk's protein content,' Zhu says. But the price tag attached to molecular analysis technology may be holding back its wider use. Bo Tao, an LC/MS application engineer at Agilent, says even the cheapest HPLC costs more than US$10,000 and the consumables needed to run the tests are also expensive. Meanwhile, China's Ministry of Science and Technology posted a note on its website asking members of the public to submit testing methods able to identify the presence of melamine in less than 30 minutes. According to media reports, the ministry had received more than 100 solutions by its 8 October deadline.

Exercises:

EXERCISES I. Answer the questions. 1) In what state is chlorine found in nature? 2) At what temperature does chlorine liquefy? 3) Is chlorine easily soluble in water? 4) What action does chlorine exert in water? 5) What is the reactivity of chlorine? 6) What products are obtained when sodium chloride or potassium chloride solutions are subjected to electrolysis? 7) By what method is chlorine generally produced? 8) What products are produced if fused sodium chloride is used ?

II. Make up a description of any element you like.

I. Answer the questions.

1) In what state is chlorine found in nature? 2) At what temperature does chlorine liquefy? 3) Is chlorine easily soluble in water? 4) What action does chlorine exert in water? 5) What is the reactivity of chlorine? 6) What products are obtained when sodium chloride or potassium chloride solutions are subjected to electrolysis? 7) By what method is chlorine generally produced? 8) What products are produced if fused sodium chloride is used ?

II. Make up a description of any element you like.

Uyga vazifa: So’zlarni yodlash. Mashqlar ishlash

LESSON 17

International organizations. Sharing the information.Topic : Controversial new theory for nanotube growth.

10 February 2009

US scientists have proposed a new theory for how carbon nanotubes grow. If their predictions are borne out experimentally, the theory could have practical implications for researchers trying to control nanotube growth in the lab. But experts say the theory may be unrealistic.

Carbon nanotubes are essentially rolls of graphene - hollow cylinders of carbon in which the atoms are arranged in a hexagonal lattice. But they don't roll up like sheets of paper; they self-assemble or 'grow' in the direction of a tube's length, prompting scientists to wonder how exactly each new layer of carbon is formed.

Houston and the Honda Research Institute in Ohio have now put forward a formula that they say provides a model for the extension process. Yakobson likens it to weaving a rug - the more atomic kinks or 'threads' are exposed at the growing end, the faster growth proceeds.

'The kinks are an extension of the spiral lines of atoms that make up the tube,' explains Yakobson. 'You can visualize these kinks as the ends of threads, so the more thread ends you have, the faster the tube will grow.'

The number of kinks at the growing edge is ultimately dependent on the tube's chirality, or the angle at which it is 'rolled'. Chiral tubes expose many kinks and so form quickly. A non-chiral tube, by contrast, is not formed by adding to a spiral 'thread' but by the addition of complete rings of carbon atoms. Therefore, explains Yakobson, an energy barrier has to be overcome each and every time a new ring is initiated. Nicole Grobert, a nanotubes expert based at the University of Oxford, UK, warns that the team's work is purely theoretical and unlikely to explain growth processes in real life systems. 'It has nothing to do with reality, I think, because the conditions in which the tubes grow are very chaotic,' she says. 'You have to look at the different methods that are used to grow nanotubes and I should think all of these have different growth scenarios, so you can't come up with one theory and explain all of them.'

David Tománek, who studies nanostructured materials at Michigan State University, East Lansing, US, says the model contradicts everything that is known about the formation process of nanotubes in the presence of catalytic particles. 'It also contradicts common sense in claiming that a couple of yarns, 71 representing monoatomic carbon chains, should nicely attach to each other to form a hollow tube,' he says.

'The jury is still out,' admits Yakobson. 'We're going to have to go through neverending verification processes.' But he argues that data from previous studies has so far supported his team's findings - for example, data taken from different growth methods shows an abundance of nanotubes with large chiral angles, as predicted by the formula.

Understanding how nanotubes grow would help scientists gain control over their structure, potentially leading to tubes with predefined properties and applications, says Grobert. But she thinks Yakobson's theory of nanotube growth is too farfetched.
Hayley Birch

Reading.

Concept of Laws of Triads

The German chemist Johann Wolfgang Döbereiner created a periodic table called Laws of Triads, in 1829. His periodic table was based on the atomic weight of chemical elements. According to his periodic table, the atomic weight of the middle element in the triad was an average of the atomic weights of the other two elements. Later, when new elements were added to the triads, his theory could not be established.

Concept of Law of Octaves

The English chemist John Newlands came up with his form of periodic table in 1865. He, too, classified the elements on the basis of atomic weight. He observed that when the elements are graded in the increasing order of their atomic weight, then their physical as well as chemical properties are repeated after an interval of eight. He compared this trend of elements with the octaves of music, and hence, he referred to it as the Law of Octaves. However, this law was not valid for those elements whose atomic weight was higher than that of calcium. The main drawback of this table was that it could not accommodate the inert gases (helium, neon, etc).

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

LESSON 18.
THE PASSIVE VOICE . TRANSLATION.

Ex. 1. A. 1. There are a number of coloured substances, in a natural fibre that are changed to colourless products by reaction with oxygen. Many of these substances are not affected by atmospheric oxygen. 2. Complete precipitation is often ensured by the use of the common ion effect. 3. A few of the uses of aluminium have already been referred to in the article published this month. 4. Ions, such as the hydronium ions, which are made up of several atoms held together by covalence, are known as radicals. 5. An unsaturated compound is defined as one in which the maximum valency is not exerted by all the component atoms. 6. Cellulose acetate is unaffected by weak acids, oils and most solvents. 7. Since X-ray patterns for some amorphous substances are similar to those of fluid liquids, they are looked upon as liquids which have high viscosities and are often referred to as supercooled liquids. 8. The preparation of sodium chromate from chromate ores has already been spoken of. 9. The discovery of manganese is usually credited to Cahn. 10. This question can't be answered at once. It should be thoroughly studied. 11. The heating of the solution was followed by a sudden cooling, which resulted in forming of a new product. 12. 52 Oxidation has been defined as the losing of electrons. 13. The same procedure is followed in deriving the formula of a compound containing more than two elements. 14. Gold is slowly attacked by fused nitrates and alkali-metal hydroxides. 15. Glass and silica are not attacked by sulphuric acid of any strength.

B. 1. The experimental results will be referred to in the article which is to be published in our local journal. 2. Enough has already been m1tten about this new discovery. 3. After a long discussion the decision was arrived at. 4. Lately much attention has been given to the artificial fibres which can be produced from oil. 5. All his remarks about this new work have been taken into account and particular consideration is given to the experimental part. 6. The conference was attended by many foreign scientists working in the field of nuclear physics. 7. They have been given the results of the tests carried out in our laboratory. 8. The agreement between these two relations can be reached if you examine the data thoroughly. 9. Once the distribution of gas velocities has been calculated, the final step is to determine the nature and extent of the separation of uranium isotopes in the gas. 10. The composition of the product is profoundly affected by addition of chlorine and hydrogen chloride. 11. The rate of reduction of the amount of oxygen was affected bi the oxidizing conditions. 12. Any neutrons and protons left over after the formation of the maximum number of alpha-particles are looked upon simply as being present in the nucleus. 13. This technique has been followed in our research work and it proved to be very reliable. 14. They were offered a very interesting work which could result in a new discovery. 15. The method of preparation of oxygen by the decomposition of potassium chlorate was described in chapter 5. 16. Special mention must be made of the extensive research now being conducted in biochemistry. 17. The electrons in any one energy level were spoken of as if they all possessed exactly the same quantity of energy. 18. In

general the oxidation number is thought of as representing the net electrical charge on the atom. 9. These calculations can be fully relied on as they have been checked repeatedly. 20. The coefficient of heat transfer in any vaporator is considerably affected by the magnitude of the temperature drop, the rate of circulation and some other factors. 21. For many years it has been known that some substitution reactions of complex ions are hastened by light. 22. The reactions were followed by titration with a standard base. Methyl Red — Metylene Blue was used as indicator. 23. Platinum is attacked only slowly by fluorine. Copper and steel can be used as containers for the gas; they are attacked by it, but become coated with a thin layer of.

Uyga vazifa:

So’zlarni yodlash.

Mashqlar ishlash

МУСТАҚИЛ ТАЪЛИМ МАШҒУЛОТЛАРИ

Мустақил таълимни ташкил этишнинг шакли ва мазмуни

Чет тили фанидан мустақил ишларининг мақсади - талабаларнинг касбий коммуникатив фаолиятини шакллантириш ва ривожлантириш, уларнинг ижодий фаолиятини ўстириш, ва чет тили устида мустақил ишлай олиш малака ва кўникмаларини ҳосил қилиш ва ривожлантиришдан иборат. Ушбу умумий мақсадга эришиш учун қуйидаги бир неча вазифаларни бажариш назарда тутилади:

- талабаларнинг тил тайёргарлик сифатини ошириб бориш, тил ва мутахассислик бўйича адабиётлар устида ишлай олиш кўникмаларини шакллантириш ва ривожлантириш;
- ўз касбий билим ва малакаларини кейинчалик мустақил тўлдириб ва янгилаб туриш эхтиёжларини яратиш ва сақлаб қолиш, чет тили бўйича яратилган малака ва кўникмаларни ўстириб, ривожлантириб бориш;
- талаба бажариши керак бўлган ишларни тўғри ташкил қилиш, келиб чиқадиган қийинчиликларни олдиндан била олиш, ҳис этиш ва уларни бартараф қилиш йўлларини топа олиш.

Мустақил таълим учун тавсия этиладиган мавзулар:

1. Ўзи ҳақида тўлиқ маълумот бериш;
2. Орзуимдаги уй;
3. Спорт;
4. Машҳур кишилар
5. Менинг университетим;
6. Байрамлар;
7. Менинг мутахассислигим.
8. Етакчи университетлар
9. Буюк Британия, Америка Қўшма штатлари
10. Ўзбекистон.
11. Инглиз тилида гапирувчи давлатлар
12. Мустақллик куни.
13. Буюк Британия давлат тизими.
14. Ўзбекистон давлат тизими.
15. Давлатлар таьлим тизими.
16. Давлатлар маданияти ва тарихи.
17. Ўзбекистон музейлари.
18. Дунёнинг машҳур университетлари ва бошкалар

V-семестр 16 соат

№	Theme	Hours
16.	Profession skills.	4

17.	Life and creativity of famous people in the studied scince.	6
18.	News of the iearning scince.	6

VI-семестр 15 соат

№	Theme	Hours
19.	Working on the text “Professionality and speciality”.	7
20.	Actual problems on speciality.	8

Тавсия этилаётган мустақил ишларнинг мазмуни

Талабаларнинг мустақил ишлари нутқ фаолиятининг қуйидаги турлари бўйича ташкил қилинади.

Ўқиш: (танишиб чиқиш, синчиклаб, қараб чиқиш), ёзув, тинглаб тушуниш ва гапириш;

Тинглаб тушуниш: ҳажми турлича бўлган аудио- ва видео матнларни тинглаб тушуниш, саволларга жавоб бериш, гапириб бериш, аннотация ёза олиш;

Гапириш: талабаларнинг диалогик ва монологик нутқлари бўйича мустақил ишлари аудиторияда ўргатилган матнлар, ўқув материаллари асосида ташкил қилинади. Гапириш бўйича мустақил иш сифатида мавзу асосида маълумот тайёрлаш, матн мазмунини гапириб бериш, ўрганилган лексик материаллар асосида ҳикоялар тузиш, берилган муаммоли масала ва вазиятларни муҳокама қилиш каби топшириқлар бериш мумкин. Гапириш кўникмаларини ривожлантириб бориш учун мультимедиа дастурларини ва он-лайн технологияларини қўллашга асосий эътибор қаратилади;

Ўқиш: талаба ўрганаётган соҳасига оид адабиётлар билан танишиб чиқиши ва ўзи учун қизиқарли ва керакли бўлган ахборотни тушуниши, публицистик, илмий-оммабоп ижтимоий-сиёсий адабиётларни ўқиши ва керакли ахборотни олиши лозим. Машғулотларда юқорида айтилган малака ва кўникмаларни шакллантириш ва ўстириш жуда мураккаб бўлганлиги учун уларни мустақил иш жараёнида синчиклаб, кўз югуртириб, қараб чиқиб ўқиш турлари орқали ташкил қилинади. Ушбу ўқиш турларини назорат қилиш-матнни бутунлай таржима қилиш ёки унинг танлаб олинган қисмларини таржима қилиш билан амалга оширилади.

Танишиб чиқиб ўқиш мустақил иш тури сифатида уйда ўқиш шаклида олиб борилади. Ўқишнинг бу тури учун аутентик ёки адаптация қилинган адабий, илмий-оммабоп адабиёт танлаб олинади. Текшириш шакллари: ўқиганини мазмунини тушунганлиги бўйича савол-жавоб ишлари, ажратиб олинган масалалар бўйича ахборот олиш, бахс-мунозаралар ўтказиш, ахборотга режа тузиш ва ҳ.к.

Қараб чиқиб, қидириб топиш учун ўқиш. Ўқишнинг бу турида оммавий-сиёсий, публицистик матнлар, газета ва журнал материаллари берилади ва ҳар бир дарсда қисқача ахборот олинади. Талаба битта газета мақолалари асосида ахборот беради ёки мавзу бўйича бир қанча газета ва журналлардан ахборот тайёрлайди.

Ёзув. Ёзув бўйича мустақил иш ўз ичига ўрганилаётган тилда фикрни баён қила олиш ишларини олади. Бунда мустақил иш мазмунига қуйидагилар киради:

- аннотация, реферат, резюмелар туза олиш;
- оғзаки равишда нутқ ҳосил қилиш учун режа ёки тезис тузиш;
- турли хатлар, табрикнома, таклифлар, иш юзасидан хатлар туза олиш;
- ўқишга ва ишга қабул юзасидан аризалар ёза олиш;
- соҳага оид турли ҳужжатларни тўлдириш;
- баён, иншо, эсселар ёза олиш; касби бўйича иш юритиш ишларини (ёзувларини) олиб бориш.

Ўқиб таржима қилинган материаллар курс ишлари ва рефератларда қўлланилади.

САМООБРАЗОВАНИЕ

V-семестр 16 часов

№	Theme	Hours
16.	Profession skills.	4
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VI-семестр 15 часов

№	Theme	Hours
19.	Working on the text “Professionality and speciality”.	7
20.	Actual problems on speciality.	8

Самообразование с использованием научной и справочной литературы позволяет формировать у студентов навыки профессионального прочтения текста, вырабатывает умение анализировать различные аспекты структуры и образной системы произведения.

В процессе выполнения самообразования вырабатываются практические умения и навыки: овладеть речью, критическим мышлением, творческими способностями, написанием.

Рекомендуемые темы самостоятельной работы и самообразования должны быть разработаны в соответствии с темами практических занятий, направлены на выработку умения анализировать и исследовать языковые факты.

Предлагаемые формы работы – реферирование и подготовка слайд-презентаций.

ГЛОССАРИЙ

English	Ўзбек	Русский
semipolary	ярим қутбли	семиполяр
covolent bond	ковалент боғ	ковалентная связь
hydrogen bond	водород боғ	водородная связь
coordination bond	координацион боғ,	координационная связь
electron tendency	электронга мойиллик	сродство к электрону
ionization energy	ионланиш энергияси	энергия ионизации
polysaccharides	полисахаридлар	полисахариды
length chemical bond	кимёвий боғнинг узунлиги	длина химической связи
bronsted–Lowry acid	Бренстенд-Лоури кислотаси	Кислота Бренстенд-Лоури
bronsted–Lowry base	Бренстенд-Лоури асоси	Основание Бренстенд-Лоура
Inductive effect	индукцион таъсир	индукционное влияние
mezomer effect	мезомер таъсири	мезомерные влияние
Bromohydrin	бромгидрин	бромогидрин
Carboxylation	карбоксиллаш	карбоксилирование
Carboxylic acid	карбон кислота	карбоновые кислоты
Conformer	конформер	конформер
Conjugate addition	туташ бирикиш	сопряженного присоединения
Claisen condensation reaction	Кляйзен конденсация реакцияси	Реакции конденсации Кляйзена
Decarboxylation	Декарбоксиллаш	Декарбоксилирование
Mechanisms of organic reactions	органик реакцияларнинг механизмлари	механизми органических реакций
Meisenheimer complex	Мейзенгеймер комплекс	Комплекса Мейзенгеймера
Molozonide	молозонид	молозонид
configuration	конфигурация	конфигурация
isomerism, metamerism	изомерия, метамерия	изомерия, метамерия
tautomerism	таутомерия	таутомерия
stereochemistry	Стереохимия	стереохимия

conformation	конформация	конформация
Vinyl group	винил гуруҳ	винилная группа
Triple bond	учбоғ	тройная связь
Ziegler–Natta catalyst	Циглер Натта катализатори	Катализатор Циглера-Натта
Williamson ether synthesis	Вильямсон эфир синтези	Реакции Вильямсона
nucleophilic substitution	нуклеофиль алмашиниш	нуклеофилная замешения
isomers	Изомерлар.	изомеры
homologues	Гомологлар	гомологи
heyminal	Геминал	геминал
carbocation	Карбокатион	карбокатион
carbanion	Карбанион	Карбанион
homolysis	Гомолиз	гомолиз
heterolis	Гетеролиз	гетеролиз
Hydroboration	Гидроборлаш	Гидроборирование
Hydration	гидратланиш	гидратация
enantiomer	Энантиомер	энантиомер
Diastereomer	Диастереомер	Диастереомер
Diels–Alder cycloaddition reaction	Дильс-Альдер циклобирикиш реакциялари	Реакции Дильс-Алдерса
nucleophile	нуклеофиль	нуклеофиль
nucleophility	Нуклеофиллик	нуклеофилность
hydrogenation	Гидрогенлаш	гидрогенизация
hydration	Гидратлаш.	гидратация
dien	Диен	Диен
dienophile	Диенофил	Диенофиль
Sulfonation	сульфолаш	сульфирирование
chromatography	Хроматография	Хроматография
reactivity	Реакцион қобилият	реакционная способность
regioselectivity	Региоселективлик	Региоселективность
stereoselectivity	Стереоселективлик	Стереоселективность
Grignard reagent	Гриньяр реагенти	Реагент Гриньяра
Epoxide	Эпоксид	Эпоксид
The rules of Popov	Попов қоидаси	Правила Попова
Aldona-crotonic condensation	Альдол-кротон конденсацияси.	Альдона-Кротоновая конденсация
etherification	Этерификация	Этерификация
Transesterification	Переэтерификация	Переэтерификация
Acid halide	Галогенангидрид.	Галогенангидрид

Acid anhydride.	Кислота ангидриди.	Ангидрид кислоты
Acetylide anion.	Ацетилид анион.	Ацетилид анион
Adams catalyst	Адамс катализотари.	Катализатор Адамса.
1,2-Addition	1,2-бирикиш.	1,2-присоединения
Allyl group	Аллил гуруҳ.	Аллильная группа
Aldehyde	Альдегид.	Альдегид.
Amide.	Амид.	Амид.
Amine	Амино бирикмалар.	Амин соединение
Fisher-Speyer reaction	Фишер-Шпейер реакцияси	Реакция Фишера-Шпийера
Mukoyama reaction	Мукояма реакцияси	Реакция Мукояма
Yamaguchi reaction	Ямагучи реакцияси	реакция Ямагучи
Prins reaction	Принс реакцияси	Реакцяия Принса
Prev reaction	Прев реакцияси	Реакция Прева
Woodward reaction	Вудворт реакцияси	Реакция Вудворта
Wacker-process	Вакер жараён	Вакер процесс
Reaktion cross-connection	Кросс бирикиш реакцияси	Реакция Кросс присоеденения
Reaction metatezisa	Метатезис реакцияси	Реакция Метатезиса
Reaction Curry House	Кори-Ҳаус реакцияси	Реакция Кори- Хауса

ИЛОВАЛАР

5.1. ФАН ДАСТУРИ

ЎЗБЕКИСТОН РЕСПУБЛИКАСИ
ОЛИЙ ВА ЎРТА МАХСУС ТАЪЛИМ ВАЗИРЛИГИ

Рўйхатга олинди:
№ БД-108
2017 йил "12" 08

Олий ва ўрта махсус таълим вазирлиги
2017 йил "24" 08

ХОРИЖИЙ ТИЛ
(инглиз тили)
ФАН ДАСТУРИ
(Барча бакалавриат йўналишлари учун)

Тошкент – 2017

Ўзбекистон Республикаси Олий ва ўрта махсус таълим вазирлиги 2017 йил "14" 08 даги "603" -сонли буйруғи билан фан дастури рўйхати тасдикланган.

Фан дастури Олий ва ўрта махсус, касб-хунар таълими йўналишлари бўйича Ўкув-услубий бирлашмалар фаолиятини Мувофиклаштирувчи кенгашининг 2017 йил "18" 08 даги 4 - сонли баённомаси билан маъкулланган.

Фан дастури Ўзбекистон Миллий университетида ишлаб чикилди.

Тузувчилар:

Бабаева С.Р. - ЎзМУ "Инглиз тили" кафедраси мудири, ф.ф.н., доцент;

Болибекова М.М. - ЎзМУ "Инглиз тили" кафедраси катта ўкитувчиси;

Назарова Д.О. - ЎзМУ "Инглиз тили" кафедраси катта ўкитувчиси.

Такризчилар:

Джумабаева Ж.Ш. - ЎзМУ «Инглиз филологияси» кафедраси мудири, ф.ф.д., доцент;

Икромхонова Ф.И. - Тошкент тўкимачилик ва енгил саноат институти "Тиллар" кафедраси мудири, доцент.

Фан дастури Ўзбекистон Миллий университети Кенгашида кўриб чикилган ва тавсия килинган (2017 йил "14" 07 даги 6 - сонли баённома).

I. Ўқув фанининг долзарблиги ва олий касбий таълимдаги ўрни

"Хорижий тил" фани олий маълумотли кадрларни тайёрлаш жараёнининг таркибий қисми бўлиб, замонавий мутахассисларни касбий фаолияти ва кундалик ҳаётида хорижий тилдан фойдаланиш учун уни ўзлаштиришга қаратилган. Олий таълимгача бўлган таълим босқичларида орттирилган билимларга таянган ҳолда олий таълим муассасасида талаба хорижий тилни янада мустаҳкам, чуқурроқ ва танлаган касбига йўналтирилган ҳолатда ўзлаштириши кўзда тутилади.

Инглиз тили фани ишлаб чиқариш жараёни билан бевосита боғланмаган бўлсада талабалар инглиз тилини керакли даражада ўрганиши ёрдамида ихтисослик фанларининг хорижий манбааларидан тўғридан тўғри фойдаланиш, келгусидаги касбий фаолиятида жаҳондаги илғор техника ва технологиялар, илмий ютуқлар ва соҳа янгиликларидан бевосита хабардор бўлишига имкон яратади.

II. Ўқув фанининг мақсади ва вазифаси

Инглиз тили фанининг мақсади - талабаларнинг кўп маданиятли дунёда касбий, илмий ва маиший соҳаларда фаолият юритишларида коммуникатив компетенцияни шакллантиришдан иборат.

Фанининг вазифалари:

– нутқий компетенцияни ривожлантириш;

- оғзаки ва ёзма нутқда соҳавий терминларни самарали қўллаш кўникмаларини шакллантириш;

– ихтисосликка оид матн тузиш, уни таҳрир ва таҳлил қилиш малакаларини ҳосил қилиш.

Талабаларнинг билим, кўникма ва малакаларига қўйиладиган талаблар:

– хорижий тиллардаги гап тузилиши ва гапдаги сўзларнинг тартиби тўғрисида;

– хорижий тилларда сўзларининг услубий қўлланиши тўғрисида ***тасаввурга эга бўлиши;***

– хорижий тилларнинг товуш хусусиятларини, нутқ товушлари ва сўзларни тўғри талаффуз қилишни;

– хорижий тиллар синтаксиси талаблари асосида мазкур тилларда тўғри гап ва боғланган матн тузишни;

– касбий терминологияни, оғзаки ва ёзма нутқ хусусиятларини ***билиши ва улардан фойдалана олиши;***

– ўз соҳаси доирасида хорижий тилда фикр ифодалай олиш, илмий техник адабиётлардан фойдалана олиш ***кўникмасига эга бўлиши керак.***

III. Асосий қисм (амалий машғулотлар)

Нутқ мавзулари:

Кундалик мавзу (ўзи ҳақида, оиласи ҳақида, иш куни, севган машғулоти, бўш вақтни ўтказиши ва ҳоказо).

Ижтимоий мавзу (атроф-мухит, маиший ва касбий йўналишда ижтимоий муносабат).

Таълим мавзуси (ўқув муассасаси, ўқув қуроллари ва унга муносабат, ихтисослик фанларининг ҳозирда ўқитилиши ва ҳоказо)

Ижтимоий маданий (Ўзбекистон Республикаси ва тили ўрганилаётган мамлакатнинг тарихий, географик, иқлимий, маданий, маиший хусусиятлари).

Касбга йўналтирилган мавзу (ўрганилаётган ихтисослик тарихи, йўналишлари, соҳанинг буюк намоёндалари, долзарб муаммолари, касбий этика ва ҳоказо).

3.1. Умумий босқич

Нутқ компетенцияси

Босқичнинг асосий мақсади:

– узлуксиз таълим тизимининг аввалги босқичлари (умумий ўрта таълим мактаблари, академик лицей ва касб-ҳунар коллежлари)да талабалар инглиз тилида эгаллаган малака ва кўникмаларини коррекция қилиш ва тенглаштириш;

– талабаларни нутқ фаолияти турлари бўйича касбий мулоқотга тайёрлашдан иборат.

Тинглаб тушуниш:

– маъруза, тақдимот ва мунозаралар, радио ва телевидение эшиттиришлари, янгиликлар, интервьюлар, ҳужжатли фильм ва шу каби оғзаки матнлар;

– реклама ва эълонлар;

– тил соҳиблари нутқ ёзувлари (бадиий, ҳужжатли фильмлар, оммавий чиқиш ва ҳоказо);

– тил соҳибларининг ижтимоий мавзулардаги ўзаро суҳбати;

– тингланган ахборотнинг асосий мақсади, тўлиқ мазмунини тинглаб тушуниш малака ва кўникмаларини ривожлантириш.

Гапириш:

Диалог нутқ

– ижтимоий мавзуларда суҳбат ва норасмий диалог;

– касбий ёки бошқа мавзуларда расмий ва норасмий мунозаралар;

– мунозарани бошқариш, интервью, музокаралар ва телефон орқали мулоқот олиб бориш.

Монолог нутқ

– ихтисосликка оид мавзуларда маъруза тайёрлаш ва ўқиш;

– мунозара, далил ва исботларни олга суриш, фикрни асослаб бериш;

– реклама ва махсус мавзуларда тақдимот тайёрлаш ҳамда чиқиш қилиш;

– маълумотларни умумлаштириш, мақолалар ёзиш, муҳокама қилиш.

Ўқиш:

– танишув ўқиш, кўз югуртириб ўқиш ва синчиклаб ўқиш кўникма ва малакаларини ривожлантириш;

– хат-хабар, ёзишмалар ва электрон почтани ўқиш;

– махсус материалларни ўзида акс эттирган аутентик матнларни ўқиш;

– махсус сўз ва терминларга эга матнларни, илмий ва касбга оид адабиётларни, электрон манбалар ва матбуот материалларини ўқиш.

Ёзма нутқ:

– турли ёзишмалар, хат-хабарлар ва махсус доклалар (эслатма CVs ва хоказо) ёзиш;

– эссе, баён, резюме, талқинот иши (мақолалар, битирув малакавий ишлар) ёзиш.

3.2. Касбга йўналтирилган боскич

Касбга йўналтирилган боскичнинг асосий максади:

– нутк турлари бўйича касбий соҳада инглиз тилини амалий эгаллаш;

– талабани ижодий шахс сифатида ривожлантириш;

– соҳа бўйича адабиётларни таржима қилиш малака ва кўникмаларини ривожлантириш.

Тинглаб тушуниш:

– касбга йўналтирилган аутентик материалларни бир марта эшитиб асосий мазмунини тушуниш ва зарур ахборотни олиш;

– кундалик воқеалар хақида янгиликлар, репортажларни тушуниш, фильм қахрамонлари нуткини тушуниш.

Гапириш:

Диалогик нутқ

– тил соҳиблари билан эркин мулоқотда бўлиш ва касбий мавзулара ўз фикр ва мулоҳазаларини исботлаб бериш;

– суҳбатни бошлаш ва тугатишни билиш, суҳбатдошига таклиф ва маслахат бериш, саволларига жавоб бериш, ахборот алмашиш, мухокама қилинаётган далилларни аниқлаштириш, ўқиган ёки эшитганларини мухокама қилиш;

– матн асосий мазмунини ифодаловчи лексик ва синтактик қурилмаларга асосланиб гапириб бериш;

– ассоциатив тафаккурга асосланиб мулоҳаза, танқид, баҳолаш далиллар билан исботлаш орқали ўз нуткини тузиш;

– риторик характерга эга диалог нутк малакаларини такомиллаштириш;

– касбий мулокотлар, конференция, симпозиум, учрашув ва мунозараларда катнашиш учун нутк фаолияти, кўникма ва малакаларини такомиллаштириш.

Монологик нутқ

– долларб муаммо юзасила барча "Тарафлар" ва "Карши" далилларни келтирган холда ўз фикрини баён килиш.

– тинглаган ва ўқиган матн мазмунини гапириш;

– мазмунга баҳо бериш.

– ўрганилган мавзулар бўйича ахборот бериш;
– ўқиган матнни таҳлил қилиш ва шарҳлаш;
– ўқиган ёки тинглаган матнни қисқача мазмунини баён этиш;
– ўрганилган мавзуда чиқиш қилиш;
– ижтимоий – сиёсий матнларни ўқиб шарҳлаб бериш.

Ўқиш:

Танишув ўқиш

– матнни луғатсиз, берилган савол ёки умумий мазмунини тушуниш мақсадида ўқиш;
– мати: 10% гача нотаниш сўз бўлган илмий-оммабоп, ижтимоий-сиёсий, махсус бадиий матнлар;
– мати мазмунини чет тилида ёки она тилида сўзлаб бериш, параграфларни номлаш, тест топшириш.

Синчиклаб (ўрганиб) ўқиш

– матнни асосий ахборотни ажратиб олган ҳолда мазмунини тўлиқ ва аниқ тушуниб ўқиш.

Ўқиш тезлиги, ҳажми:

– луғатдан фойдаланиб 1600 босма белгили матнни 1,0 академик соатда ўқиш;
– мати: махсус, илмий оммабоп 12% гача нотаниш сўзга эга бўлади.

Кўз югуртириб ўқиш

– мати мазмуни хусусиятларини аниқлаш;
– зарур ахборотни матндан топиш;
– сўз (мати) маъно мазмунини контекст асосида фаҳмлаб олиш;
– матндаги бирламчи (асосий) иккинчи даражали ахборотни ажратиш;
– мати калит сўзларини ажрата олиш;
– мати қисмларига сарлавҳа қўйиш.

Ёзма нутқ:

– касбга йўналтирилган доирада шаклланган малакаларни такомиллаштириш;
– реферат, аннотация ёзиш техникасини такомиллаштириш;
– ҳужжатларни расмийлаштиришни билиш (тузилиши, услуби, ҳужжат тили) ва у асосида ҳужжатларни намунага қараб, схемага кўра, клише ва фразаларни қўллаб, ахборотни ҳисобга олиб, иш юритиш вазиятлари талабларига мос равишда расмийлаштириш;
– берилган мавзуда баён, эссе, резюме тузиш, соҳага оид алоҳидаликлар бўйича реферат ёзиш.

3.3. Грамматик компетенция

Актив грамматик минимум:

– от, отларда сон, келишик , артикл;
– сифат , сифат даражалари;
– олмош;

– феъл;
– мажҳуллик нисбати;
– дарак, сўроқ, инкор содда гапларнинг қўлланилиши;
– гапларда сўз тартиби;
– сўроқ гаплар;
– буйрук майлидаги инкор гаплар, қўшма тўлдирувчининг қўлланилиши;
– шарт майлининг қўлланилиши,
– and, but боғловчили қўшма гапларни қўлланилиши;
– if, that because, when, before, as soon as, till, until, after боғловчили эргашган қўшма гапларни қўлланилиши;
– боғловчили эргашган қўшма гапларнинг барча турларини қўллай олиш;
– иборали феълларни қўлланилиши.

Пассив грамматик минимум:

– герундий, сифатдош, равишдошли қурилмаларнинг ишлатилиши;
– герундий, сифатдош, равишдошли қурилмаларнинг ясалиши.

3.4. Сўз ясаш минимуми

Талаба янги нутқий шаклларда ўрганилаётган сўз ясаш моделлар бўйича ясалган мураккаб сўз ва нотаниш ясама сўзларнинг маъноларини мустақил аниқлай олиш лозим. Қуйидаги сўз ясаш моделларини такрорлаш лозим: v+er=n. двигател белгиси Fto design - лойиҳалаш -designer - лойиҳачи; adj+ness=n (hard - қаҳрли - hardness -қаҳрлилик); v+ing=n (to varn - огоҳлантирмоқ, varning-огоҳлантириш); *n(fil+adj* (power - куч, powerful - бақувват); adj+ish=adj (damp - нам, dampish - намчил) adj+ly=adv (firm - қаттиқ - Firmly - қаттиқ); un+adj=adj (important - муҳим, unimportant - номуҳим).

Олдин талабалар ўрганган қуйидаги сўз ясаш моделлари ҳам ўзлаштирилиши зарур. V+er=n тузилишидаги ишлаб чиқариш қуроли, асбоб, қурилма ва ҳ.к. ни билдиради (to heat-иситиш - heater - иситгич); v+able=adj (to drink-ичмоқ-drinkable - ичиладиган); adj+ire=v Fcircual - думалоқ, circulire - думалоқлаш, adj+en=v (fast-қаттиқ-to fasten-қаттиқланиш); dis+v=v (to approve - маъқуллаш - to disapprove-маъқулламаслик); n+n=n (a steam pipe-буғ қувури; конверсия бўйича мослаштирилган ва рус тилида мунтазам тузилиш - семантик мосликка эга феъллар.

Талаба қуйидаги сўз ясаш моделларини билиши ва улар асосида нотаниш ясама сўзларнинг конуний маъносини мустақил англай олиши лозим; adj+ity=n (acid-нордон - acidity - нордонлик); v+ment=n (to treat - ишлов бермоқ - treatment - ишлов); (grain - дон - grainy - донли); n+ed=adj (motor - мотор - motored - мотор қўйилган); n+a]=adj Fcoast veper - coastal-қирғоққа тегишли; v+ent=adj)to differ-фарқланмоқ -different — фаркли; adj+ify=v - humid - намли - to humidify -намламоқ (n+ate-v (fraction - фракция to fracinate - моддани алоҳида фракцияларга бўлмоқ n+ize=v (rubber -резина to tubberize - резинлаш); d+v=v (to clutch - уламоқ; to declutch -ўмоқ]; re+v=v (to colour - бўямоқ - to recolour - янги рангга бўямоқ); over+v=v (to heat - иситмоқ - to overheat - қайта

иситмок); en+adj=v -large - катта to enlarge - катталаштирмок; en+n=v (circle - доира - to^ncircle - доирага олмок3; n+n=v (a boiler - room қозонхона); a'dj+n=n (a loid - speaker - овозни баландлатувчи мосламалар); adj+adj=adj Fdark-blue-зангори; n+adj-adj (heat-stable-иссикликка чидамли, рус тилида мунтазам структура=семантик мосликка эга бўлмаган феъл ва отлар конверсияси.

IV. Амалий машғулотлар бўйича кўрсатма ва тавсиялар

Юкори курсларда ўкув фани сифатида инглиз тили дарсларидан касбий максадларда уни амалда қўллашга ўтиш бўйича зарур тушунчалар берилиши керак. Олдига қўйилган максадга эришишда талабалар:

а) махсус фанларни ўрганишда инглиз илидаги адабиётларни ўкиш малакасига эга бўлиш;

б) курс ишлари ва бакалавр битирув малакавий ишларини инглиз тилида ёзишлари мумкин;

в) инглиз тилида ўтказиладиган конференцияларда катнашиши мумкин;

г) инглиз тилида маъруза ва маълумотлар тайёрлашлари мумкин.

Инглиз тили дарсларида қўлланиладиган топшириклар талабаларнинг фикрлаш фаолиятини ривожлантиришга ёрдам бериб, махсус фанларни ўрганишда хам зарурий фикрлаш фаолиятини шакллантириш учун замин яратади.

Инглиз тили фанини ўкитиш жараёнида таълимнинг замонавий интерфаол усулларидан, педагогик ва ахборот-коммуникация технологияларидан кенг фойдаланилади. Амалий машғулотларда ақлий хужум, кластер, блиц-сўров, кичик гурухларда ишлаш, инсерт, презентация, кейс стади каби усулларнинг мавзуга мос танланиши ва қўлланилиши дарс самарасини оширишга катта хисса қўшади.

Нутқ фаолияти турлари устида ишлаш учун вакт таксимоти

Қўйилган максадларга эришиш учун хар бир дарсда нутқ фаолияти турлари куйидаги нисбатда бўлиши максадга мувофик:

тинглаб тушуниш - 25%;
гапириш - 30%;
ўкиш - 25%;
ёзув - 20%.

V. Мустакил таълимни ташкил этишнинг шакли ва мазмуни

Инглиз тили фанидан мустакил ишларининг максади талабаларнинг касбий коммуникатив фаолиятини шакллантириш ва ривожлантириш, уларнинг ижодий фаолиятини ўстириш, ва инглиз тили устида мустакил ишлай олиш малака ва кўникмаларини хосил килиш ва ривожлантиришдан иборатдир.

Талабаларнинг мустакил ишлари нутк фаолиятининг куйидаги турлари бўйича ташкил килинади.

7. Менинг мутахассислигим.
8. Етакчи университетлар.
9. Буюк Британия, Америка қўшма штатлари.
10. Ўзбекистон.
11. Инглиз тилида гапирувчи давлатлар.
12. Мустақиллик куни.
13. Буюк Британия давлат тизими.
14. Ўзбекистон давлат тизими.
15. Давлатлар таълим тизими.
16. Давлатлар маданияти ва тарихи.
17. Ўзбекистон музейлари.
18. Дунёнинг машхур университетлари ва бошкалар.

VI. Асосий ва қўшимча ўкув адабиётлар хамда ахборот манбалари

Асосий адабиётлар

1. Дудкина Г. А. и др. English for business men.1 кисм, Тошкент-2000.
2. Кудрявцева О. Е. и др. English for businessmen. 2- кисм.Тошкент-2000.
3. Абдалина Е. А. "Инглиз тили дарслиги". Тошкент -2000 й.
4. Бонк Н. А. Учебник английского языка. Бишкек-1997.
5. Саттаров Т.К. Английский для студентов-юристов (1 часть). Т.ТГЮИ. 2005 й.

Қўшимча адабиётлар

1. Каримов И.А. Юксак маънавият – енгилмас куч. – Т.: Ўзбекистон- 2008.
2. Мирзиёев Ш.М. Эркин ва фаровон, демократик Ўзбекистон давлатини биргаликда барпо этамиз. Т-2016
3. Мирзиёев Ш.М. Танкидий тахлил катъий тартиб интизом ва шахсий жавобгарлик- хар бир рахбар фаолиятининг кундалик коидаси бўлиши керак. Т-2016
4. Мирзиёев Ш.М. Буюк келажагимизни мард ва олижаноб халкимиз билан бирга курамиз. Т-2017
5. Бабаева С.Р. Инглиз тили. Биология факультети талабалари учун ўкув кўлланма. Тошкент - 2015
6. Болибекова М.М. Инглиз тили кискача грамматикаси ўкув кўлланма. ЎзМУ. 2008.
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10. Качалова К. Н. Грамматика английского языка. Бишкек-2007
11. John& Liz Soars «Headway» Oxford University Press -1999
12. Adrian Tennant «Straightforward» Macmillian
13. Обидова Д. Englishreader.Тошкент- 1998.
14. Бабаева С.Р. The science of life Тошкент- 2014.

V.2 ISHCHI O’QUV DASTURI

ЎЗБЕКИСТОН РЕСПУБЛИКАСИ

ОЛИЙ ВА ЎРТА МАХСУС ТАЪЛИМ ВАЗИРЛИГИ

АНДИЖОН ДАВЛАТ УНИВЕРСИТЕТИ

"ТАСДИҚЛАНДИ"

Ўқув ишлари бўйича проректор

_____ б.ф.ф.доц. А.Маматюсупов

2019 йил "31" август

"ХОРИЖИЙ ТИЛ"

(Инглиз тили)

фанининг

ИШЧИ ЎҚУВ ДАСТУРИ

(3 курс)

Билим сохаси: **100000 - Гуманитар соха**

Таълим сохаси: **140000 – Табиий фанлар**

Таълим йўналишлари: 5140500 –Кимё

Умумий ўқув соати -303 соат

Шу жумладан:

Амалий машғулотлар –216 соат

(1-семестр-36, 2-семестр-36, 3-семестр-36, 4-семестр-36, 5-семестр-36, 6-семестр-36)

Мустақил таълим соати– 87 соат

(1-семестр-14, 2-семестр-14, 3-семестр-14, 4-семестр-14, 5-семестр-16, 6- семестр-15)

Андижон-2019й.

Фаннинг ишчи ўқув дастури Ўзбекистон Республикаси Олий ва ўрта махсус таълим вазирлиги 2017 йил "24" августдаги 603 сонли буйруғи билан (буйруқнинг 1 иловаси) тасдикланган "Хорижий тил" фани дастури асосида тайёрланган.

Фан дастури Андижон давлат университети Кенгашининг 2019 йил "31" августдаги "1" сонли баёни билан тасдикланган.

Тузувчилар:

Д.Рустамов– АндДУ, Факультетлараро чет тиллар (аниқ ва табиий фанлар) кафедраси мудири

Э.Курбанов– АндДУ, Факультетлараро чет тиллар (аниқ ва табиий фанлар) кафедраси ўқитувчиси

М.Ахунов – АндДУ, Факультетлараро чет тиллар (аниқ ва табиий фанлар) кафедраси ўқитувчиси

Д.Умрзаков – АндДУ, Факультетлараро чет тиллар (аниқ ва табиий фанлар) кафедраси ўқитувчиси

Тақризчилар:

М.Абдувалиев – АндДУ, "Инглиз тили ва адабиёти" кафедраси доценти, филология фанлари номзоди.

С.Солижонов - АндДУ, "Инглиз тили фонетикаси" кафедраси мудири, филология фанлари номзоди.

АндДУ Чет тиллар факультети декани:
2019 йил "31" 08 А.Маматқулов

Факультетлараро чет тиллар (аниқ ва табиий фанлар) кафедраси мудири:
2019 йил "31" 08 Д.Рустамов

I. Ўқув фанининг долзарблиги ва олий касбий таълимдаги ўрни

“Хорижий тил” фани олий маълумотли кадрларни тайёрлаш жараёнининг таркибий қисми бўлиб, замонавий мутахассисларни касбий фаолияти ва кундалик ҳаётида хорижий тилдан фойдаланиш учун уни ўзлаштиришга қаратилган. Олий таълимгача бўлган таълим босқичларида орттирилган билимларга таянган ҳолда олий таълим муассасасида талаба хорижий тилни янада мустаҳкам, чуқурроқ ва танлаган касбига йўналтирилган ҳолда ўзлаштириши кўзда тутилган. Инглиз тили фани ишлаб чикариш жараёни билан бевосита богланмаган булсада талабалар инглиз тилини керакли даражада урганиши ёрдамида ихтисослик фанларининг хорижий манбааларидан тўғридан тўғри фойдаланиш келгусидаги касбий фаолиятида жаҳондаги илғор техника ва технологиялар, илмий ютуқлар ва соҳа янгиликларидан бевосита хабардор бўлишига имкон яратади.

II. Ўқув фанининг мақсад ва вазифалари

Инглиз тили фанининг мақсади - талабаларнинг кўп маданиятли дунёда касбий, илмий ва маиший соҳаларда фаолият юритишларида коммуникатив компетенцияни шакллантиришдан иборат.

Фаннинг вазифалари:

- нутқий компетенцияни ривожлантириш;
- оғзаки ва ёзма нутқда соҳавий терминларни самарали қўллаш кўникмаларини шакллантириш;
- ихтисосликка оид матн тузиш, уни тахрир ва тахлил қилиш малакалрини ҳосил қилиш;

Талабаларнинг билим, кўнима ва малакаларига кўйиладиган талаблар:

- хорижий тиллардаги гап тузилиши ва гапдаги сўзларнинг тартиби тўғрисида;
- хорижий тилларда сўзларининг услубий қўлланиши тўғрисида *тасаввурга эга бўлиши;*
- хорижий тилларнинг товуш хусусиятларини, нутқ товушлари ва сўзларни тўғри талаффуз қилишни; •
- хорижий тиллар синтаксиси талаблари асосида мазкур тилларда тўғри гап ва боғланган матн тузишни;
- касбий терминологияни, оғзаки ва ёзма нутқ хусусиятларини *билиш ва улардан фойдалана олиши;*
- ўз соҳаси доирасида хорижий тилда фикр ифодалай олиш илмий техник алабиётлардан фойдалана олиш кўникмасига эга бўлиши керак.

III. Асосий қисм (амалий машғулотлар)

Нутқ мавзулари:

Кундалик мавзу (ўзи ҳақида, оиласи ҳақида, иш куни, севган машғулоти, бўш вақтни ўтказиши ва ҳоказо).

Ижтимоий мавзу (атроф-муҳит, маиший ва касбий йўналишда ижтимоий муносабат)

Таълим мавзуси (ўқув муассасаси, ўқув қуроллари ва унга муносабат, ихтисослик фанларининг хозирда ўқитилиши ва ҳоказо)

Ижтимоий маданий Ўзбекистан Республикаси ва тили ўрганилаётган мамлакатнинг тарихий, географик, иклимий, маданий, маиший хусусиятлари).

Касбга йуналтирилган мавзу (ўрганилаётган ихтисослик тарихи, йўналишлари соҳанинг буюк намоёндалари, долзарб муаммолари, касбий этика ва хоказо).

“Хорижий (инглиз) тил” фани бўйича амалий машғулотларнинг мавзулар ва соатлар бўйича тақсимланиши:

№	Мавзулар номи	Ажратилган соат		
		Жами	Амалий	Мустақ. таълим
I - семестр (амалий 36 соат, 24 соат мустақил таълим)				
1.	**Ижтимоий мавзулар** (атроф-муҳит, маиший масалалар, шахс ва касб психологияси, глобал муаммолар)	50	36	14
II - семестр (амалий 36 соат, 24 соат мустақил таълим)				
2.	**Ижтимоий-маданий мавзулар** (илмий ва соҳага оид вазиятларда маданий тафовутлар, дунё ва тили ўрганилаётган мамлакатларнинг маданий, ижтимоий хусусиятлари)	50	36	14
III- семестр (амалий 36 соат, 24 соат мустақил таълим)				
3.	**Таълим мавзулари** (таълим тизими, давомли таълим, маърузалар, мақола, тезис ва илмий ишлар ёзиш, ўқиш ва ўрганиш стратегиялари ва ҳ.к.)	50	36	14
IV- семестр (амалий 36 соат, 22 соат мустақил таълим)				
4.	**Интернет ва ахборот технологияларига оид мавзулар**. (жаҳон ва юртимиз миқёсидаги фан ва техника янгиликлари, ютуқлари, интернет тармоқларидан фойдаланиш)	50	36	14
V- семестр (амалий 36 соат, 24 соат мустақил таълим)				
5.	**Мутахассислик соҳасига оид мавзулар** (соҳа йўналишлари, долзарб мавзулари, масъулият, ҳужжатлар юритиш, касбий этика, музокаралар олиб бориш, мутахассислик соҳасидаги илмий ва амалий ютуқлар, инновацион ғоялар ва янгиликлар)	52	36	16
VI- семестр (амалий 36 соат, 22 соат мустақил таълим)				
6.	**Мутахассислик соҳасига оид мавзулар** (соҳа йўналишлари, долзарб мавзулари, масъулият, ҳужжатлар юритиш, касбий этика, музокаралар олиб бориш, мутахассислик соҳасидаги илмий ва амалий ютуқлар, инновацион ғоялар ва янгиликлар)	51	36	15
	Жами	**303**	**216**	**87**

3.1 Умумий босқич.
Нутқий компетенция

Босқичнинг асосий мақсади:

- узлуксиз таълим тизимининг аввалги босқичлари (академик лицей ва касб-ҳунар коллежлари)да талабалар хорижий тилда эгаллаган малака ва кўникмаларини коррекция қилиш ва тенглаштириш;
- талабаларни нутқ фаолияти турлари бўйича касбий мулоқотга тайёрлашдан иборат;

Тинглаб тушуниш:

- маъруза, тақдимот ва мунозаралар, радио ва телевидение эшиттиришлари, янгиликлар, интервьюлар, ҳужжатли фильм ва шу каби оғзаки матнлар;
- реклама ва эълонлар;
- тил соҳиблари нутқ ёзувлари (бадиий, ҳужжатли фильмлар, оммавий чиқиш ва ҳоказо);
- тил соҳибларининг ижтимоий мавзулардаги ўзаро суҳбати;
- тингланган ахборотнинг асосий мақсади, тўлиқ мазмунини тинглаб тушуниш малака ва кўникмаларини ривожлантириш.

Гапириш:

Диалог нутқ

- ижтимоий мавзуларда суҳбат ва норасмий диалог;
- касбий ёки бошқа мавзуларда расмий ва норасмий мунозаралар;
- мунозарани бошқариш, интервью, музокаралар ва телефон орқали мулоқот олиб бориш.

Монолог нутқ

- ихтисосликка оид мавзуларда маъруза тайёрлаш ва ўқиш;
- мунозара, далил ва исботларни олға суриш, фикрни асослаб бериш;
- реклама ва махсус мавзуларда тақдимот тайёрлаш ҳамда чиқиш қилиш;
- маълумотларни умумлаштириш, мақолалар ёзиш, муҳокама қилиш.

Ўқиш

- танишув ўқиш, кўз югуртириб ўқиш ва синчиклаб ўқиш кўникма ва малакаларини ривожлантириш;
- хат-хабар, ёзишмалар ва электрон почтани ўқиш;
- махсус материалларни ўзида акс эттирган аутентик матнларни ўқиш;
- махсус сўз ва терминларга эга матнларни, илмий ва касбга оид адабиётларни, электрон манбалар ва матбуот материалларини ўқиш.

Ёзма нутқ

- турли ёзишмалар, хат-хабарлар ва махсус докладлар (эслатма CVs ва ҳоказо) ёзиш;
- эссе, баён, резюме, тадқиқот иши (мақолалар, битирув малакавий ишлар) ёзиш.

3.2 Касбга йўналтирилган босқич

Касбга йўналтирилган босқичнинг асосий мақсади:

- нутқ турлари бўйича касбий соҳада чет тилини амалий эгаллаш;
- талабани ижодий шахс сифатида ривожлантириш;
- соҳа бўйича адабиётларни таржима қилиш малака ва кўникмаларини ривожлантириш;

Тинглаб тушуниш:

- касбга йўналтирилган аутентик материалларни бир марта эшитиб асосий мазмунини тушуниш ва зарур ахборотни олиш;
- кундалик воқеалар ҳақида янгиликлар, репортажларни тушуниш, фильм қаҳрамонлари нутқини тушуниш.

Гапириш:

Диалогик нутқ

- тил соҳиблари билан эркин мулоқотда бўлиш ва касбий мавзулара ўз фикр ва мулоҳазаларини исботлаб бериш;
- суҳбатни бошлаш ва тугатишни билиш, суҳбатдошига таклиф ва маслаҳат бериш, саволларига жавоб бериш, ахборот алмашиш, муҳокама қилинаётган далилларни аниқлаштириш, ўқиган ёки эшитганларини муҳокама қилиш;
- матн асосий мазмунини ифодаловчи лексик ва синтактик қурилмаларга асосланиб гапириб бериш;
- ассоциатив тафаккурга асосланиб мулоҳаза, танқид, баҳолаш далиллар билан исботлаш орқали ўз нутқини тузиш;
- риторик характерга эга диалог нутқ малакаларини такомиллаштириш;
- касбий мулоқотлар, конференция, симпозиум, учрашув ва мунозараларда қатнашиш учун нутқ фаолияти, кўникма ва малакаларини такомиллаштириш.

Монологик нутқ:

- долзарб муаммо юзасида барча “Тарафдор” ва “Қарши” далилларни келтирган ҳолда ўз фикрини баён қилиш;
- тинглаган ва ўқиган матн мазмунини гапириш;
- мазмунга баҳо бериш;
- ўрганилган мавзулар бўйича ахборот бериш
- ўқиган матнни таҳлил қилиш ва шарҳлаш;
- ўқиган ёки тинглаган матнни қисқача мазмунини баён этиш;
- ўрганилган мавзуда чиқиш қилиш;
- ижтимоий –сиёсий матнларни ўқиб шарҳлаб бериш.

Ўқиш:

Танишув ўқиш

- матнни луғатсиз, берилган савол ёки умумий мазмунини тушуниш мақсадида ўқиш;
- матн: 10 % гача нотаниш сўз бўлган илмий-оммабоп, ижтимоий-сиёсий, махсус бадиий матнлар;
- матн мазмунини чет тилида ёки она тилида сўзлаб бериш, параграфларни номлаш, тест топшириш.

Синчиклаб (ўрганиб) ўқиш

- матнни асосий ахборотни ажратиб олган ҳолда мазмунини тўлиқ ва аниқ тушуниб ўқиш.

Ўқиш тезлиги, ҳажми:

- луғатдан фойдаланиб 1600 босма белгили матнни 1,0 академик соатда ўқиш.

- матн**:** махсус, илмий оммабоп 12% гача нотаниш сўзга эга бўлади.

Кўз югуртириб ўқиш:

- матн мазмуни хусусиятларини аниқлаш;
- зарур ахборотни матндан топиш;
- сўз (матн) маъно мазмунини контекст асосида фаҳмлаб олиш;
- матндаги бирламчи (асосий) иккинчи даражали ахборотни ажратиш;
- матн калит сўзларини ажрата олиш;
- матн қисмларига сарлавҳа қўйиш.

Ёзма нутқ

Ёзма нутқ бўйича:

- касбга йўналтирилган босқичда шаклланган малакаларни такомиллаштириш;
- реферат, аннотация ёзиш техникасини такомиллаштириш;
- ҳужжатларни расмийлаштиришни билиш (тузилиши, услуби, хужжат тили) ва у асосида ҳужжатларни намунага қараб, схемага кўра, клише ва фразаларни қўллаб, ахборотни ҳисобга олиб, иш юритиш вазиятлари талабларига мос равишда расмийлаштириш;
- берилган мавзуда баён, эссе, резюме тузиш,соҳага оид адабиётлар бўйича реферат ёзиш.

3.3 Грамматик компетенция

Актив грамматик минимум

- от, отларда сон, келишик, артикл;
- сифат, сифат даражалари;
- олмош;
- феъл;
- мажхуллик нисбати;
- дарак, сўроқ, инкор содда гапларнинг қўлланилиши;
- гапларда *сўз* тартиби;
- сўрок гаплар;
- буйрук майлидаги инкор гаплар, қўшма тўлдирувчининг қўлланилиши;
- шарт майлининг қўлланилиши;
- and, but боғловчили қўшма гапларни қўлланилиши;

1. if, that because, when, before, as soon as, till, until, after боғловчили эргашган қўшма гапларни қўлланилиши;
2. боғловчили эргашган қўшма гапларнинг барча турларини қўллай олиш;
3. иборали феъларни қўлланилиши.

Пассив грамматик минимум:

4. герундий, сифатдош, равишдошли қурилмаларнинг ишлатилиши;
5. герундий, сифатдош, равишдошли қурилмаларнинг ясалиши.

3.4 Сўз ясаш минимуми

Талаба янги нутқий шаклларда ўрганилаётган сўз ясаш моделлар бўйича ясалган мураккаб сўз ва нотаниш ясама сўзларнинг маъноларини мустақил аниқлай олиш лозим. Қуйидаги сўз ясаш моделларини такрорлаш лозим: v+er=n двигател

белгиси Fto design - лойихалаш -designer - лойихачи; adj+ness=n (hard - каҳрли - hardness -каҳрлилик); v+ing=n (to varn - огохлантирмок, varning огоҳлантириш ; *n+-full=adj* (power - куч, powerful - бакувват); adj+ing=adj damp – нам damping - намчил) adj+ly=adv (firm - каттик - Firmly - каттик); un+adj (important мухим, unimportant - номухим).

Олдин талабалар уўганган қуйидаги ясаш моделлари ҳам ўзлаштирилиши зарур. V+er=n тузилишидаги ишлаб чиқариш қуроли, асбоб, қурилма ва х.к. ни билдиради (to heat-истиш - heater - иситгич); v+able=adj (to drink- ичмоқ-drinkable – ичиладиган) adj+ire=v circul - думалоқ, circulire - думалоклаш. adj+en=v (fast-каттик, fasten-қаттикланиш): dis+v=v (to approve – маъқуллаш to disapprove-маъқулламаслик); n+n=n \a steam pipe-буғ қувури; конверсия буйича «Юслаштирилган ва рус тилида мунтазам тузилиш - семантик мосликка эга феъллар.

Талаба қуйидаги сўз ясаш моделларини билиши ва улар асосида нотаниш ясама сўзларнинг қонуний маъносини мустақил англай олиши лозим; adj+ity=n (acid-нордон - acidity - нордонлик); v+ment= n (to treat - ишлов бермок - tieatment - ишлов): grain - дон – grainy-донли); n+ed=adj (motor - мотор - motored - мотор куйилган); n+al=adj (coast қирғоқ, coastal - қирғоққа тегишли); v+ent=adj (to differ - фарқланмоқ - different-фарқли); adj+ify=v (humid - намли - to humidify – намламоқ); n+ate=v (fraction - фракция to fracinate – моддани алоҳида фракцияларга бўлмоқ); n+ize=v (rubber-резина to rubberize – резиналаш); de+ v =v (to clutch - уламок; declutch – узмоқ); re+v =v (to colour - бўямоқ - to recolour – янги рангга бўямоқ); over +v =v (to heat - иситмоқ - to overheat – қайта иситмоқ); en+adj=v (large-катта, to enlarge – катталаштирмок); en+n=v (circle - доира – to encircle - доирага олмок); n+n=v (a boiler - room козонхона); adj+n=n (a loid speaker - овозни баландлатувчи мосламалар); adj+adi=adj (dark blue- зангори); n+adj=adj (heat-stable-иссикликка чидамли); рус тилида мунтазам структураси семантик мосликка эга бўлмаган феъл ва отлар конверсияси.

“Хорижий тил (Инглиз тили)” фани бўйича амалий машғулотларнинг календар тематик режаси

(I-семестр)

№	Амалий машғулотлар мавзулари	Соат
1.1	Noun. Articles.	2
1.2	Demonstrative Pronouns.	2
1.3	The verb *“to be”* in the Pr. Ind.Tense.	2
1.4	Personal pronouns. Imperative Mood.	2
1.5	Prepositions - in- to - by. Numerals. About myself. Doing ex-es.	2
1.6	The plural form of nouns. My working Day.	2
1.7	Possessive and inter-rogative pronouns. Text My family	2
1.8	The verb to have in the Present Ind. tense. Text My friends family.	2
1.9	*There is / are* construction. Text My flat.	2
1.10	Prepositions *–on, -at, -of.*	2
1.11	Special question. Dialogue.	2
1.12	Negative Sentences. Doing ex-ses.	2
1.13	Present Simple. General questions. My friend‘s Working Day	2

1.14	The Past Indefinite Tense. My Day off	2
1.15	Present Continuous Tense.	2
1.16	Future Simple. Alternative questions. My future profession.	2
1.17	Past Contin. Tense. Tag question	2
1.18	Future Cont. Tense. English and uzbek meals. Writng receipts.	2
	Jami:	**36**

(II-семестр)

№	Амалий машғулотлар мавзулари	Соат
2.1	Pronouns: some, any . Doing ex-ses.	2
2.2	Degree of adj. Text : The univeristy's library system.	2
2.3	Degreesof Adv. Text : Our university.	2
2.4	Text. At the English Lesson.	2
2.5	Text. My attitude to Homework.	2
2.6	Text. What is school for us.	2
2.7	Text : University canteens.	2
2.8	Text : Students' hostels.	2
2.9	The modal verb ‚can' Text : The faculty where I study	2
2.10	The modal verb 'must' Text : Education in Uzbekistan. State Policy.	2
2.11	The modal verb ‚may' Text : 'A Day at school' of Uzbekistan.	2
2.12	The modal verb ‚could' Text : Education in Great Britain.State policy.	2
2.13	The modal verb ‚should' Text : Classroom behaviour rules.	2
2.14	The modal verb ‚would' Text : Post-school education in Uzbekistan.	2
2.15	The use of „be going to" Text : Post-school Education in Great Britain.	2
2.16	Text : World famous universities.	2
2.17	Text : Eductional Reform in Uzbekistan	2
2.18	Text : Eductional Reform in Uzbekistan	2
	Жами:	**36**

II-курс (III семестр)

№	Амалий машғулотлар мавзулари	Соат
3.1	The Present Perfect Tense.Doing ex-ses	2
3.2	Working on the text. Uzbekistan-Independent State	2
3.3	The Present Perfect ContinuousTense. Doing ex-ses	2
3.4	System of Government of Uzbekistan	2
3.5	The Past Perfect Tense. Doing ex-ses	2
3.6	Working on the text Great Britain	2
3.7	The Past Perfect Continuous Tense.Doing ex-ses	2
3.8	The British system of Parliament	2
3.9	The Future Perfect TenseDoing ex-ses	2

3.10	Educational system of Uzbekistan	2
3.11	So am I/Neither am I/ I think so/I hope so. Doing ex-ses	2
3.12	Educational system of Great Britain	2
3.13	Be/get used to iboralari. Doing ex-ses	2
3.14	Famous people of Uzbekistan	2
3.15	Prefer, would prefer. Doing ex-ses	2
3.16	Famous people of Great Britain	2
3.17	Customs and festivals of Uzbekistan	2
3.18	Customs and festivals of Great Britain	2
	Жами:	**36**

(IV-семестр)

№	Амалий машғулотлар мавзулари	Соат
4.1	Infinitiv.Doing ex-ses.	2
4.2	Problems of Environment.	2
4.3.	Gerundiy. Doing ex-ses.	2
4.4.	Tourism	2
4.5.	Sifatdosh . Doing ex-ses	2
4.6.	Human rights	2
4.7.	All/ all of, no/none of, most/most of, both/bot hof, neither/neither of, either/either of iboralari. Doing ex-ses	2
4.8.	Transport services.	2
4.9.	Still and yet, any more/any longer/no longer iboralari. Doing ex-ses	2
4.10.	Linking contrasting ideas.Gr.p.142.Making presentations.	2
4.11.	Filling applications and writing CV	2
4.12.	On time/in time, at the end/in the end. Doing ex-ses	2
4.13.	Newspapers and Broadcasting in Uzbekistan	2
4.14.	Adjective+preposition.,verb+preposition . Doing ex-ses	2
4.15.	Newspapers and Broadcasting in Great Britain.	2
4.16.	Working on the newspaper articles.	2
4.17.	Working on the TV news	2
4.18.	*Working on the TV news*	2
	Жами:	**36**

III-курс (V-семестр)

№	Амалий машғулотлар мавзулари	Соат
5.1	Adveribial clauses.Working on the text “Chemistry:key to progress and abundance. “	2
5.2	Information about the history of subject. Topic: Fields of chemistry.	2
5.3	Adverbial clauses of reason. Doing exersises..Topic: Symbols, formulas and equations.	2
5.4	Branches of the subject. Topic: Inorganic molecules and compounds.	2
5.5	Adveribial clauses of time.Doing ex-ses. Topic: Periodic law.	2
5.6	Branches oft he subject.Topic The Periodic Table.	2
5.7	Adverbial clauses of place. Doing ex-ses. Topic : Laboratory.	2

5.8	Branches of the subject. Description of chemical elements. Chlorine.	2
5.9	Direct and Indirect speech.Doing ex-ses. Topic: Analytical chemistry. Methods of analysis.	2
5.10	Sequences of Tenses.	2
5.11	Methods of separation	2
5.12	Ion exchange methods in analytical chemistry.	2
5.13	Chromatography and ion exchange technique.	2
5.14	Passive voice. Topic : Chromatography techniques.	2
5.15	Paper chromatography, applications and procedure.	2
5.16	Text on speciality. Gas analysis.	2
5.17	Texts on specialty. Some physical methods used in gas analysis.	2
5.18	Analysis of mixtures.	2
	Жами:	**36**

(VI - семестр)

№	Амалий машғулотлар мавзулари	Соат
6.1	Quote structures. Doing exerises.Working on the topic : Ion exchange.	2
6.2	Organic chemistry. Carbon and compounds of carbon.	2
6.3	Countable and uncountable nouns and partitives. Doing exersises. Famous chemists.	2
6.4	Teaching abilities. Antoine Lavoisier.	2
6.5	Using participles to give additional information. Working on the texte: Alfred Nobel.	2
6.6	Advanced Chemistry Projects – Corrosion.	2
6.7	Attributive clauses.Discussion the topic : All that is small is not nano.	2
6.8	Chemical Properties of Stainless Steel.	2
6.9	Giving advice.Doing exersises. Topic : Classes Depending on Chemical Properties of Stainless Steel.	2
6.10	Chemistry Experiments for Kids.	2
6.11	Linking contrasting ideas.Doing exersises. Topic: Chemistry of Acid Rain.	2
6.12	Careers. Discussion of topic. Cracking water with sunlight.	2
6.13	Predicting future.Doing exersises. Topic : Types of Chemical Reactions.	2
6.14	Working on the text History of the Periodic Table.	2
6.15	Cause affect linking words and phrases. Doing exersises.Topic : Modern Form of Periodic Table.	2
6.16	Topic: Analytical uncertainty.	2
6.17	International organizations. Sharing the information.	2
6.18	Controversial new theory for nanotube growth.	2
	Жами:	**36**

IV. Амалий машҳулотлар бўйича кўрсатма ва тавсиялар

Юкори курсларда ўқув фани сифатида инглиз тили дарсларидан касбий максадларда уни амалда қўллашга ўтиш бўйича зарур тушунчалар берилиши керак. Олдига қўйилган максадга эришишда талабалар:

а) махсус фанларни ўрганишда инглиз тилидаги адабиётларни ўқиш малакасига эга бўлиш;

б) курс ишлари ва бакалавр битирув малакавий ишларини инглиз тилида ёзишлари мумкин;

в) инглиз тилидаўутказиладиган конференцияларда қатнашиши мумкин;

г) инглиз тилида маъруза ва маълумотлар тайёрлашлари мумкин.

Инглиз тили дарсларида қўлланиладиган топшириқлар талабаларнинг фикрлаш фаолиятини ривожлантиришга ёрдам бериб, махсус фанларни ўрганишда ҳам зарурнй фикрлаш фаолиятини шакллантириш учун замин яратади.

Инглиз тили фанини ўқитиш жараёнида таълимнинг замонавий интерфаол усулларидан, педагогик ва ахборот-коммуникация технологияларидан кенг фойдаланилади. Амалий машғулотларда ақлий хужум, кластер, блиц-сўров, кичик гуруҳларда ишлаш, инсерт, презентация, кейс стади каби усулларнинг мавзуга мос танланиши ва қўлланилиши дарс самарасини оширишга катта ҳисса қўшади.

Нутқ фаолияти турлари устида ишлаш учун вақт тақсимоти

Қўйилган мақсадларга эришиш учун ҳар бир дарсда нутқ фаолияти турлари қуйидаги нисбатда бўлиши мақсадга мувофиқ:

тинглаб тушуниш - 25% ;

гапириш - 30%;

ўқиш – 25%;

ёзув – 20% .

V. Мустақил таълимни ташкил этишнинг шакли ва мазмуни

Инглиз тили фанидан мустақил ишларининг мақсади - талабаларнинг касбий коммуникатив фаолиятини шакллантириш ва ривожлантириш, уларнинг ижодий фаолиятини ўстириш, ва чет тили устида мустақил ишлай олиш малака ва кўникмаларини ҳосил қилиш ва ривожлантиришдан иборатдир.

Талабаларнинг мустақил ишлари нутқ фаолиятининг қуйидаги турлари бўйича ташкил қилинади.

Ўқиш: (танишиб чиқиш, синчиклаб, қараб чиқиш), ёзув, тинглаб тушуниш ва гапириш;

Тинглаб тушуниш: ҳажми турлича бўлган аудио- ва видео матнларни тинглаб тушуниш, саволларга жавоб бериш, гапириб бериш, аннотация ёза олиш;

Гапириш: талабаларнинг диалогик ва монологик нутқлари бўйича мустақил ишлари аудиторияда ўргатилган матнлар, ўқув материаллари асосида ташкил қилинади. Гапириш бўйича мустақил иш сифатида мавзу асосида маълумот тайёрлаш, матн мазмунини гапириб бериш, ўрганилган лексик материаллар асосида ҳикоялар тузиш, берилган муаммоли масала ва вазиятларни муҳокама қилиш каби топшириқлар бериш мумкин. Гапириш кўникмаларини ривожлантириб бориш учун мультимедиа дастурларини ва он-лайн технологияларини қўллашга асосий эътибор қаратилади;

Ўқиш: талаба ўрганаётган соҳасига оид адабиётлар билан танишиб чиқиши ва ўзи учун қизиқарли ва керакли бўлган ахборотни тушуниши, публицистик,

илмий-оммабоп ижтимоий-сиёсий адабиётларни ўқиши ва керакли ахборотни олиши лозим.

Машғулотларда юқорида айтилган малака ва кўникмаларни шакллантириш ва ўстириш жуда мураккаб бўлганлиги учун уларни мустақил иш жараёнида синчиклаб, кўз югуртириб, қараб чиқиб ўқиш турлари орқали ташкил қилинади. Ушбу ўқиш турларини назорат қилиш-матнни бутунлай таржима қилиш ёки унинг танлаб олинган қисмларини таржима қилиш билан амалга оширилади.

Ёзув. Ёзув бўйича мустақил иш ўз ичига ўрганилаётган тилда фикрни баён қила олиш ишларини олади. Бунда мустақил иш мазмунига қуйидагилар киради:

- аннотация, реферат, резюмелар туза олиш;
- оғзаки равишда нутқ ҳосил қилиш учун режа ёки тезис тузиш;
- турли хатлар, табрикнома, таклифлар, иш юзасидан хатлар туза олиш;
- ўқишга ва ишга қабул юзасидан аризалар ёза олиш;
- соҳага оид турли ҳужжатларни тўлдириш;
- баён, иншо, эсселар ёза олиш; касби бўйича иш юритиш ишларини (ёзувларини) олиб бориш.

Ўқиб таржима қилинган материаллар курс ишлари ва рефератларда қўлланилади.

Мустақил таълим учун тавсия этиладиган мавзулар:

19. Ўзи ҳақида тўлиқ маълумот бериш;
20. Орзуимдаги уй;
21. Спорт;
22. Машҳур кишилар
23. Менинг университетим;
24. Байрамлар;
25. Менинг мутахассислигим.
26. Етакчи университетлар
27. Буюк Британия, Америка Қўшма штатлари
28. Ўзбекистон.
29. Инглиз тилида гапирувчи давлатлар
30. Мустақллик куни.
31. Буюк Британия давлат тизими.
32. Ўзбекистон давлат тизими.
33. Давлатлар таьлим тизими.
34. Давлатлар маданияти ва тарихи.
35. Ўзбекистон музейлари.
36. Дунёнинг машҳур университетлари ва бошкалар

“Хорижий (инглиз) тил” фанидан мустақил таълимни ташкил этишнинг шакли ва мазмуни

Талабалар мустақил таълимининг мазмуни ва хажми

I-семестр 14 соат

№	Theme	Hours
1.	About Myself. Present tense.	4
2.	My friend’s family. Interrogative sentences.	4

3.	My flat. Possessive pronouns.	4
4.	My day.	2

II-семестр 14соат

№	Theme	Hours
5.	Our university. Relative pronouns.	2
6.	Information Resource Center of University.	4
7.	Education of Uzbekistan.	4
8.	Working on Dialogue: canteen of University.	2
9.	Edication system.	2

III-семестр 14 соат

№	Theme	Hours
10.	Independent of Uzbekistan.	4
11.	Geography, climate and edonomics of England.	4
12.	Culture: customs, celebrations, folk games, writers and poets, composers, dancers, artists and actors.	6

IV-семестр 14 соат

№	Theme	Hours
13.	Culture: customs, celebrations, folk games, writers and poets, composers, dancers, artists and actors.	6
14.	Transport system: urban transport, traffic regulations, problems in the provision of transportation service to the public.	4
15.	Publishers of Uzbekistan and England.	4

V-семестр 16 соат

№	Theme	Hours
16.	Profession skills.	4
17.	Life and creativity of famous people in the studied scince.	6
18.	News of the iearning scince.	6

VI-семестр 15 соат

№	Theme	Hours
19.	Working on the text “Professionality and speciality”.	7
20.	Actual problems on speciality.	8

Фаннинг ўқув юкламаси

№	Машғулот тури	Ажратилган соат						Жами
		1 -сем.	2- сем.	3- сем.	4 -сем.	5 -сем.	6 -сем.	
1.	Амалий	36	36	36	36	**36**	**36**	216
2.	Мустақил таълим	14	14	14	14	**16**	**15**	87
	Жами	50	50	50	50	**52**	**51**	303

Талабанинг “Хорижий тил” инглиз тили фани бўйича ўзлаштириш кўрсаткичи қуйидаги мезонлар асосида баҳоланади

Рейтинг тизими асосида баҳолаш мезони

Фаннинг номи	***Рейтинг назорати***									
	Жорий назорат			***Умумий***	*Мустақил таълим Оралиқ назорат*			***Умумий***	*Я Н*	***Умумий***
	Сони	*Балл*	*Жами*		*Сони*	*Балл*	*Жами*		***Ёзма***	*Жами*
Ҳорижий тил	*1*	*60*	*60*	***60***	*1*	*10*	*10*	***10***	***30***	***100***

Талабалар ЖН дан тўплайдиган балларнинг мезонлари

№	**Кўрсаткичлар**	**Жорий назорат баллари**	
		Максимал	**Ўзгариш оралиғи**
1	Дарсларга қатнашганлик ва ўзлаштириш даражаси. Амалий машғулотлардаги фаоллиги, амалий машғулот дафтарларининг юритилиши ва ҳолати	20	0-20
2	Вазифа топшириқларининг ўз вақтида ва сифатли бажарилиши. Мавзулар бўйича уй вазифаларини бажарилиш ва ўзлаштириш даражаси.	20	0-20
3	Оғзаки ўтилган мавзулар юзасидан саволларга жавоб.	20	0-20
Жами ЖН баллари		**60**	**0-60**

Талабалар ОН дан тўплайдиган балларнинг мезонлари

№	**Кўрсаткичлар**	**Оралиқ назорат баллари**	
		Максимал	**Ўзгариш оралиғи**
1	Талабаларнинг мустақил таълим топшириқларини ўз вақтида сифатли бажариши ва ўзлаштириш.	6	0-6
2	Тайёрлаган топшириқни тақдимот қилиш.	2	0-2
3	Берилган саволларга жавоб бериш.	2	0-2
Жами ОН баллари		**10**	**0-10**

Талабалар ЯН дан тўплайдиган балларнинг мезонлари

№	Кўрсаткичлар	Оралиқ назорат баллари	
		Максимал	Ўзгариш оралиғи
1	Грамматик кўникмаларни текшириш.	10	0-10
2	Ёзув кўникмаларини текшириш.	10	0-10
3	Берилган саволларга жавоб бериш.	10	0-10
Жами ОН баллари		**30**	**0-30**

Умумий кўрсаткич:

Балл	Баҳо	Талабаларнинг билим даражаси
86-100 балл учун талабанинг билим даражаси қуйидагиларга жавоб бериши лозим	Аъло	✓ Янги мавзуни Инглиз тилида тушунтириш ва мазмунини оғзаки еркин баён қила олиш; ✓ Инглиз тилида ижодий фикрлай олиш; ✓ Инглиз тилида мустақил мушоҳада қила олиш; ✓ Инглиз тилида оғзаки ахборот бера олиш; ✓ Луғат ёрдамида таржима қила олиш; ✓ Олган билимларни амалда қўллай олиш;
71-85 балл учун талабанинг билим даражаси қуйидагиларга жавоб бериши лозим	Яхши	✓ Тил ўрганилаётган мамлакат тилида ўз фикрини тушунтира билиш; ✓ Мустақил мушоҳада юрита олиш; ✓ Тасаввурга ега бўлиш; ✓ Луғат ёрдамида таржима қила олиш; ✓ Матн мазмунини қисқача тушунтира олиш;
55-70 балл учун талабанинг билим даражаси қуйидагиларга жавоб бериши лозим	Қониқарли	✓ Билиш, янги мавзуни қисман айтиб бериш; ✓ Мавзуни қисман тушуна билиш. ✓ Мавзу ҳақида тушунчага ега бўлиш.
0-54 балл билан талабанинг билим даражаси қуйидаги ҳолатларда баҳоланади	Қониқарсиз	✓ Ўқий олмаслик; ✓ Гапира олмаслик; ✓ Тасаввурга ега бўлмаслик; ✓ Билмаслик.

Фан бўйича саралаш бали 55 баллни ташкил етади. Талабанинг саралаш балидан паст бўлган ўзлаштириши рейтинг дафтарчасида қайд етилмайди.

Жорий **ЖН** ва оралиқ **ОН** турлари бўйича 55 балл ва ундан юқори баллни тўплаган талаба фанни ўзлаштирган деб ҳисобланади ва ушбу фан бўйича якуний назоратга кирмаслигига йўл қўйилади.

Талабанинг семестр давомида фан бўйича тўплаган умумий балли ҳар бир назорат туридан белгиланган қоидаларга мувофиқ тўплаган баллари йиғиндисига тенг.

ОН ва **ЯН** турлари календар тематик режага мувофиқ деканат томонидан тузилган рейтинг назорат жадваллари асосида ўтказилади. **ЯН** семестрнинг охирги 2 ҳафтаси мобайнида ўтказилади.

ЖН ва **ОН** назоратларда саралаш балидан кам балл тўплаган ва узрли сабабларга кўра назоратларда қатнаша олмаган талабага қайта топшириш учун, навбатдаги шу назорат туригача, сўнгги жорий ва оралиқ назоратлар учун еса якуний назоратгача бўлган муддат берилади. Талабанинг семестрда **ЖН** ва **ОН** турлари бўйича тўплаган баллари ушбу назорат турлари умумий балининг 55 фоизидан кам бўлса ёки семестр якуний жорий, оралиқ ва якуний назорат турлари бўйича тўплаган баллари йиғиндиси 55 балдан кам бўлса, у академик қарздор деб ҳисобланади. Талаба назорат натижаларидан норози бўлса, фан бўйича назорат тури натижалари еълон қилинган вақтдан бошлаб бир кун мобайнида факултет деканига ариза билан мурожаат етиши мумкин. Бундай ҳолда факултет деканининг тақдимномасига кўра ректор буйруғи билан 3 (уч) аъзодан кам бўлмаган таркибда апеллятсия комиссияси ташкил етилади.

Апеллятсия комиссияси талабаларнинг аризаларини кўриб чиқиб, шу куннинг ўзида хулосасини билдиради. Баҳолашнинг ўрнатилган талаблар асосида белгиланган муддатларда ўтказилиши ҳамда расмийлаштирилиши факултет декани, кафедра мудури, ўқув-услубий бошқарма ҳамда ички назорат ва мониторинг бўлими томонидан назорат қилинади.

Якуний назорат ёзма шаклда ўтказилади.

Якуний назорат максимал 30 баллик тизимда ўтказилади.

V. Асосий ва қўшимча ўқув адабиётлар ҳамда ахборот манбалари

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МИНИСТЕРСТВО ВЫСШЕГО И СРЕДНЕГО СПЕЦИАЛЬНОГО

ОБРАЗОВАНИЯ РЕСПУБЛИКИ УЗБЕКИСТАН

АНДИЖАНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

"УТВЕРЖДАЮ"

Проректор по учебной работе.

_____ к.ф.н., доцент Ш.Маматюсупов

"31" 08 2019 год

ИНОСТРАННЫЙ ЯЗЫК

РАБОЧАЯ УЧЕБНАЯ ПРОГРАММА

(для 3 курса)

Область знаний: - 100000- Гуманитарная сфера

Область образование: - 140000 – Естественные науки

Направление образование: - 5140500 –Химия

Всего часов - 303

В том числе:

Практические-216

(1-семестр-36, 2-семестр-36, 3-семестр-36, 4-семестр-36, 5-семестр-36, 6-семестр-36)

Самообразование- 87

(1-семестр-14, 2-семестр-14, 3-семестр-14, 4-семестр-22, 5-семестр-16, 6- семестр-15)

Андижан - 2019

Рабочая учебная программа разработана на основе типовой учебной программы «Иностранный язык», утвержденной приказом Министерства высшего и среднего специального образования Республики Узбекистан за №: 603 от «24»08 2017 года.

Рабочая учебная программа утверждена на заседании совета Андижанского государственного университета от 31 августа 2019 года, протокол №1.

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2019 год «31» 08

Заведующий межфакультетской кафедрой иностранных языков (точные и естественные науки): _____ Рустамов Д.

2019 год «31» 08

1. Актуальность и место изучаемого предмета в высших учебных заведениях.

Обучение иностранному языку студентов неязыковых специальностей рассматривается как составная часть вузовской программы гуманитаризации высшего образования, как органическая часть процесса осуществления подготовки высококвалифицированных специалистов, активно владеющих иностранным языком как средством межкультурной и межнациональной коммуникации, как в сферах профессиональных интересов, так и в ситуациях социального общения.

2. Цели и задачи изучаемого предмета

Цель обучения иностранному языку- обучать иностранному языку как средству межкультурной коммуникации, формировать личность, вобравшую в себя ценности родной и иноязычной культур и готовую к межнациональному общению во всех сферах жизни, находит свое отражение в определении новых целей и подходов в обучении иностранному языку в неязыковом вузе.

Задачи:

- Развитие речевой компетенции;
- обеспечить активное владение иностранным языком как средством «формирования и формулирования мыслей» в социально обусловленных и профессионально ориентированных сферах общения.
- Научить работать с новейшими технологиями, открытиями и тенденциями в развитии науки и техники на иностранном языке;
- Обучить владению иностранным языком как средством «формирования и формулирования мыслей» в социально обусловленных и профессионально ориентированных сферах общения
- переориентировать студентов в психологическом плане на понимание иностранного языка как внешнего источника информации и иноязычного средства коммуникации, на усвоение и использование иностранного языка для выражения собственных высказываний и понимания других людей;

III. Основная часть(практические занятия)

Умение простым языком представить людей или описать условия жизни и работы, повседневные занятия, то, что нравиться и что не нравиться, и т.д. в виде ряда коротких простых фраз и предложений в форме перечня; вести беседу на тему окружающей среды, социально-бытовые вопросы; умение высказать собственное мнение об образовании, учебных заведениях и т.д ; исторические, географические, климатические, социально- культурные сведения об Республике Узбекистан , а также стране изучаемого языка.

3.1 Речевая компетенция

Обобщить полученное в школе умение и навыки чтения на расширенном языковом материале с целью подготовки студентов к различным видам чтения. Научить студентов формулировать мысли на иностранном языке в вопросно-ответной форме и монологических формах речи с привлечением элементов профессионально ориентированного регистра речи.

Аудирование:

Умение понимать основное содержание беседы на знакомую тему, связанную с работой, образованием, отдыхом ; рекламы и новостей; художественных и документальных фильмов; осуществляемой посредством четкого стандартного языка.

Говорение:

Диалогическая речь: умение вести беседу на социальные и профессиональные темы; интервью и обсуждения, телефонный разговор.

Монологическая речь: подготовка речи и презентации к докладам по специальности, умения предоставлять аргументы и факты; написание тезисов и научных статей

Чтение:

Умение работать с письмами, электронной почтой, средствами массовой информации

Письмо:

Уметь заполнить подробную анкету о себе; написать открытки различных функциональных типов; статьи профессионально-ориентированного содержания, сочинения

3.2 Профессиональное направление:

Чтение

1. Умение понимать повседневную информацию и статьи по текущим вопросам, а также общее значение новой информации, входящей в знакомую сферу.

2. Умение понимать практически без затруднений любые тексты, содержащие трудные слова и грамматические конструкции (руководства, специализированные статьи).

3. Умение понимать специальные язык в статьях и технических инструкциях, даже если эти тексты выходят за рамки профессиональной деятельности читающего.

4. Умение читать достаточно бегло, чтобы справиться с учебным курсом, читать публикации в средствах массовой информации для получения сведений и понимать не стандартную переписку. 5. Умение понимать документы, корреспонденцию и доклады, включая тонкие нюансы сложных текстов.

Говорение Монологическая речь

1. Умение давать четкие, подробные описания по широкому кругу интересующих его вопросов, развивая отдельные мысли и подкрепляя их дополнительными положениями и примерами.

2. Умение давать четкие подробные описания и делать доклады на сложные профессиональные темы, углубляясь в подтемы, развивая отдельные положения и заканчивая подходящим выводом. 3. Умение пояснить свою точку зрения по актуальному вопросу, указывая на плюсы и минусы различных вариантов.

4. Умение привести ряд обоснованных доводов.

5. Умение разворачивать четкую систему аргументации, развивая и подкрепляя свою точку зрения достаточно развернутыми утверждениями и примерами.

Диалогическая речь

1. Умение вести диалог довольно бегло и без подготовки, что позволяет регулярно и подолгу общаться с носителями языка без особых трудностей для обеих сторон.

2. Умение бегло, точно и эффективно говорить на разнообразные темы: общие, учебные, профессиональные.

3. Умение выбрать наиболее адекватное из имеющихся в его распоряжении средств языка для общения в нетипичных, трудных ситуациях.

4. Умение переключаться на другой регистр общения, гибко реагировать на изменения в теме, направленности, тоне разговора, при необходимости перефразировать высказывание.

5. Соблюдение правил речевого этикета в ситуациях научного диалогического общения.

Аудирование

1. Умение без труда следить за ходом сложных диалогов, которые ведутся третьей стороной в процессе группового обсуждения/дискуссии даже по абстрактной, незнакомой тематике.

2. Умение понимать основные положения по смысловому наполнению речи на конкретные или абстрактные темы, произносимые на нормативном языке, включая технические обсуждения по темам, находящимся в рамках сферы деятельности.

3. Умение понимать основные положения лекций, бесед, докладов и других видов тематически сложных выступлений, касающихся профессиональной деятельности.

4. Умение извлекать конкретную информацию из объявлений в общественных местах, например, на вокзале, на стадионе и др., несмотря на плохую слышимость и помехи. Умение понимать сложную техническую информацию, к примеру, правила эксплуатации, технические условия.

Письмо

1. Умение написать отзыв о статье, тезисы на конференцию.

2. Умение писать четкие тексты (доклады), подробно освещающие разнообразные интересующие студента вопросы, синтезируя и оценивая информацию и аргументы, поступающие из нескольких источников.

3. Умение синтезировать информацию и аргументы из нескольких источников.

4. Умение написать эссе или доклад, в котором доказательства разворачиваются системно, важные моменты подчеркиваются и приводятся детали, подкрепляющие излагаемую точку зрения.

3.3 Грамматическая компетенция

Активный грамматический минимум:

Существительное (число и падеж),артикль; Прилагательное и его степени;

Местоимение; глагол и его формы; страдательный залог; порядок слов в предложении, вопросительные, повелительные предложения; союзные слова if, that because, when, before, as soon as, till, until;

Пассивный грамматический минимум: Образование и применение герундия, причастия.

Распределение тем и часов практический занятий по предмету "Инностранный язык(английский)":

№	Название тем	Часы		
		Итог	практические	самообразова
	I - семестр			
1.	**Социальные темы**	50	36	14
	II - семестр			
2.	**Социально-культурные темы**	50	36	14
	III- семестр			
3.	**Темы образования**	50	36	14
	IV- семестр			
4.	**Темы об интернете и информационных технологиях**	50	36	14
	V- семестр			
5.	**Темы по специальности**	52	36	16
	VI- семестр			
6.	**Темы по специальности**	51	36	15
	Итог	**303**	**216**	**87**

2. Календарно- тематический план практических занятий

(I-семестр)

№	Темы практических занятий	Часы
1.1	Noun. Articles.	2

1.2	Demonstrative Pronouns.	2
1.3	The verb *"to be"* in the Pr. Ind.Tense.	2
1.4	Personal pronouns. Imperative Mood.	2
1.5	Prepositions - in- to - by. Numerals. About myself. Doing ex-es.	2
1.6	The plural form of nouns. My working Day.	2
1.7	Possessive and inter-rogative pronouns. Text My family	2
1.8	The verb to have in the Present Ind. tense. Text My friends family.	2
1.9	*There is / are* construction. Text My flat.	2
1.10	Prepositions *–on, -at, -of.*	2
1.11	Special question. Dialogue.	2
1.12	Negative Sentences. Doing ex-ses.	2
1.13	Present Simple. General questions. My friend's Working Day	2
1.14	The Past Indefinite Tense. My Day off	2
1.15	Present Continuous Tense.	2
1.16	Future Simple. Alternative questions. My future profession.	2
1.17	Past Contin. Tense. Tag question	2
1.18	Future Cont. Tense. English and uzbek meals. Writng receipts.	2
	Jami:	**36**

(II-семестр)

№	Темы практических занятий	Часы
2.1	Pronouns: some, any . Doing ex-ses.	2
2.2	Degree of adj. Text : The univeristy's library system.	2
2.3	Degreesof Adv. Text : Our university.	2
2.4	Text. At the English Lesson.	2
2.5	Text. My attitude to Homework.	2
2.6	Text. What is school for us.	2
2.7	Text : University canteens.	2
2.8	Text : Students' hostels.	2
2.9	The modal verb ‚can' Text : The faculty where I study	2
2.10	The modal verb 'must' Text : Education in Uzbekistan. State Policy.	2
2.11	The modal verb ‚may' Text : 'A Day at school' of Uzbekistan.	2
2.12	The modal verb ‚could' Text : Education in Great Britain.State policy.	2
2.13	The modal verb ‚should' Text : Classroom behaviour rules.	2
2.14	The modal verb ‚would' Text : Post-school education in Uzbekistan.	2

2.15	The use of „be going to“ Text : Post-school Education in Great Britain.	2
2.16	Text : World famous universities.	2
2.17	Text : Eductional Reform in Uzbekistan	2
2.18	Text : Eductional Reform in Uzbekistan	2
	Жами:	**36**

II-курс (III семестр)

№	Темы практических занятий	Часы
3.1	The Present Perfect Tense.Doing ex-ses	2
3.2	Working on the text. Uzbekistan-Independent State	2
3.3	The Present Perfect ContinuousTense. Doing ex-ses	2
3.4	System of Government of Uzbekistan	2
3.5	The Past Perfect Tense. Doing ex-ses	2
3.6	Working on the text Great Britain	2
3.7	The Past Perfect Continuous Tense.Doing ex-ses	2
3.8	The British system of Parliament	2
3.9	The Future Perfect TenseDoing ex-ses	2
3.10	Educational system of Uzbekistan	2
3.11	So am I/Neither am I/ I think so/I hope so. Doing ex-ses	2
3.12	Educational system of Great Britain	2
3.13	Be/get used to iboralari. Doing ex-ses	2
3.14	Famous people of Uzbekistan	2
3.15	Prefer, would prefer. Doing ex-ses	2
3.16	Famous people of Great Britain	2
3.17	Customs and festivals of Uzbekistan	2
3.18	Customs and festivals of Great Britain	2
	Жами:	**36**

(IV-семестр)

№	Темы практических занятий	Часы
4.1	Infinitiv.Doing ex-ses.	2
4.2	Problems of Environment.	2
4.3.	Gerundiy. Doing ex-ses.	2
4.4.	Tourism	2
4.5.	Sifatdosh . Doing ex-ses	2
4.6.	Human rights	2
4.7.	All/ all of, no/none of, most/most of, both/bot hof, neither/neither of, either/either of iboralari. Doing ex-ses	2
4.8.	Transport services.	2

4.9.	Still and yet, any more/any longer/no longer iboralari. Doing ex-ses	2
4.10.	Linking contrasting ideas.Gr.p.142.Making presentations.	2
4.11.	Filling applications and writing CV	2
4.12.	On time/in time, at the end/in the end. Doing ex-ses	2
4.13.	Newspapers and Broadcasting in Uzbekistan	2
4.14.	Adjective+preposition.,verb+preposition . Doing ex-ses	2
4.15.	Newspapers and Broadcasting in Great Britain.	2
4.16.	Working on the newspaper articles.	2
4.17.	Working on the TV news	2
4.18.	*Working on the TV news*	2
	Жами:	**36**

III-курс (V-семестр)

№	Темы практических занятий	Часы
5.1	Adveribial clauses.Working on the text "Chemistry:key to progress and abundance. "	2
5.2	Information about the history of subject. Topic: Fields of chemistry.	2
5.3	Adverbial clauses of reason. Doing exersises..Topic: Symbols, formulas and equations.	2
5.4	Branches of the subject. Topic: Inorganic molecules and compounds.	2
5.5	Adveribial clauses of time.Doing ex-ses. Topic: Periodic law.	2
5.6	Branches oft he subject.Topic The Periodic Table.	2
5.7	Adverbial clauses of place. Doing ex-ses. Topic : Laboratory.	2
5.8	Branches of the subject. Description of chemical elements. Chlorine.	2
5.9	Direct and Indirect speech.Doing ex-ses. Topic: Analytical chemistry. Methods of analysis.	2
5.10	Sequences of Tenses.	2
5.11	Methods of separation	2
5.12	Ion exchange methods in analytical chemistry.	2
5.13	Chromatography and ion exchange technique.	2
5.14	Passive voice. Topic : Chromatography techniques.	2
5.15	Paper chromatography, applications and procedure.	2
5.16	Text on speciality. Gas analysis.	2
5.17	Texts on specialty. Some physical methods used in gas analysis.	2
5.18	Analysis of mixtures.	2
	Жами:	**36**

(VI - семестр)

№	Темы практических занятий	Часы
6.1	Quote structures. Doing exerises.Working on the topic : Ion exchange.	2
6.2	Organic chemistry. Carbon and compounds of carbon.	2
6.3	Countable and uncountable nouns and partitives. Doing exersises. Famous chemists.	2
6.4	Teaching abilities. Antoine Lavoisier.	2
6.5	Using participles to give additional information. Working on the texte: Alfred Nobel.	2
6.6	Advanced Chemistry Projects – Corrosion.	2
6.7	Attributive clauses.Discussion the topic : All that is small is not nano.	2
6.8	Chemical Properties of Stainless Steel.	2
6.9	Giving advice.Doing exersises. Topic : Classes Depending on Chemical Properties of Stainless Steel.	2
6.10	Chemistry Experiments for Kids.	2
6.11	Linking contrasting ideas.Doing exersises. Topic: Chemistry of Acid Rain.	2
6.12	Careers. Discussion of topic. Cracking water with sunlight.	2
6.13	Predicting future.Doing exersises. Topic : Types of Chemical Reactions.	2
6.14	Working on the text History of the Periodic Table.	2
6.15	Cause affect linking words and phrases. Doing exersises.Topic : Modern Form of Periodic Table.	2
6.16	Topic: Analytical uncertainty.	2
6.17	International organizations. Sharing the information.	2
6.18	Controversial new theory for nanotube growth.	2
	Жами:	**36**

Практические занятия проводятся в каждой академической группе отдельно в аудиториях, оснащённых мультимедийным оборудованием. Занятия проводятся с помощью активных и интерактивных методов, используется технология. Наглядные материалы представляются при помощи ИКТ.

3. Самообразование

I-семестр 14 часов

№	Theme	Hours
1.	About Myself. Present tense.	4
2.	My friend’s family. Interrogative sentences.	4

3.	My flat. Possessive pronouns.	4
4.	My day.	2

II-семестр 14часов

№	Theme	Hours
5.	Our university. Relative pronouns.	2
6.	Information Resource Center of University.	4
7.	Education of Uzbekistan.	4
8.	Working on Dialogue: canteen of University.	2
9.	Edication system.	2

III-семестр 14 часов

№	Theme	Hours
10.	Independent of Uzbekistan.	4
11.	Geography, climate and edonomics of England.	4
12.	Culture: customs, celebrations, folk games, writers and poets, composers, dancers, artists and actors.	6

IV-семестр 14 часов

№	Theme	Hours
13.	Culture: customs, celebrations, folk games, writers and poets, composers, dancers, artists and actors.	6
14.	Transport system: urban transport, traffic regulations, problems in the provision of transportation service to the public.	4
15.	Publishers of Uzbekistan and England.	4

V-семестр 16 часов

№	Theme	Hours
16.	Profession skills.	4
17.	Life and creativity of famous people in the studied scince.	6
18.	News of the iearning scince.	6

VI-семестр 15 часов

№	Theme	Hours
19.	Working on the text “Professionality and speciality”.	7
20.	Actual problems on speciality.	8

Самообразование с использованием научной и справочной литературы позволяет формировать у студентов навыки профессионального прочтения текста, вырабатывает умение анализировать различные аспекты структуры и образной системы произведения.

В процессе выполнения самообразования вырабатываются практические умения и навыки: овладеть речью, критическим мышлением, творческими способностями, написанием.

Рекомендуемые темы самостоятельной работы и самообразования должны быть разработаны в соответствии с темами практических занятий, направлены на выработку умения анализировать и исследовать языковые факты.

Предлагаемые формы работы – реферирование и подготовка слайд-презентаций.

Учебная нагрузка предмета

№	Тип занятия	Выделенные часы						Итог
		1 - сем.	2- сем.	3- сем.	4 - сем.	5 - сем.	6 - сем.	
1.	Практические	36	36	36	36	**36**	**36**	216
2.	Самообра-зование	14	14	14	14	**16**	**15**	87
	Итог	50	50	50	50	**52**	**51**	303

ПОРЯДОК ПРОВЕДЕНИЯ ВИДОВ КОНТРОЛЯ

1.Порядок проведения текущего контроля:
Этот тип контроля проводится в аудитории с участием всех студентов академической группы в следующих формах:
• проверка домашних заданий;
• решение примеров и задач;
• проведение тестовых испытаний;
• проведение контрольных работ;
• устный опрос.

2. Порядок проведения промежуточного контроля:
Этот тип контроля проводится в аудитории с участием всех студентов потока в следующих формах:
• устный опрос(для осеннего семестра);
• письменная работа(для весеннего семестра).

3. Порядок проведения итогового контроля:
Этот вид контроля проводится в аудиторниях с участием всех студентов потока и академических групп в форме письменной работы .

Критерии оценки знаний на основе рейтинговой системы

	рейтинговая система					
	Текущий контроль	*Ито*	Промежуточный	*Ито*	*И.К.*	***Итог***

Название предмета					контроль					
	Число	Балл	Итог		Число	Балл	Итог		Письменно	
Иностранный язык	*1*	*60*	*60*	***60***	*1*	*10*	*10*	***10***	***30***	***100***

Критерии оценок (баллов) студентов на текущем контроле.

№	Показатели	Баллы ТК	
		Максимал	ТК
1	Посещаемость занятий и уровень успеваемости. Активность на практических занятиях. Состояние тетрадей по практическим занятиям.	20	0-20
2	Своевременное и качественное выполнение самостоятельных заданий. Выполнение домашных заданий	20	0-20
3	Результаты письменных работ или текушего тестового контроля	20	0-20
Всего		**60**	**0-60**

Критерии оценок (баллов) студентов на промеждуточной контроле.

№	Показатели	Баллы ПК	
		Максимал	ПК
1	Посещаемость занятий студентами. Активность на лекционных занятиях. Состояние тетрадей по лекционным занятиям.	6	0-6
2	Своевременное и качественное выполнение самостоятельных работ и уровень успеваемости	2	0-2
3	Устний опрос, коллоквиумы, и другие виды опроса	2	0-2
Всего		**10**	**0-10**

Критерий оценки письменной работы в итоговом контроле

№	Показатели	Баллы ИК	
		Максимал	ИК
1	Проверка грамматических компетенций	10	0-10
2	Проверка письменных компетенций	10	0-10
3	Ответы на сотавленные вопросы	10	0-10
Всего		**30**	**0-30**

Итоговый контроль проводится в форме писсменой работы и оценки вается максимально 30 баллов

Общие показатели:

Методы оценки	Уровень знаний студентов
Критерии оценки	• ***86 - 100 баллов «отлично»*** • *делать выводы и решения;* • *креативное мышление;* • *уметь самостоятельно анализировать;* • *владеть умениями применения полученных знаний;* • *знать суть темы;* • *богатое представление, воображение и мышление;* • *объяснение терминологии и понятий, связанных с курсом «Частная методика преподования математика»;* • решение всех задач и примеров в включенных в курс математики средней курсив обще образовательной школы, академических лицеев;
	71 - 85 баллов "хорошо" *• способность самостоятельного мышленая;* *• уметь применять полученные знания в аудитории;* *• знать суть темы;* *• объяснение терминологии и понятий, связанных с курсом «Частная методика преподавания математики»;* *• решение всех задач и примеров включенных в курс математики средной общеобразовательной школы, академических лицеев;*
	55 - 70 баллов "удовлетворительно" *• понимание сути методических ситуаций;* *• знать суть темы;* *• объяснение терминологии и понятий, связанных с курсом «Частная методика преподавания математики»;*
	0 - 54 балла "неудовлетворительно" *• понимать суть методических ситуаций;* *•отсутствие четкого понимания курса «Частная методика преподавания математики»;* *• неспособность объяснить термины и*

	понятия, связанные с курсом «Частная методика преподавания математики»;

Критерий оценки письменной работы в итоговом контроле

Итоговый контроль проводится в форме письменной работы, которая состоит из15 вариантов. Каждый вариант содержит 2 теоретических вопроса и 3 практических заданий. Теоретические вопросы составлены на основе опорных и фразах охватывающих все разделы курса.

Ответы на каждый теоретический вопрос оцениваются в диапазоне 0-6 баллов. Каждое практическое задание также оценивается в диапазоне 0-6 баллов. При этом студент может набрать максимум 30 баллов.

Чтобы определить общий уровень знаний студентов в итогом контроле баллы полученные за каждый вопрос варианта слагаются; их результат (сумма) и будет результатом итогового контроле.

6. Основная и дополнительная учебная литература и информационные источники

Основная литература

6. Дудкина Г.А и др. English for businessmen. 1 кисм. Тошкент 2000.
7. Кудрявцева О.Е. и др. English for businessmen. 2- кисм.Тошкеит-2000.
8. Абдалина Е.А. Инглиз тили дарслиги'". Тошкент-2000 й
9. Бонк Н.А. Учебник английского языка. Бишкек-1997 й.
10. Саттаров Т.К. Английский для студентов-юристов (I часть). Т.ТГЮИ. 2005 й.

Дополнительная литература

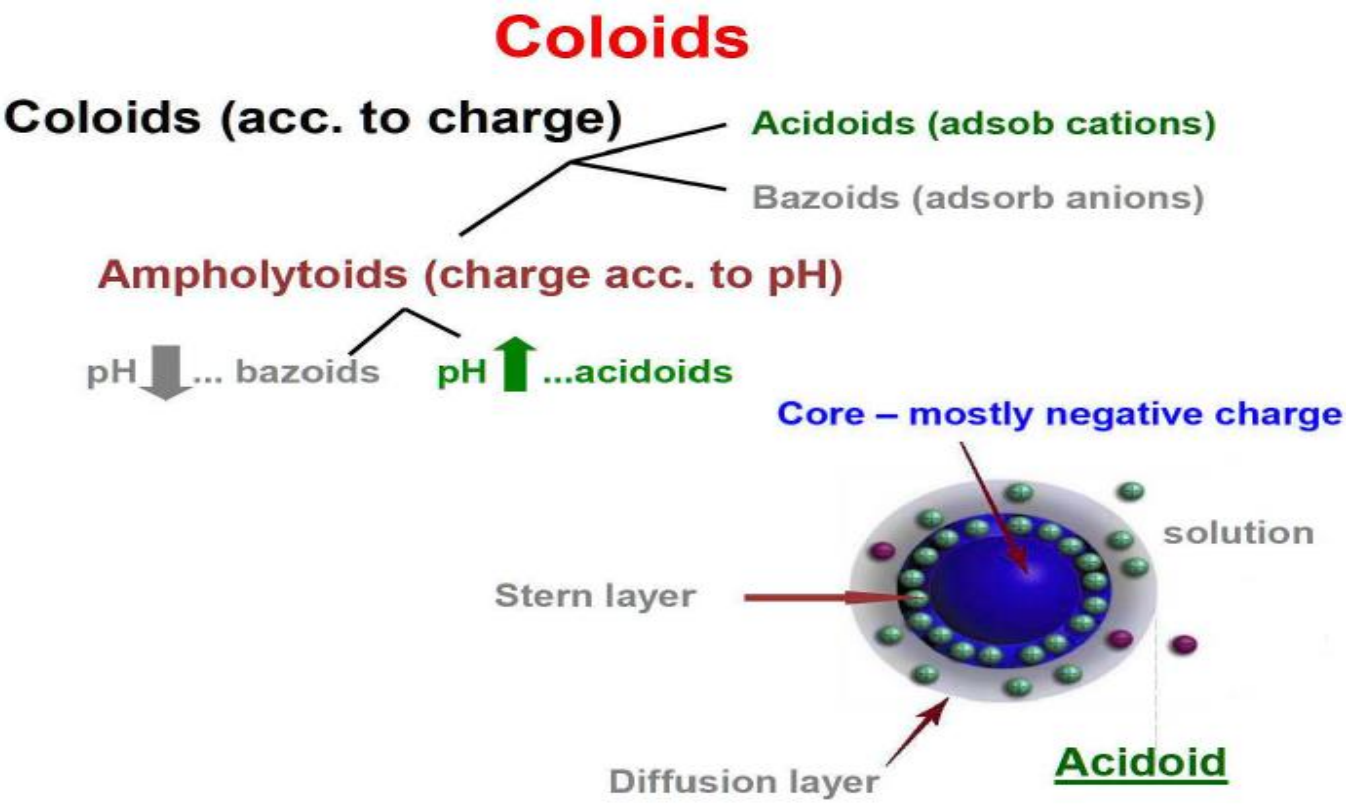
27. Каримов И.А. Юксак маънавият енгилмас куч. - Т.: Ўзбекистон- 2008.
28. Мирзиёев Ш.М. Эркин ва фаровон, демократик Ўзбекистон давлатини биргаликда барпо этамиз. Т-2016
29. Мирзиёев Ш.М. Танқидий таҳлил қатъий тартиб интизом ва шахсий жавобгарлик - ҳар бир раҳбар фаолиятининт кунлалик қоидаси бўлиши керак. Т- 2016
30. Мирзиёев Ш.М. Буюк келажагимизни мард ва олижаноб халқимиз билан бирга қурамиз. Т-2017
31. Бабаева С.Р. Инглиз тили. Биология факультети талабалари учун Ўқув қўлланма. Тошкент - 2015
32. Болибекова М.М. Инглиз тили қисқача грамматикаси ўқув қўлланма. ЎзМУ. 2008.
33. New Inside Out. Sue Kay & Vaughan Jones. Macmillan 2014
34. Scale up. The authors. Tashkent- 2014
35. Martin Seviour “Word Wise” “SHARQ PUBLISHING HOUSE". 1997
36. Качалова К.Н. Грамматика английского языка. Бишкек-2007

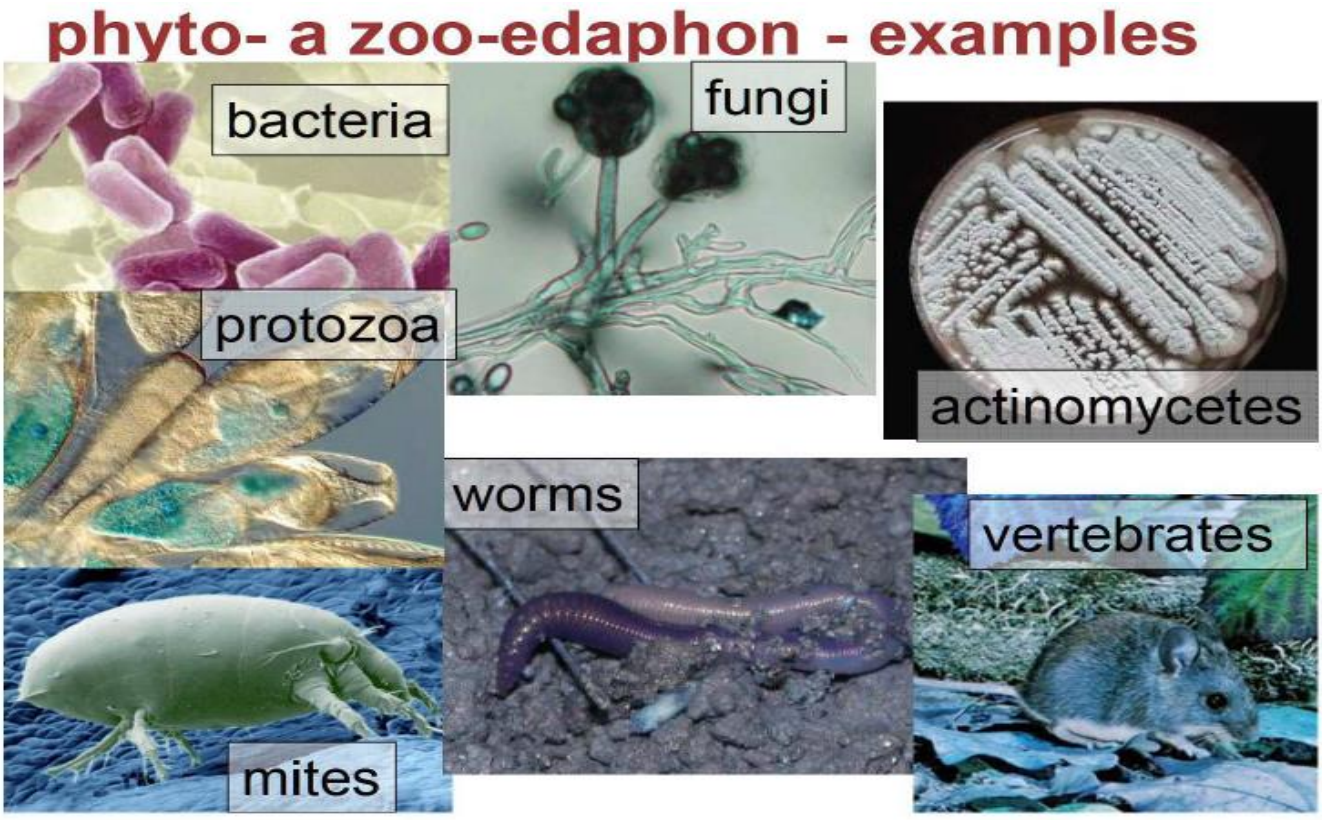
37. JohnA Liz Soars «Headway» Oxford University Press - I999
38. Adrian Tennant «Straightforward" Macmilllan
39. Обидова Д. English reader.Тошкент - 1998.
40.Бабаева **C.P The** science of life Тошкент - **2014.**
41.Болибекова М .М. Инглиз тилида психологиядан кичик матнлар тўплами. УзМУ-2002
42. Болибекова М. М. Инглиз тилида фалсафадан кичик матнлар тўплами УзМУ-2003.
43. Колодяжная Л. This is Great Britain. Москва- 2000
44. Болибекова М.М. Политология бўлими магистр ва талабалари учун мутахассисликка оид матнлар тўплами УзМУ- 2008.
45. R. Murphy English Grammar in Use. Cambridge University PressT985
46. Болибекова М.М. Инглиз тилида оғзаки мавзулар тўплами. УзМУ 2003.
47. Лутфуллаева М. English in topics Т- 2002
48. Агзамова З.И. Турдисва С.Х. Физика факультети бакалавриат талабалари учун инглиз тилилан матнлар тўплами. НУУЗ. Т. 2007
49. Бабаева С.Р. Иктисодиёт факультети талабалари учун мутахассисликка оид матнлар тўплами . Т-2013.
50. Назарова Д.О. Famous people of English speaking countries. Тошкент - 2015
51. Болибекова М.М. «Социология» Т-2009
52. Юсупова З.Ш. Сборник английских текстов для неязыковых факультетов. НУУЗ. Т- 2003.

Интернет сайты

10. http://iteslj.org/
11.http://iteslj.org/Techniques/Yang-Writing.html
12.http://iteslj.org/Techniques/Ross-ListeningC Comprehension .
13.html http://www.teachingienglish.org.uk think articles/listening http7/
14.www usc.edu/dept/education CMMR/CMMRJB Г8А home html#Resourees B(ginningTeachers
15.http://wwwJMChennentors.oom/MCenter%20Site/BegTchrNeeds.
16. http://www.inspiringteachcrs.com/
17. hitp://teachnet.org/ntpi/research/prep/Cooper/
18. http://www.alt- leachercert.org/Mentoring.html vvww.examenglish.com

V.3 TARQATMA MATERIALLAR





Human impact on soils

- **intensive agriculture**
  - ✓fertilization
  - ✓pesticides
  - ✓toxic compounds
- **landfills**
- **urbanization**

- **deserti-fication**
- **erosion**
  - ✓forest clear-cutting
  - ✓agriculture

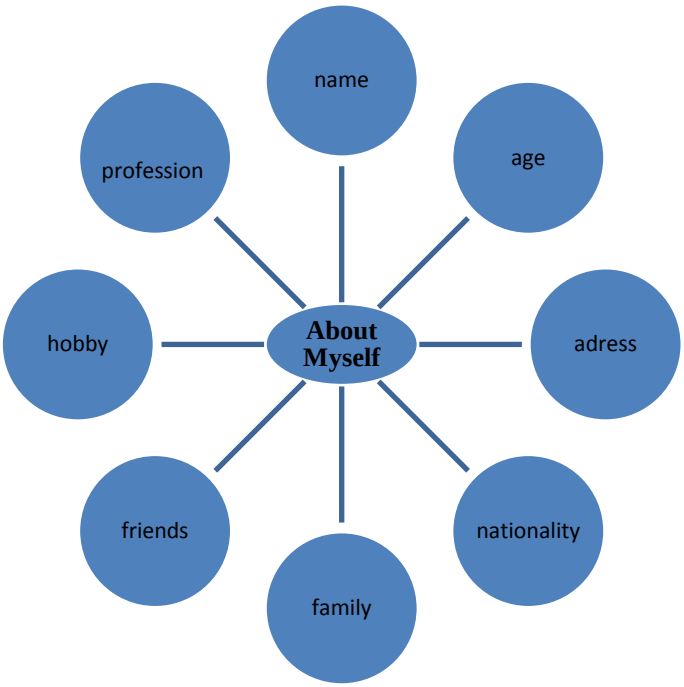
Vegetation

natural plants, agriculture crops:
fields, meadows, pastures, forests

trees – forests, rainforests

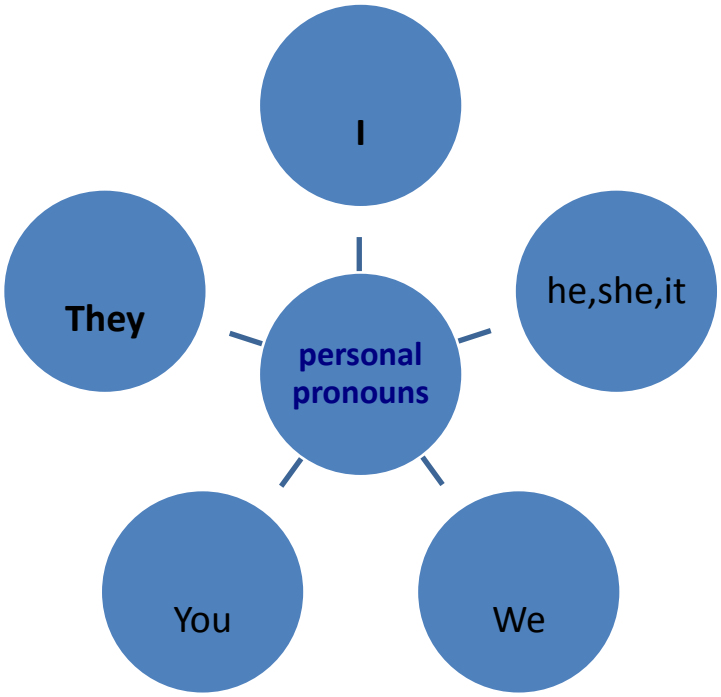
«KLASTER» metodi

Fikringizga nima kelsa, barchasini yozing.G’oyalar sifatini muhokama qilmang faqat ularni yozing.

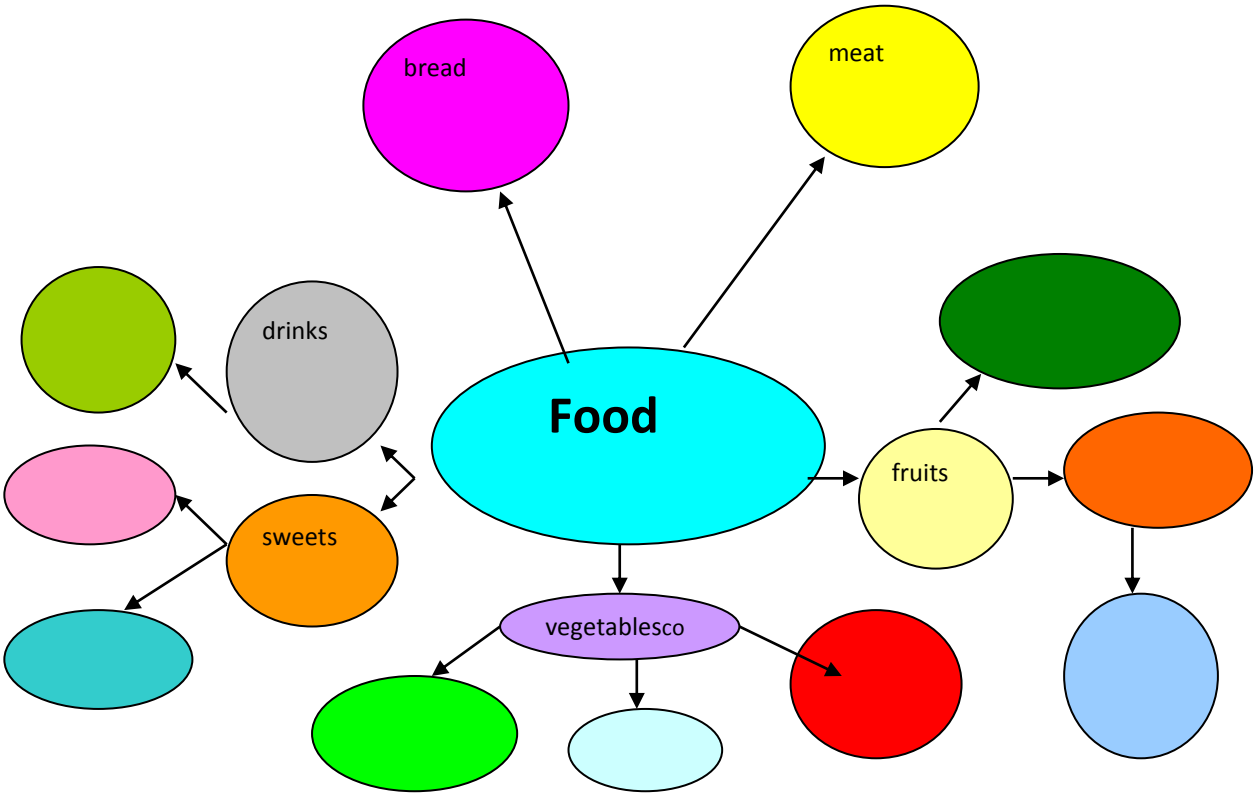


Grammatika: Personal Pronouns –Kishilik olmoshlari

Shaxsni bildiruvchi olmoshlar kishilik olmoshlari deyiladi. Ingliz tilida kishilik olmoshlari quyidagilar

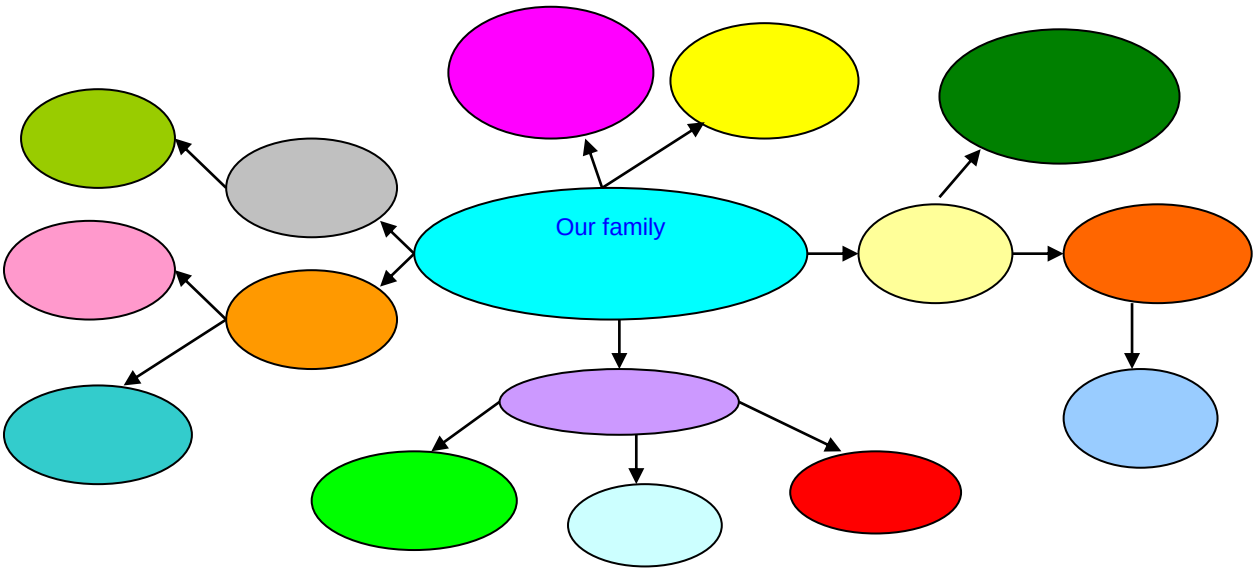


«KLASTER» metodi
Fikringizga nima kelsa, barchasini yozing.G'oyalari sifatini muhokama qilmang



faqat ularni yozing.

«KLASTER» metodi



Guruhlar uchun topshiriqlar:

Quyidagi rasm asosidayangi so’z va iboralardan foydalanib hikoya tuzing.		
I- guruh:	**II- guruh:**	**III- guruh:**
		

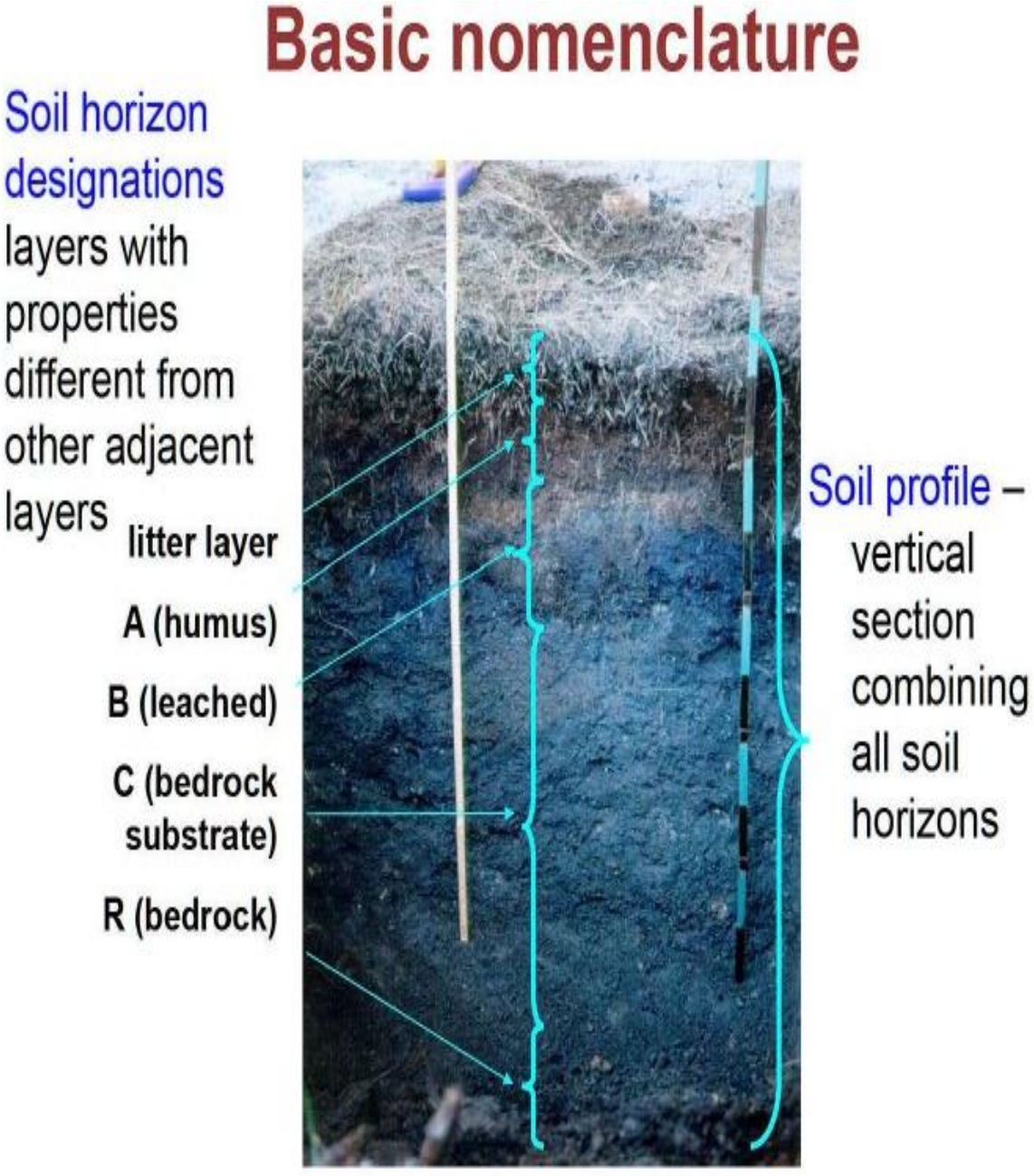
Fikringizga nima kelsa, barchasini yozing. G’oyalar sifatini muhokama qilmang faqat ularni yozing.

Guruhlar uchun topshiriqlar.

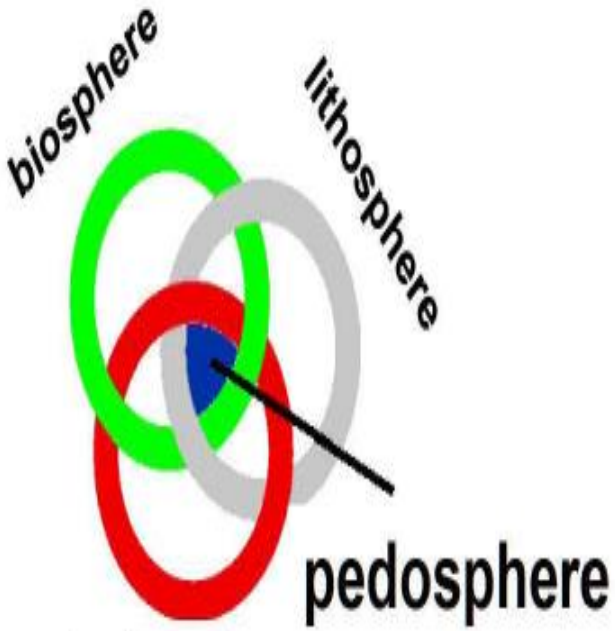
Guruh №1
How do you spend your day off?

Guruh №2
How did you spend your last day off?

Guruh №3
What are your plans for your next day off?



Soil – interface of systems



soil is natural unit generated at the interface of lithosphere and atmosphere under mutual process of pedogenetic factors

soil is binding element in between anorganic and organic matter and live organisms on the Earth

soil is desribed according to soil horizons

V.4 TESTLAR

1. PRACTICE TESTS

1.1. GRAMMAR TESTS

Grammar Test 1

Choose the best answer A, B, C or D.

1. The universe is estimated _____ between 10 billion and 20 billion years old.
A) being B) to be C) which is D) is

2. Genetically, the chimpanzee is more similar to human _____.
A) and than any other animal B) than any other animal C) any other animal is D) and any other animal is

3. _____ in 1939, the Borne Bridge spans the Cape Cod Canal and is one of the many grand projects of the Depression era.
A) Completed B) Completing C) Completes D) Being completing

4. Like the pyramid, the volume of a cone_____ by multiplying the area of the base by one third the altitude.
A) obtain B) is obtained C) obtaining D) obtains

5. Over the past 40 years, world demand for food_____.
A) triple B) tripled C) have tripled D) has tripled

6. The organizers would have responded positively to proposals if they_____ by 10th June.
A) were submitted B) would be submitted C) had been submitted D) would have been submitted

7. When I finish the course next year I _____ speak perfect French.
A) can B) will can C) was able to D) will be able to

8. You _____ to visit most museums in Britain.
A) mustn't pay B) don't have to pay C) cannot pay D) need not have paid

9. What_____? I can't find it in the dictionary.
A) means the word 'heliotrope' B) mean the word 'heliotrope'
C) does the word 'heliotrope' mean D) do the word 'heliotrope' mean

10. He_____ that his mobile phone had been out of action all day.
A) told B) said C) asked D) wanted to know

11. We asked the travel agent_____ a swimming pool at the villa.
A) is there B) was there C) if there was D) whether there is

12. I've never heard _____ ridiculous speech.
A) a such B) such a C) so a D) a so

Grammar Test 2

Choose the best answer A, B, C or D.

1. The fact _____ money orders can usually be easily cashed has made them a popular form of payment.
A) of B) that C) is that D) which is

2. The basic premise behind all agricultural production is _____ the riches of the soil available for human consumption.
A) to be made B) the making C) making is D) to make

3. So many whales_____ that they are in danger of dying out.
A) were killed B) are killed C) have killed D) have been killed

4. By the third month of the war rebel forces _____ most of the province.
A) takes B) took C) had taken D) were taking

5. If you _____ the 'record' button, the green light will come on.
A) will press B) would press C) press D) should press

6. The council _____ find ways of cutting costs last year.
A) must B) had to C) will have to D) has to

7. Unfortunately, you_____ grow bananas in the British climate.
A) may not B) can't C) must not D) ought not to

8. Who usually_____ the certificates at the graduation ceremony?
A) does present B) do present C) presents D) present

9. The manager told us last Friday evening that he wanted us in at 8 a.m. _____ to start the Saturday sale.
A) tomorrow B) the next day C) today D) the day before

10. The Stanford University survey asked respondents how much time_____ on the Internet.
A) did you spend B) did they spend C) they spend D) they spent

11. Generally_____, our best business comes via our website.
A) to speak B) speaking C) having spoken D) to have spoken

12. I have to say that the hotel wasn't quite _____ the brochure claimed.
A) as luxurious as B) more luxurious as C) so luxurious how D) as luxurious how

Grammar Test 3

Choose the best answer A, B, C or D.

1. Modern skyscrapers have a steel skeleton of beams and columns _____ a three-dimensional grid.
A) forms B) from which forming C) and forming D) that forms

2. In the late 1970s and early 1980s, the United States developed a reusable space shuttle _____ to space cheaper and easier.
A) to make access B) and making access C) which made accessible D) and made accessible

3. When I graduate from college next June, I _____ a student here for five years.
A) has been B) will be C) will have been D) had been

4. No biological life was found, though it_____ by many scientists.
A) had speculated B) have been speculating C) speculated D) had been speculated

5. If the museum had charged money for entry, a lot of people_____ able to use it at that time.
A) would not be B) would not have been C) were not D) had not been

6. Thanks to satellite technology, we _____ now predict hurricanes quite accurately.
A) may B) ought C) can D) must

7. If you think a piece of equipment in the gym isn't working properly and _____ mending, tell the instructor.
A) must B) may be C) should be D) needs

8. The government has broken all its pre-election promises regarding the Health Service, _____?
A) hasn't it B) hasn't the government C) has not it D) isn't it

9. The veterinarian told the farmer_____ the animal sleep.
A) let B) to let C) not let D) to not let

10. Professor Jones rang from Vancouver. He said he_____ to stay another week as the research was still going on there.
A) decides B) has decided C) had decided D) will decide

11. The Hyperlink modem is much _____ than any others in our catalogue.
A) fastest B) the fastest C) more faster D) faster

12. _____ regularly, the engine should last for 200,000 kilometers.
A) Serviced B) Servicing C) Service D) Having been servicing

Grammar Test 4

Choose the best answer A, B, C or D.

1. _____ more than 65,000 described species of protozoa of which more than half are fossils.
A) Being that there are B) There being C) Are there D) There are

2. We are not allowed _____ any arrangements for the conference before talking to him.
A) make B) made C) to make D) had made

3. In recent years, scientific and technological developments_____ human life on our planet.
A) change B) have changed C) have change D) changed

4. If the form had been completed correctly, the transfer _____ only two days.

A) would take B) will take C) took D) would have taken

5. Latecomers _____ to enter the theatre until there is a suitable break.
A) may not B) will not may C) will not be allowed D) will not have

6. Applicants for this desk-top publishing course must have good keyboarding skills but _____ to have prior publishing experience.
A) don't need B) must C) need D) mustn't

7. _____ does it take you to get to the university campus?
A) How quickly B) When C) How long D) How far

8. The manager asked the staff_____ anything in the office before the police arrived.
A) to touch B) not to touch C) to not touch D) don't touch

9. There are so many people here! But that TV programme a few weeks ago said the smaller islands of the archipelago _____ mostly uninhabited and very peaceful.
A) are B) is C) was D) were

10. The scientists said it was one of _____ earthquakes ever.
A) most powerful B) the most powerful C) powerfullest D) more powerful

11. _____ rich, he won't be able to afford this equipment.
A) Being not B) Not being C) Having not been D) Not to be

12. The candidates_____ in alphabetical order.
A) will be interviewed B) will interview C) will have been interviewed D) will have interviewed

Grammar Test 5

Choose the best answer A, B, C or D.

1. The company launched an advertising campaign _____ its market share.
A) to increase B) that increase C) that it increases D) to be increased

2. The new tax regulations are somewhat_____ last year's.
A) rigorouser than B) more rigorous than C) more rigorous as D) as rigorous than

3. The value of the currency fell, _____ foreign holidays more expensive.
A) having made B) making C) being made D) having been made

4. This area_____ by closed circuit cameras.
A) is monitoring B) has been monitoring C) is being monitored D) is been monitored

5. The firm _____ company cars to junior managers since 2002.
A) gives B) is giving C) has been giving D) has given

6. If the governments involved_____ positive action after the 1997 crisis, the current crisis would not have happened.
A) took B) take C) have taken D) had taken

7. They finish the new motorway next month so we _____ get to the coast much more quickly.
A) can B) will can C) will be able to D) will have to

8. You _____ have an international driving license for this country.
A) don't have to B) must not C) has to D) must not to

9. Our CEO entered his chosen career quite late, _____?
A) isn't it B) didn't he C) did not he D) didn't our CEO

10. The departmental manager _____ it was my fault that we had lost the Siemens contract.
A) told B) said me C) said D) told to me

11. Does the brochure say _____ in the villas.
A) how often is the bed linen changed B) how often the bed linen is changed
C) how is the bed linen changed often D) how the bed linen often is changed

12. The damage was _____ severe that the pilot couldn't regain control.
A) so B) such C) so a D) such a

Grammar Test 6

Choose the best answer A, B, C or D.

1. Much of the forest_____ out in the hurricane, as you can see.
A) has been wiped B) has wiped C) wiped D) was wiped
2. I _____ your report yesterday – could I see it now?
A) have not received B) not received C) did not receive D) did not received
3. Could you look after Mrs White tomorrow – I can't do it because I _____ back from the conference when she gets here.
A) will have travelled B) was travelling C) was going to travel D) will be travelling
4. The telecoms operator _____ figures showing that the demand for broadband Internet has grown twice this year.
A) has been published B) has published C) is being published D) will be published
5. If that package from Neilson's arrives this afternoon, _____it up to my office immediately.

A) you are bringing B) you would bring C) bring D) you brought

6. No conclusions _____ from this chapter.

A) can be drawn B) can't be drawn C) cannot be drawn D) can be not drawn

7. The files aren't here – I _____ them back at the office.

A) may leave B) must be leaving C) should have left D) must have left

8. Every new discovery seems to widen the horizon and increase the extent of _____ contact with unexplored areas.

A) our B) us C) we D) ours

9. I asked Martha _____ the conference had gone well.

A) what B) did C) if D) that
10. My boss was very supportive and encouraged me _____for the promotion.

A) to apply B) to have applied C) to applying D) to be applied
11. Tourism today is an industry _____ has grown so much in recent years that in many countries it provides the greatest single contribution to the country's revenue.
A) who B) which C) whose D) where
12. There is hardly _____ to be seen in the city centre after dusk.
A) nobody B) anybody C) everybody D) one
13. The new manager is sure _____ into ways to cut costs.
A) to looking B) to look C) being looked D) to be looked
14. Our new security scheme is much _____ than the previous Government's.
A) generouser B) more generouser C) generousest D) more generous
15. The Black Sea is _____ the North Sea.
A) not so stormy than B) not stormy as C) not so stormy like D) not so stormy as

Grammar Test 7

Choose the best answer A, B, C or D.

1. I_____ for a German laboratory for two years, from 1990 to 1992.
A) work B) have worked C) have been working D) worked
2. We _____ our normal suppliers, but we have changed our minds because we have found some new ones that are cheaper.
A) will use B) are going to use C) will be using D) were going to use
3. The statistics published yesterday _____ that over 30000 subscribers a week are turning to high-speed Internet services.
A) shows B) show C) are shown D) were shown
4. Gas is made up of very _____ molecules.
A) few B) less C) much D) a large number
5. They refused to give _____ explanation to the fact.
A) some B) any C) no D) not any
6. We had to get an interpreter in Japan because none of us_____ speak Japanese.

A) knew B) were able C) could D) succeeded

7. The Manager asked me _____ of the new proposal.

A) what did I think B) if I thought C) that I did think D) what I thought

8. He apologized _____ at the meeting late.

A) to arrive B) that he arrived C) of arriving D) for arriving

9. You _____ yet whether to study management or business administration.

A) need decide B) need deciding C) needn't decide D) need to have decided

10. Do you think we will be able to find _____ amongst all the people at the exhibition hall?

A) ourselves B) us C) each other D) our

11. All the problems _____ from both theoretical and experimental viewpoints.
A) will deal B) will deal with C) will be dealt with D) deal with
12. This keyboard is much _____ than any other in our catalogue.
A) convenienter B) convenientest C) more convenienter D) more convenient
13. These _____ are available in current literature.

A) datum B) datums C) datas D) data
14. The atomic weight of sulphur is twice _____ that of oxygen.
A) as large as B) as large than C) larger as D) so large as
15. There will be a repeat of the smog crisis of two years ago here if nothing _____ to control the fires.

A) be done B) will be done C) would be done D) is done

Grammar Test 8

Choose the best answer A, B, C or D.

1. We_____ that the authorities are not doing enough to restore this beautiful lake to its former state.
A) believing B) are believing C) believes D) believe
2. Customers in remote areas do not know whether the phone lines in their areas _____.
A) will be being upgraded B) will upgrade C) will be upgraded D) will have upgraded
3. Monsieur Degas _____ this afternoon, but he rang to change the appointment to next Tuesday.
A) would come B) was going to come C) is going to come D) will have come
4. _____ you those figures yet?
A) Has he sent B) Have he sent C) Has he send D) Did he send
5. Neil's a good administrator, but if he deals with customers, he always _____ problems.
A) creating B) creates C) created D) would create
6. If the temperature _____, the experiment might have been a failure.
A) had been not raised B) had not been raised C) had not raised D) would have been raised
7. I haven't seen Simone for ages - she_____ in a different department.

A) should work B) needn't have worked C) must be working D) ought to have been working

8. _____ these hypotheses can explain the origin of the solar system.

A) Nothing of B) No of C) Nobody of D) None of
9. At the meeting the shareholders asked how the company _____in the previous year.

A) did B) had done C) have done D) has done
10. At present intensive research _____ on the improvement of spaceflight conditions.

A) is done B) is doing C) is being done D) has been done

11. You _____ such a long essay. Three paragraphs would be enough to demonstrate your writing ability. You have written much more than that.
A) need have written B) needn't have written C) need write D) need writing
12. I thought the Government _____ genetically modified food. Didn't the Prime Minister say that himself?
A) is supported B) supported C) have been supported D) will support
13. Electronic devices are in wide use in this _____.
A) laboratory research B) laboratory's researches C) laboratories researches D) laboratories's research
14. The physiologists are rather worried about the side effects of aspirin. Can you recommend a _____ alternative?
A) safier B) safer C) more safe D) more safer

15. The older the formations, _____ generally to study.
A) hard they are B) they are hard C) the harder they are D) harder they are

Grammar Test 9

Choose the best answer A, B, C or D.

1. The main advantage of broadband Internet is that files _____ by users up to 40 times faster than with a dial-up modem.
A) can download B) can be downloaded C) must be loaded D) could download
2. How many units_____ last year?
A) sold you B) have you sell C) have you sold D) did you sell
3. If sales continue to do this well, we _____ our target by the end of next month.
A) will have reached B) are reaching C) will be reaching D) were reaching
4. Each year millions of reports on scientific research are published, a great number of _____ being in foreign languages.
A) their B) theirs C) them D) they
5. The device has got a year's guarantee, so you can bring it back if anything _____ wrong.
A) will go B) would go C) goes D) had gone
6. The research group might_____ good results.

A) getting B) got C) get D) not got

7. The detailed study of planets close to the Earth _____ in our knowledge concerning the origin of the solar system.

A) won't filled gaps B) will fill gaps C) not fill gaps D) fill gaps

8. I couldn't find Mrs Arnoux, so I asked her secretary _____.

A) was she there B) where was she C) where she was D) where she was being

9. He rang to ask _____we were still interested in the site or not.

A) whether B) when C) where D) that

10. I can't wait so you must give me an _____ answer.

A) immediately B) immediate C) more immediate D) most immediate

11. You can't have lost the laboratory key. It's got to be _____.

A) anywhere B) somewhere C) everywhere D) where some

12. The problems that exist with your experimetns today should _____ a month or two ago.
A) have been solved B) be solved C) have solved D) have been solving
13. In our study children on a diet high in dairy products tended to be considerably_____ than average.
A) more fat B) fatter C) fater D) more fatter
14. Petrol is _____ it was a few years ago.
A) twice more expensive as B) two times more expensive as C) twice as expensive as D) two times much expensive than
15. They are often confronted with difficult problems which they have to _____.
A) have solved B) solve C) be solving D) have been solving

Grammar Test 10

Choose the best answer A, B, C or D.

1. The weather forecast says there'll be wind from the north west tonight. That always _____ snow with it at this time of year.
A) bring ing B) bring C) brings D) has brought
2. I can't find Ms Brown – _____ to lunch?
A) Have she gone B) Has she gone C) Did she go D) Has she went
3. The materials _____ excessively wet or excessively dry for this purpose.
A) must be not B) must not be C) have not beD) has not be
4. Usually outstanding scientists _____ to give review papers.
A) are being invited B) are invited C) invited D) were being invited
5. If you_____ tomorrow, you'll have problems because of the volcano eruption in Iceland.

A) will travel B) travelled C) would travel D) travel

6. I_____ the contract if I had read it properly.

A) will have signed B) wouldn't have signed C) didn't sign D) signed

7. Sorry, but_____ you give me a hand with these test tubes? They're very fragile.

A) might B) may C) would D) shall
8. We _____them the reminder on Monday morning because the cheque arrived that afternoon.

A) needed to send B) needn't send C) needed to have sent D) needn't have sent
9. I didn't receive the ticket, so I rang the travel agent to find out if they _____it.

A) sent B) had sent C) have sent D) sends

10. I rang to ask when they _____, but in fact they had already relocated.

A) are moving B) will move C) shall move D) were moving

11. Many research scientists are inspired by the hope of _____ diseases by genetic engineering,

A) cure B) having cured C) being cured D) curing

12. The new chess champion from Ukraine is amazing. _____ can beat him!

A) Anyone B) Everyone C) No one D) One

13. He brought a laptop _____ his e-mails when he was travelling.
A) access B) to access C) to have accessed D) to be accessed
14. I don't mind the Mediterranean summer because it's a_____ heat than you find in the tropics.
A) dryer B) drier C) more dry D) more drier
15. It doesn't rain _____ it does in autumn.
A) as much in summer as B) as many in summer as C) so much in summer than D) as much in summer like

Grammar Test 11

Choose the best answer A, B, C or D.
1. Prior to the 19th century, professional scientists _____ and scientific research was largely carried out by amateurs.
A) have not existed B) not existed C) did not exist D) do not exist
2. Everybody _____ that rainforests are disappearing.

A) is knowing B) are knowing C) know D) knows
3. Analysis of the Martian soil suggests that water exists on Mars, and there are a _____ areas where scientists believe ice forms and melts.
A) many B) much C) few D) little
4. In recent years, many plans _____ for large 'floating cities' with living accommodation for as many as 50,000 people.
A) have made B) have been making C) have been made D) making
5. The world's oceans contain huge amounts of salt. In fact, if you _____ all the salt from the oceans, you _____ to use it to build a wall about 300 km wide and a kilometer tall all around the Earth!
A) remove/will be able B) removed/would be able
C) had removed/would have been able C) would remove/were able
6. When you look into the night sky, you may not be able to tell the difference between stars and planets, but planets are _____ to Earth.
A) a lot nearer B) nearer than C) less near than D) more nearer
7. The explorer tried _____ the journey the next year, but failed again.
A) complete B) completing C) to complete D) in completing
8. Rapid population growth _____ cause problems.
A) must B) can C) need D) have to
9. You _____ look at other students' work. It's against the rules.
A) had better not B) needn't C) don't have to D) mustn't
10. The latest study_____ by these two environmental engineers has produced mixed results.
A) conducting B) conducted C) been conducted D) having been conducted
11. Polar bears, _____ are excellent swimmers, can often be seen in open water kilometers from land.
A) that B) which C) whom D) why
12. It remains to be seen _____ great companies or make them stronger than ever.
A) if the new technology will weaken B) will the new technology weaken
C) weaken the new technology D) when the new technology weakens
13. The participants were told _____ any questions while the experiment was going on.
A) not to ask B) not ask C) do not ask D) to not ask
14. According to the plans, for this project, this huge ship _____ from smaller units.
A) will construct B) will be constructing C) will be constructed D) will have been constructed
15. _____ a range of forest types depending on the annual rainfall.
A) It is B) They are C) There are D) There is

Grammar Test 12

Choose the best answer A, B, C or D.

1. Although rainforests cover only six per cent of the Earth's land surface, they_____ about 50% of all species of life on the planet.
A) containing B) are containing C) contain D) have been containing
2. When Edouard Benedictus, a French scientist, _____ in his laboratory, he dropped a glass bottle which had some plastic inside – and invented safety glass.
A) was working B) has worked C) works D) worked
3. _____ desert plants store food in their leaves or roots, and some desert plants can live for many years.
A) Many B) A lot C) Lots D) much
4. The passengers of the cruise ship _____ with all kinds of entertainment and sports facilities.

A) will have providedB) will be provided C) will provide D) will be providing
5. Humans are among the few animals to have colour vision. If you _____ a horse, for example, you _____ everything in black and white.
A) would be/saw B) are/will see
C) had been/would have seen D) were/would see
6. Planets are very far away, and a journey to Mars would take about 9 months, _____ a journey to the Moon (about 3 days).
A) more longer than B) as long as C) much longer than D) longest than
7. John Stuart decided _____ Australia from south to north in 1859.
A) cross B) to cross C) crossing D) in crossing
8. One of the possible reasons for sleeping is that if we didn't sleep and save some energy, we _____ have to eat a lot more food.
A) can't B) will C) may D) must
9. Are you any good at athletics? How fast _____ you run?
A) should B) must C) need D) can
10. Before _____ about the problems caused by large-scale industry, it makes sense to consider small-scale pollution at home.
A) worrying B) worried C) been worried D) having been worried
11. Today, mountain forests and fresh springs surround the rim of the crater's walls, _____ reach an elevation of 2286 km.
A) that B) what C) those D) which
12. Do you happen to know _____ similar in size?
A) are the Arabian Desert and the Gobi Desert B) whether the Arabian Desert and the Gobi Desert are
C) the Arabian Desert and the Gobi Desert are C) if are the Arabian Desert and the Gobi Desert
13. The Managing Director told his secretary _____ anyone in during the staff meeting.
A) not let B) don't let C) not to let D) to not let
14. Old companies always _____ new technology.
A) fear B) are feared C) are being feared D) have been feared
15. Each species of frog has a particular set of sounds, because _____ important that frogs of the same species find each other.
A) it is B) they are C) there is D) there are

Grammar Test 13

Choose the best answer A, B, C or D.

1. While he _____ the Moon through his telescope, Galileo realized that it had mountains and craters.
A) observed B) was observing C) observes D) observing
2. This telescope is excellent! It _____ for fifteen years, and it has produced more than 700,000 images of the universe.
A) works B) have worked C) has been working D) worked
3. You can't swim in the Dead Sea because it contains too _____ salt.
A) many B) a lot of C) lots D) much
4. Worldwide sales of bottled water _____ to reach $72 billion by next year.
A) forecast B) forecasted C) is forecast D) are forecast
5. If a storm _____ Bartolomeu Dias's ship off the coast of Africa in 1487, they _____ in the Indian Ocean by accident.
A) had not hit/would not have arrived B) did not hit/would not arrive
C) would not hit/did not arrive D) would not have hit/had not arrived

6. Hot water can freeze _____ cold water.
A) more easy than B) more easily than C) as easier as D) easiest as
7. Finally in 1861 Stuart managed _____ at the northern coast of Australia, near the modern city of Darwin.
A) to arrive B) arriving C) in arriving D) arrive
8. Scientists could not understand why Mercury appeared to rotate faster than it should, and some astronomers suggested that there _____ be an undiscovered planet causing this unusual orbit and even gave it the name 'Vulcan'.
A) can not B) might C) need D) mustn't
9. You _____ eat so many sweets. They aren't good for you.
A) had better B) don't have to C) shouldn't D) needn't
10. The results _____ by our American colleagues are easy to explain if you apply Einstein's theory of relativity.
A) obtaining B) been obtained C) having been obtained D) obtained
11. Millions of years ago, Ngorongoro was an active volcano with a cone _____ some scientists believe was as high as Mount Kilimanjaro.
A) what B) where C) that D) why
12. Do you know _____?
A) how high is Mount Everest B) how Mount Everest is high C) Mount Everest how high is D) how high Mount Everest is
13. The explorer asked his companions _____ fires after dark.
A) not make B) don't make C) to not make D) not to make
14. In many countries in recent years, areas of urban land which were once used for industry _____ for other purposes.
A) have redeveloped B) have been redeveloped C) have redeveloping D) have being redeveloping
15. At the Equator, _____ a lot of rain, on average more than 200 cm per year.
A) it is B) they are C) there is D) there are

Grammar Test 14

Choose the best answer A, B, C or D.

1. In recent years, cable television _____ the power of the broadcasters.
A) has undermined B) undermined C) was undermined D) undermining
2. In 1999, 156 countries _____ the Kyoto protocol, part of a United Nations agreement on climate change.
A) have signed B) signed C) signing D) were signing
3. In geography, a desert is an area which receives little rain and which loses _____ its moisture through evaporation.
A) a lot of B) a lot of C) many D) much
4. Overcrowded classrooms frequently _____ levels of carbon dioxide that would be regarded as unacceptable on board a submarine.
A) are contained B) contain C) contains D) containing
5. If Charles Darwin _____ a voyage to South America between 1831 and 1836, he _____ his famous book *The Origin of Species,* which argued that living creatures evolved over millions of years.
A) did not take/would not write B) would not take/did not write
C) would not have taken/had not written D) had not taken/would not have written
6. Research shows that levels of pollutants are usually _____ indoors than out, even in the most polluted cities.
A) highest B) most high C) more high D) higher

7. On that expedition, Stuart failed _____ the coast, and turned back ill and short of food.
A) to reach B) reaching C) in reaching D) reach
8. Lack of sleep _____ damage the immune system, so people who do not sleep enough tend to fall ill more often.
A) can B) should C) must D) need to
9. I'm really tired, but luckily I _____ get up early in the morning.
A) can't B) don't have to C) had better D) shouldn't
10. Some amateur paleontologists insist that _____ fossils can be really exciting.
A) having collected B) collect C) having been collected D) collecting
11. The Polar Bear, _____ is threatened by global warming, may become extinct by the end of the century.
A) that B) which C) whom D) those
12. We still don't know how many _____ in the earthquake.
A) have people been injured B) if people have been injured
C) people have been injured D) whether have people been injured
13. People once thought that coal and sulphur burning below ground _____ volcanic eruptions
A) cause B) are causing C) caused D) will cause
14. Since the 1980s, $ 10 billion _____ on the project.
A) has been spent B) has spending C) has been spending D) has spent
15. In a tropical forest, _____ difficult for plants on the forest floor to develop, as tall trees (25-35 metres) block the light.
A) they are B) there are C) there is D) it is

Grammar Test 15

Choose the best answer A, B, C or D.
1. News of this technological development _____ some years ago.
A) has been published B) was published C) published D) have been published
2. Since the early 1980s, we_____ aware of the devastating effects of large-scale environmental pollution.
A) are B) have been C) are being D) will be
3. Reptiles, such as snakes, lizards and tortoises, spend _____ hours in the sun to generate body heat.
A) lots B) a lot C) many D) much
4. New technologies always _____ within them both threats and opportunities.
A) contain B) are contained C) containing D) have been contained
5. If Columbus _____ about Marco Polo's trip to China, he _____ to sail there by crossing the Atlantic.
A) did not read/would not try B) had not read/would not have tried
C) would not have read/had not tried D) would not read/would not try
6. Brazil's Amazon forest is disappearing _____ scientists previously imagined.
A) as fast than B) less faster than C) fastest than D) faster than
7. John Stuart's expedition succeeded _____ a huge desert.
A) to discover B) discovering C) in discovering D) discover
8. Most of us enjoy a good night's sleep, but we _____ not realize just how important sleep is.
A) must B) should C) may D) can
9. I think that was the last bus. _____ look for a taxi.

A) We needn't B) We'd better C) We're able to D) We don't have to

10. _____ all those contradictory data, the researchers had some difficulty trying to interpret them in a proper way.

A) Collected B) Having been collected C) Having collected D) Being collected

11. Contained within the Ngorongoro Conservation Area is the geologically important and historically controversial Olduvai Gorge, _____ the anthropologists Louis and Mary Leakey discovered numerous specimens of the fossil remains of early humans.

A) which B) where C) that D) whom

12. The researchers are wondering how long _____ in tap water.

A) chlorine stays B) does chlorine stay C) does chlorine stays D) if chlorine stays

13. Scientists predicted when _____ by measuring movements in the Earth.

A) the volcano will erupt B) will the volcano erupt

C) the volcano would erupt D) would the volcano erupt

14. Modern recycling methods _____ to save energy on board the Freedom Ship.

A) will use B) will be using C) will have used D) will be used

15. Frogs lay large numbers of eggs, because _____ likely that predators will eat most of them.

A) they are B) it is C) there is D) there are

1. 2. VOCABULARY TESTS

Vocabulary Test 1

Read the text below and decide which answer A, B, C or D best fits each space.

Sound Advice for Language Learners

A recent (0)…*B*….. of a language learning magazine has consulted a number of experts in the (1)……..of second language acquisition. Their advice may prove invaluable for those (2) ……..a language course. One suggestion is that you (3)…….. whether you are likely to be successful at learning a language. Did you enjoy studying languages at school, for example? Do you have enough time to learn a language? The major (4) …….. will be your own time and effort. Therefore you must make sure that the course on offer leads to a (5) …….. qualification. Also, be realistic in your (6)…… . If you don't set achievable aims you are most likely to give up. Do not be deceived (7)…….. thinking that the most expensive courses are the best. (8)…….. around to get the best possible value for money. You should also bear in mind that the quicker you learn a language the more quickly you forget it. Sandra Miller, a French teacher, tried to teach herself German by enrolling on a (9)…….. course. Already fluent in four languages and with a sound knowledge of teaching methodology her chances of (10)…….. progress were high. Three years (11)…….. she remembers very little. She feels her biggest mistake was not to follow (12)…….. her first experience. "I should have consolidated what I had learnt by continuing to study, even if it were by myself."

0	A series	B issue	C programme	D release
1	A domain	B branch	C field	D area
2	A wondering	B thinking	C looking	D considering
3	A assess	B review	C balance	D survey
4	A charge	B cost	C price	D valuation

5	A recognised	B understood	C valued	D regarded	
6	A sights	B ends	C objects	D goals	
7	A by	B about	C into	D in	
8	A Nose	B Push	C Run	D Shop	
9	A rapid	B crash	C quick	D fast	
10	A achieving	B doing	C gaining	D making	
11	A on	B forward	C from	D onward	
12	A up	B on	C through	D out	

Vocabulary Test 2

Read the text below and decide which answer A, B, C or D best fits each space.

Improving Your Intellect

A (0)…*B*….. of researchers at the University of California claimed in a recently published report that listening to classical music can actually improve one's level of intelligence. This surprising claim was (1)…….. after groups of volunteers listened to three different tapes and completed IQ tests after listening to each one. The volunteers (2)…….. ten minutes of Mozart, a relaxation tape and a recording of silence. When making the test after listening to Mozart, the subjects' scores were noticeably (3)…….. than after the other two. However, the tape had no (4)…….. effect on any of the volunteers' intelligence levels.

Researchers believe that this kind of music opens certain neural networks which are used when performing intellectual tasks like puzzle (5)…….. . They do not claim that Mozart alone among classical composers is (6)…….. of lifting your spirits and boosting brain-power, but they do believe that this particular composer's distinctive style makes his works ideally suited for stimulating our grey matter. Researchers in New Zealand attempted to (7)…….. these results, but their efforts did not (8)…….. with success. Despite this lack of this outside verification, the Californian team are determined to carry (9)…….. . Further (10)…….. have been planned, this time using a (11)…….. range of audio material. Chris Band, one of the leaders in the UK intelligence research field, has poured cold water on Californian claims. He asserts that their results cannot be (12)…….. seriously until someone else manages to reproduce them.

0	A party	B team	C band	D gang	
1	A made	B said	C stated	D done	
2	A heard	B listened	C followed	D attended	
3	A larger	B more	C greater	D higher	
4	A last	B permanent	C final	D constant	
5	A solving	B working	C doing	D putting	
6	A capable	B able	C competent	D proficient	
7	A redo	B copy	C imitate	D reproduce	
8	A engage	B welcome	C meet	D accept	
9	A off	B on	C along	D out	
10	A trials	B experiences	C efforts	D attempts	
11	A longer	B richer	C further	D broader	
12	A faced	B accepted	C taken	D believed	

Vocabulary Test 3

Read the text below and decide which answer A, B, C or D best fits each space.

Environmental Concerns

Earth is the only (0)…*B*….. we know of in the universe that can support human life. (1)…….. human activities are making the planet less fit to live on. As the western world (2)…….. on consuming two-thirds of the world's resources while half of the world's population do so (3)…….. to stay alive we are rapidly destroying the (4)…….. resources we have by which all people can survive and prosper. Everywhere fertile soil is (5)…….. built on or washed into the sea. Renewable resources are exploited so much that they will never be able to recover (6)…….. . We discharge pollutants into the atmosphere without any thought of the consequences. As a (7)…….. the planet's ability to support people is being (8)…….. at the very time when rising human numbers and consumption are (9)…….. increasingly high demands on it.

The Earth's (10)…….. resources are there for us to use. We need food, water, air, energy, medicines, warmth, shelter and minerals to (11)…….. us fed, comfortable, healthy and active. If we are sensible in how we use the resources they will (12)…….. indefinitely. But if we use them wastefully and excessively they will soon run out and everyone will suffer.

0	A situation	B place	C position	D site	
1	A Still	B Even though	C In spite of	D Despite	
2	A continues	B repeats	C carries	D follows	
3	A already	B just	C for	D entirely	
4	A alone	B individual	C lone	D only	
5	A sooner	B neither	C either	D rather	
6	A quite	B greatly	C utterly	D completely	
7	A development	B result	C reaction	D product	
8	A stopped	B narrowed	C reduced	D cut	
9	A doing	B having	C taking	D making	
10	A natural	B real	C living	D genuine	
11	A hold	B maintain	C stay	D keep	
12	A last	B stand	C go	D remain	

Vocabulary Test 4

Read the text below and decide which answer A, B, C or D best fits each space.

No More Classes

The use (0)…*C*….. computers has meant students can study language programmes (1)…….. their own speed when and for how long they want – and no need to worry about the teacher having a favourite or doing (2)…….. another boring lesson. What's more, in the virtual classrooms of the future the student will (3)…….. on their headset, and be transported into an imaginary school, choose their class, take the books they need off the shelf and (4)…….. conversations with other computerized students.

They might (5)…….. choose to pay a visit to the supermarket or the train station, the bank or the restaurant. At the (6)…….. of a button they would be transported to (7)……..realistic settings where they could practice their English, maybe getting a hand (8)…….. a virtual English companion. All this perhaps, at the computer, from the comfort of their home: no (9)……..to catch the bus to college, or a plane to England.

Exciting? Certainly, and an interesting alternative to traditional classroom lessons. But would it ever (10)…….. the classroom? Hopefully not. (11)…….. the need to relate to real people talking about real issues and generally learning a little more about others will always lead language learners to (12)……..at least a little of their time with real people.

0	A in	B at	C of	D to
1	A with	B for	C at	D in
2	A still	B for	C yet	D already
3	A place	B put	C set	D get
4	A take	B do	C catch	D hold
5	A although	B preferably	C instead	D contrary
6	A force	B hit	C depress	D push
7	A so	B such	C like	D alike
8	A with	B to	C from	D for
9	A role	B duty	C obligation	D need
10	A replace	B restore	C succeed	D recover
11	A definitely	B mainly	C totally	D surely
12	A spend	B make	C have	D do

Vocabulary Test 5

Read the text below and decide which answer A, B, C or D best fits each space.

The Sahara

Around 4,000 BC, the Sahara began to turn (0)…*A*….. a desert. Since that time, it has slowly been growing larger and larger and today it is the world's largest desert. It (1)…….. nine million square kilometers of Africa, that is, as (2)…….. land as the United States. The Sahara is mostly made up of mountains, bare rocky plains and high flatlands (3)…….. plateaus. The rest is a(n) (4)…….. sea of sand which in some (5)…….. piles up into dunes. Very few plants survive more than a few weeks and those that do have adapted deep roots or take in moisture (6)…….. their leaves. The desert is hot and dry during the day but (7)……..cool at night. Many of the two million people who (8)……..in the Sahara are nomads – people who travel from place to place to (9)…….. food and water for themselves and their animals. This traveling is necessary since the Sahara gets less than ten centimeters of water a year. Other people (10)……., prefer not to travel and live in oases. Oases are places where water comes from wells or springs and where people can (11)…….. their crops and water their animals. This picture of the Sahara is different to how it was over ten thousand years (12)……., when it had lakes and streams and was a fertile place.

0	A into	B to	C from	D out
1	A has	B covers	C takes	D owns
2	A long	B far	C much	D many
3	A said	B named	C told	D called
4	A extreme	B huge	C bulky	D extended
5	A sites	B events	C places	D positions
6	A in	B on	C through	D about
7	A turns	B converts	C changes	D has
8	A inhabit	B live	C stay	D exist
9	A explore	B invent	C find	D supply
10	A although	B but	C and	D however
11	A grow	B raise	C develop	D increase
12	A since	B before	C ago	D after

Vocabulary Test 6

Choose the word or phrase (A, B, C or D) that best keeps the meaning of the original sentence if it is substituted for the underlined word or phrase.

1. The buyer wanted the furniture manufacturer to cut his prices.
A) do away with B) make use of C) reduce D) review
2. The prime ingredient in table salt is sodium.
A) curious B) unexpected C) effective D) main
3. The temperature of water can accelerate a chemical reaction.
A) quicken B) increase C) delay D) stop
4. He is very enthusiastic about his acceptance to the University.
A) excited B) pleased C) passive D) non-committal
5. What is necessary now is a correct balance of the use of coal, gas, oil and nuclear power.
A) method in B) mixture of C) technique D) technology in
6. The cup was filled to the rim.
A) to the brim B) too full C) overflowing D) half way
7. She always avoided her bad-tempered aunt.
A) disliked B) remembered C) took care of D) evaded
8. I was all alone and felt like crying.
A) sad B) unhappy C) lonely D) unloved
9. He looked up just as the sun emerged from the cloud.
A) vanished in B) covered C) appeared out of D) revealed
10.A flying aeroplane maintains its equilibrium as long as there is sufficient support from the pressure of air or wind against its wings.
A) equanimity B) balance C) ability to fly D) flight path

Vocabulary Test 7

Choose the word or phrase (A, B, C or D) that best keeps the meaning of the original sentence if it is substituted for the underlined word or phrase.

1. A conscientious scientist hardly ever bases his research on a guess.
A) probably B) variably C) scarcely D) undeniably
2. The University basketball team is undoubtedly the best one in the city.
A) persistently B) relatively C) certainly D) practically
3. There is an abundance of ore in the mountain area.
A) a wide variety B) more than sufficient C) a unique type D) a common type
4. Severe criticism does not create a supportive learning environment.
A) harsh B) unfair C) special D) light
5. They adapted slowly because their surroundings were so new to them.
A) warmed up B) adjusted C) frozen D) improved
6. Congress is discussing tax rates tomorrow in a closed session.
A) abolishing B) reducing C) debating about D) revoking
7. He has a fine apartment with all the modern conveniences.
A) house B) flat C) office D) department
8. The child died from lack of care and proper nourishment.
A) excess B) desire C) denial D) absence
9. The basic colours of the spectrum are red, blue and yellow.
A) necessary B) secondary C) exceptional D) primary
10. His attempts to shift the blame for his defeat onto his companion met no response.
A) responsibility B) importance C) reason D) necessity

Vocabulary Test 8

Choose the word or phrase (A, B, C or D) that best keeps the meaning of the original sentence if it is substituted for the underlined word or phrase.

1. Modern technology was not generally available before the 1930s.
A) at the time of B) prior to C) due to D) thanks to
2. A group of geologists explored the caves.
A) isolated B) inscribed C) tested D) examined
3. Ecologists are advocating measures to clean the polluted areas.
A) supporting B) opposing C) discouraging D) believing in
4. The Mississippi River flood in 1994 was devastating.
A) divisible B) crushing C) damaging D) shocking
5. At times the vital balance between animals and plants is upset by man's interference.
A) good intentions B) intrusion C) assistance D) withdrawal
6. Congress is discussing tax rates tomorrow in a closed door session.
A) abolishing B) reducing C) debating about D) revoking
7. Suddenly a cloud appeared on the horizon.
A) emerged B) grew larger C) was hidden D) turned back
8. His enthusiasm for sports affected the results of his school examination.
A) effected B) improved C) influenced D) inspired
9. The population of the town is slightly less than one hundred thousand people.
A) even B) a little C) a lot D) much
10. Gradually the participants of the conference filled the conference hall.
A) all at once B) recently C) suddenly D) little by little

Vocabulary Test 9

Choose the word or phrase (A, B, C or D) that best keeps the meaning of the original sentence if it is substituted for the underlined word or phrase.

1. If water freezes, its volume increases.
A) varies B) expands C) diminishes D) weighs
2. The scientist studied his subject thoroughly before he started the project.
A) incredibly B) in depth C) in vain D) imperceptibly
3. In the laboratory the test tube rack is adjacent to the desk.
A) far from B) within C) behind D) next to
4. The drop in temperature was negligible.
A) unimportant B) average C) needless D) misleading
5. The young engineer had to take upon himself all the blame for the failure of the project.
A) recognition B) praise C) responsibility D) credit
6. The rain was lashing and it was cold in the room without a fire.
A) stuffy B) cosy C) icy D) chilly
7. I am alone and can do more or less whatever I like.
A) solitary B) superior C) among friends D) grown-up
8. The government's failure to establish any sound economic policy was acknowledged by the minister.
A) talked about B) made public C) admitted D) denied
9. Our manufacturing methods will be adapted to conform to the new technology.
A) improved B) renewed C) adjusted D) tolerated
10. The debate about the health care reform seems to go on endlessly.
A) discussion B) complaints C) disquietude D) disagreement

Vocabulary Test 10

Choose the word or phrase (A, B, C or D) that best keeps the meaning of the original sentence if it is substituted for the underlined word or phrase.

1. The Alps are <u>huge</u> and treacherous mountains.
A) low B) spectacular C) enormous D) solid
2. In colonial times marketing was basically <u>an exchange of goods and services.</u>
A) a harmony B) a collection C) a trade D) a cycle
3. The doctor <u>verified</u> that the disease could be prevented.
A) confirmed B) stated C) believed D) disproved
4. The economic conditions <u>influenced</u> the Ukrainian life style.
A) effected B) affected C) improved D) stabilized
5. We put up tents <u>on the border of the lake</u>.
A) on the edge of the lake B) near the lake C) on the pier of the lake D) in front of the lake
6. We asked a plumber to take a look at our bathroom so he could make <u>an estimate</u> of the repair costs.
A) a hypothesis B) a rough calculation C) a long list D) a proposal
7. We are <u>alone</u> here; you can tell me whatever you've come to tell.
A) among friends B) by ourselves C) close together D) forgotten
8. <u>Want</u> of money forced the old man to go begging.
A) excess B) love C) banishment D) lack
9. He <u>acknowledged</u> his defeat in the chess tournament by failing to appear in the last game.
A) refused B) spoke about C) admitted D) learned about
10. The gallery displayed an <u>authentic</u> picture by da Vinci.
A) genuine B) antique C) expensive D) forgotten

Vocabulary Test 11

Choose the word or phrase (A, B, C or D) which best completes each sentence.

1. Technology has indeed had a significant _____ on our lives today.
A) change B) role C) effort D) effect
2. The experiment was successfully _____ by a team of scientists.
A) performed B) created C) operated D) fulfilled
3. The third _____ of the book has not been published yet.
A) report B) publicity C) edition D) issue
4. Since he lost his job last year, he has been _____.
A) unworked B) resting C) sitting D) unemployed
5. This tradition is _____. It is found nowhere else in the world.
A) rare B) individual C) single D) unique
6. Her problem was that she _____ stand losing.
A) couldn't B) wouldn't C) didn't D) shouldn't
7. They decided to _____ the deadline.
A) proceed B) travel C) extend D) continue
8. The management promise to _____ action if a customer has been poorly treated by the staff.
A) take B) get C) make D) do

9. The next generation of telephones in every home will _____ us to see the person we are speaking to.
A) permit B) enable C) assist D) let
10. The repairs will be carried out _____ a week of receipt of your call.
A) with B) for about C) until D) within

Vocabulary Test 12

Choose the word or phrase (A, B, C or D) which best completes each sentence.

1. The bigger the memory on your hard disk, the more _____ you can store.
A) details B) money C) data D) transactions
2. Alexander Graham Bell _____ the telephone.
A) invented B) discovered C) founded D) created
3. This job requires certain _____. You have to be good at operating computers and dealing with people.
A) qualifications B) skills C) techniques D) knowledge
4. The pumping of industrial _____ into the sea kills marine life.
A) sewage B) litter C) rubbish D) waste
5. Traffic congestion can _____ to delays in reaching your destinations.
A) lead B) drive C) result D) direct
6. Please make _____ your mind what you what to do.
A) out B) clear C) sure D) up
7. The _____ requirements for British universities is usually three A levels.
A) exit B) reception C) entrance D) coming
8. You ought to take _____ of the great prices in the winter sales.
A) opportunity B) advantage C) profit D) benefit
9. The hang-glider pilot _____ to land safely, despite the strong wind.
A) achieved B) managed C) resulted D) succeeded
10. She's got a new job. She's been put in _____ of the Loans Department in the bank.
A) control B) authority C) power D) charge

Vocabulary Test 13

Choose the word or phrase (A, B, C or D) which best completes each sentence.

1. A lot of _____ has been put into finding effective ways to protect our natural environment.
A) effort B) job C) task D) attempt
2. Nicolas Copernicus _____ the orbits of the planets.
A) created B) invented C) devised D) discovered
3. Computer services are at the public's _____ in most libraries.
A) availability B) employment C) disposal D) practicality
4. The vegetation in one part of the forest is so _____ that when you look up you cannot see the sky.
A) dense B) dim C) close D) heavy
5. I was under the _____ that you knew how to use this programme.
A) understanding B) impression C) belief D) feeling
6. The famous scientist came _____ against different kinds of problems when he first settled in Spain.
A) out B) in C) off D) up

7. When developing new products, there can be any number of problems that _____.
A) await B) arise C) come D) exist
8. She was going to apply for a new job, but in the end she changed her _____.
A) mind B) heart C) thoughts D) opinion
9. Playing a sport can help people to _____ with the stress of modern life.
A) live B) manage C) cope D) survive
10. There is a _____ relationship between the quality of our employees and the quality of our products.
A) strong B) high C) deep D) sharp

Vocabulary Test 14

Choose the word or phrase (A, B, C or D which best completes each sentence.

1. The computer should be seen as a _____ we use to help us do our work.
A) power B) research C) tool D) source
2. Prices for accommodation _____ greatly depending on location.
A) range B) vary C) adjust D) waver
3. We thought the holiday resort we stayed in had very good _____ for children.
A) services B) equipment C) facilities D) conveniences
4. Due to a/an _____ of cash, the government has cancelled its development plans.
A) decrease B) minus C) absence D) shortage
5. As a _____ of leaving the window open, the laboratory was burgled.
A) cause B) reason C) decision D) result
6. The nurses cleaned the wound to reduce the risk _____ infection.
A) of B) from C) about D) for
7. It's a good thing for young people to be _____ in sport.
A) capable B) occupied C) involved D) good
8. Although the task is difficult, you must try to _____ your best.
A) get B) make C) have D) do
9. The children are more _____ to do well in a school where they are happy.
A) likely B) sure C) definite D) certain
10. He set up his first company while _____ at university.
A) yet B) still C) then D) even

Vocabulary Test 15

Choose the word or phrase (A, B, C or D) which best completes each sentence.

1. Most young people in the Western world have _____ to a decent education.
A) entrance B) reach C) access D) opportunity
2. We are just going to have to _____ the money from a bank.
A) borrow B) loan C) owe D) lend
3. The tourist _____ is very important to the economies of some countries.
A) trade B) industry C) business D) profession
4. Banks pay you _____ if you leave your money in an account.
A) interest B) profit C) value D) income
5. It can be difficult to get used to the _____ of life in another country.
A) kind B) way C) system D) habit
6. At this airport a plane lands or takes off every two minutes _____ average.
A) at B) with C) by D) on

7. They decided to meet and discuss a _____ range of issues.
A) wide B) plentiful C) lasting D) long
8. My computer developed a virus that I just couldn't get _____ of.
A) out B) away C) rid D) free
9. Critics of the post office have _____out that there are still long queues in many branches.
A) spoken B) given C) let D) pointed
10. The award was received by the manager on _____ of his staff.
A) account B) behalf C) place D) honour

APPENDIX A

KEY TO PRACTICE TESTS

Grammar Tests

Grammar Test 1: 1-B, 2-B, 3-A, 4-B, 5-D, 6-C, 7-D, 8-B, 9-C, 10-B, 11-C, 12-B

Grammar Test 2: 1-B, 2-D, 3-D, 4-C, 5-C, 6-B, 7-B, 8-C, 9-B, 10-D, 11-B, 12-A

Grammar Test 3: 1-D, 2-A, 3-C, 4-D, 5-B, 6-C, 7-D, 8-A, 9-B, 10-C, 11-D, 12-A

Grammar Test 4: 1-D, 2-C, 3-B, 4-D, 5-C, 6-A, 7-C, 8-B, 9-D, 10-B, 11-B, 12-A

Grammar Test 5: 1-A, 2-B, 3-B, 4-C, 5-C, 6-D, 7-C, 8-A, 9-B, 10-C, 11-B, 12-A

Grammar Test 6: 1-A, 2-C, 3-D, 4-B, 5-C, 6-A, 7-D, 8-A, 9-C, 10-A, 11-B, 12-B, 13-B, 14-D, 15-D

Grammar Test 7: 1-D, 2-D, 3-B, 4-A, 5-B, 6-C, 7-D, 8-D, 9-C, 10-C, 11-C, 12-D, 13-D, 14-A, 15-D

Grammar Test 8: 1-D, 2-C, 3-B, 4-A, 5-B, 6-B, 7-C, 8-D, 9-B, 10-C, 11-B, 12-B, 13-A, 14-B, 15-C

Grammar Test 9: 1-B, 2-D, 3-A, 4-C, 5-C, 6-C, 7-B, 8-C, 9-A, 10-B, 11-B, 12-A, 13-B, 14-C, 15-B

Grammar Test 10: 1-C, 2-B, 3-B, 4-B, 5-D, 6-B, 7-C, 8-D, 9-B, 10-D, 11-D, 12-C, 13-B, 14-B, 15-A

Grammar Test 11: 1-C, 2-D, 3-C, 4-C, 5-B, 6-A, 7-C, 8-B, 9-D, 10-B, 11-B, 12-A, 13-A, 14-C, 15-D

Grammar Test 12: 1-C, 2-A, 3-A, 4-B, 5-D, 6-C, 7-B, 8-C, 9-D, 10-A, 11-D, 12-B, 13-C, 14-A, 15-A

Grammar Test 13: 1-B, 2-C, 3-D, 4-D, 5-A, 6-B, 7-A, 8-B, 9-C, 10-D, 11-C, 12-D, 13-D, 14-B, 15-C

Grammar Test 14: 1-A, 2-B, 3-A, 4-B, 5-D, 6-D, 7-A, 8-A, 9-B, 10-D, 11-B, 12-C, 13-C, 14-A, 15-D

Grammar Test 15: 1-B, 2-B, 3-C, 4-A, 5-B, 6-D, 7-C, 8-C, 9-B, 10-C, 11-B, 12-A, 13-C, 14-D, 15-B

Vocabulary Tests

Vocabulary Test 1: 1-C, 2-D, 3-A, 4-B, 5-A, 6-D, 7-C, 8-D, 9-B, 10-D, 11-A, 12-A

Vocabulary Test 2: 1-A, 2-A, 3-D, 4-B, 5-A, 6-A, 7-D, 8-C, 9-B, 10-A, 11-D, 12-C

Vocabulary Test 3: 1-A, 2-C, 3-B, 4-D, 5-C, 6-D, 7-B, 8-C, 9-D, 10-A, 11-D, 12-A

Vocabulary Test 4: 1-C, 2-C, 3-B, 4-D, 5-C, 6-D, 7-B, 8-C, 9-D, 10-A, 11-D, 12-A

Vocabulary Test 5: 1-B, 2-C, 3-D, 4-B, 5-C, 6-C, 7-A, 8-B, 9-C, 10-D, 11-A, 12-C

Vocabulary Test 6: 1-C, 2-D, 3-A, 4-A, 5-B, 6-A, 7-D, 8-C, 9-C, 10-B

Vocabulary Test 7: 1-C, 2-C, 3-B, 4-A, 5-B, 6-C, 7-B, 8-D, 9-D, 10-A

Vocabulary Test 8: 1-B, 2-D, 3-A, 4-C, 5-B, 6-C, 7-A, 8-C, 9-B, 10-D

Vocabulary Test 9: 1-B, 2-B, 3-D, 4-A, 5-C, 6-D, 7-A, 8-C, 9-C, 10-A

Vocabulary Test 10: 1-C, 2-C, 3-A, 4-B, 5-A, 6-B, 7-B, 8-D, 9-C, 10-A

Vocabulary Test 11: 1-D, 2-A, 3-C, 4-D, 5-D, 6-A, 7-C, 8-A, 9-B, 10-D

Vocabulary Test 12: 1-C, 2-A, 3-B, 4-D, 5-A, 6-D, 7-C, 8-B, 9-B, 10-D

Vocabulary Test 13: 1-A, 2-D, 3-C, 4-A, 5-B, 6-D, 7-B, 8-A, 9-C, 10-A

Vocabulary Test 14: 1-C, 2-B, 3-C, 4-D, 5-D, 6-A, 7-C, 8-D, 9-A, 10-B

Vocabulary Test 15: 1-C, 2-B, 3-B, 4-A, 5-B, 6-D, 7-A, 8-C, 9-D, 10-B

V.5 БАҲОЛАШ МЕЗОНИ

Талабанинг Амалий инглиз тили фани бўйича ўзлаштириш кўрсаткичи қуйидаги мезонлар асосида баҳоланади

Рейтинг тизими асосида баҳолаш мезони

Фаннинг номи	***Рейтинг назорати***									
	Жорий назорат			***Умумий***	*Мустақил таълим Оралиқ назорат*			***Умумий***	*Я Н*	***Умумий***
	Сони	*Балл*	*Жами*		*Сони*	*Балл*	*Жами*		***Ёзма***	*Жами*
Ҳорижий тил	*1*	*60*	*60*	***60***	*1*	*10*	*10*	***10***	***30***	***100***

Талабалар ЖН дан тўплайдиган балларнинг мезонлари

№	**Кўрсаткичлар**	**Жорий назорат баллари**	
		Максимал	**Ўзгариш оралиғи**
1	Дарсларга қатнашганлик ва ўзлаштириш даражаси. Амалий машғулотлардаги фаоллиги, амалий машғулот дафтарларининг юритилиши ва ҳолати	20	0-20
2	Вазифа топшириқларининг ўз вақтида ва сифатли бажарилиши. Мавзулар бўйича уй вазифаларини бажарилиш ва ўзлаштириш даражаси.	20	0-20
3	Оғзаки ўтилган мавзулар юзасидан саволларга жавоб.	20	0-20
Жами ЖН баллари		**60**	**0-60**

Талабалар ОН дан тўплайдиган балларнинг мезонлари

№	**Кўрсаткичлар**	**Оралиқ назорат**

		баллари	
		Максимал	**Ўзгариш оралиғи**
1	Талабаларнинг мустақил таълим топшириқларини ўз вақтида сифатли бажариши ва ўзлаштириш.	6	0-6
2	Тайёрлаган топшириқни тақдимот қилиш.	2	0-2
3	Берилган саволларга жавоб бериш.	2	0-2
Жами ОН баллари		**10**	**0-10**

Талабалар ЯН дан тўплайдиган балларнинг мезонлари

№	**Кўрсаткичлар**	**Оралиқ назорат баллари**	
		Максимал	**Ўзгариш оралиғи**
1	Грамматик кўникмаларни текшириш.	10	0-10
2	Ёзув кўникмаларини текшириш.	10	0-10
3	Берилган саволларга жавоб бериш.	10	0-10
Жами ОН баллари		**30**	**0-30**

Умумий кўрсаткич:

Балл	**Баҳо**	**Талабаларнинг билим даражаси**
86-100 балл учун талабанинг билим даражаси қуйидагиларга жавоб бериши лозим	Аъло	✓ Янги мавзуни Инглиз тилида тушунтириш ва мазмунини оғзаки еркин баён қила олиш; ✓ Инглиз тилида ижодий фикрлай олиш; ✓ Инглиз тилида мустақил мушоҳада қила олиш; ✓ Инглиз тилида оғзаки ахборот бера олиш; ✓ Луғат ёрдамида таржима қила олиш; ✓ Олган билимларни амалда қўллай олиш;
71-85 балл учун талабанинг билим даражаси қуйидагиларга жавоб бериши лозим	Яхши	✓ Тил ўрганилаётган мамлакат тилида ўз фикрини тушунтира билиш; ✓ Мустақил мушоҳада юрита олиш; ✓ Тасаввурга ега бўлиш; ✓ Луғат ёрдамида таржима қила олиш; ✓ Матн мазмунини қисқача тушунтира олиш;
55-70 балл учун талабанинг билим	Қониқарли	✓ Билиш, янги мавзуни қисман айтиб бериш;

даражаси қуйидагиларга жавоб бериши лозим		✓ Мавзуни қисман тушуна билиш. ✓ Мавзу ҳақида тушунчага ега бўлиш.
0-54 балл билан талабанинг билим даражаси қуйидаги ҳолатларда баҳоланади	Қониқарсиз	✓ Ўқий олмаслик; ✓ Гапира олмаслик; ✓ Тасаввурга ега бўлмаслик; ✓ Билмаслик.

Фан бўйича саралаш бали 55 баллни ташкил етади. Талабанинг саралаш балидан паст бўлган ўзлаштириши рейтинг дафтарчасида қайд етилмайди.

Жорий **ЖН** ва оралиқ **ОН** турлари бўйича 55 балл ва ундан юқори баллни тўплаган талаба фанни ўзлаштирган деб ҳисобланади ва ушбу фан бўйича якуний назоратга кирмаслигига йўл қўйилади.

Талабанинг семестр давомида фан бўйича тўплаган умумий балли ҳар бир назорат туридан белгиланган қоидаларга мувофиқ тўплаган баллари йиғиндисига тенг.

ОН ва **ЯН** турлари календар тематик режага мувофиқ деканат томонидан тузилган рейтинг назорат жадваллари асосида ўтказилади. **ЯН** семестрнинг охирги 2 ҳафтаси мобайнида ўтказилади.

ЖН ва **ОН** назоратларда саралаш балидан кам балл тўплаган ва узрли сабабларга кўра назоратларда қатнаша олмаган талабага қайта топшириш учун, навбатдаги шу назорат туригача, сўнгги жорий ва оралиқ назоратлар учун еса якуний назоратгача бўлган муддат берилади. Талабанинг семестрда **ЖН** ва **ОН** турлари бўйича тўплаган баллари ушбу назорат турлари умумий балининг 55 фоизидан кам бўлса ёки семестр якуний жорий, оралиқ ва якуний назорат турлари бўйича тўплаган баллари йиғиндиси 55 балдан кам бўлса, у академик қарздор деб ҳисобланади. Талаба назорат натижаларидан норози бўлса, фан бўйича назорат тури натижалари еълон қилинган вақтдан бошлаб бир кун мобайнида факултет деканига ариза билан мурожаат етиши мумкин. Бундай ҳолда факултет деканининг тақдимномасига кўра ректор буйруғи билан 3 (уч) аъзодан кам бўлмаган таркибда апеллятсия комиссияси ташкил етилади.

Апеллятсия комиссияси талабаларнинг аризаларини кўриб чиқиб, шу куннинг ўзида хулосасини билдиради. Баҳолашнинг ўрнатилган талаблар асосида белгиланган муддатларда ўтказилиши ҳамда расмийлаштирилиши факултет декани, кафедра мудури, ўқув-услубий бошқарма ҳамда ички назорат ва мониторинг бўлими томонидан назорат қилинади.

Якуний назорат ёзма шаклда ўтказилади.

Якуний назорат максимал 30 баллик тизимда ўтказилади.

Критерии оценки знаний на основе рейтинговой системы

Название предмета	**рейтинговая система**									
	Текущий контроль			***Итог***	Промежуточный контроль			***Итог***	*И.К.*	***Итог***
	Число	Балл	Итог		Число	Балл	Итог		Письменно	
Иностранный язык	*1*	*60*	*60*	***60***	*1*	*10*	*10*	***10***	***30***	***100***

Критерии оценок (баллов) студентов на текущем контроле.

№	**Показатели**	**Баллы ТК**	
		Максимал	**ТК**
1	Посещаемость занятий и уровень успеваемости. Активность на практических занятиях. Состояние тетрадей по практическим занятиям.	20	0-20
2	Своевременное и качественное выполнение самостоятельных заданий. Выполнение домашных заданий	20	0-20
3	Результаты письменных работ или текушего тестового контроля	20	0-20
Всего		**60**	**0-60**

Критерии оценок (баллов) студентов на промеждуточной контроле.

№	**Показатели**	**Баллы ПК**	
		Максимал	**ПК**
1	Посещаемость занятий студентами. Активность на лекционных занятиях. Состояние тетрадей по лекционным занятиям.	6	0-6
2	Своевременное и качественное выполнение самостоятельных работ и уровень успеваемости	2	0-2
3	Устний опрос, коллоквиумы, и другие виды опроса	2	0-2
Всего		**10**	**0-10**

Критерий оценки письменной работы в итоговом контроле

№	Показатели	Баллы ИК	
		Максимал	ИК
1	Проверка грамматических компетенций	10	0-10
2	Проверка письменных компетенций	10	0-10
3	Ответы на сотавленные вопросы	10	0-10
Всего		**30**	**0-30**

Итоговый контроль проводится в форме писсменой работы и оценки вается максимально 30 баллов

Общие показатели:

Методы оценки	Уровень знаний студентов
Критерии оценки	• ***86 - 100 баллов «отлично»*** • *делать выводы и решения;* • *креативное мышление;* • *уметь самостоятельно анализировать;* • *владеть умениями применения полученных знаний;* • *знать суть темы;* • *богатое представление, воображение и мышление;* • *объяснение терминологии и понятий, связанных с курсом «Частная методика преподования математика»;* • решение всех задач и примеров в включенных в курс математики средней курсив обще образовательной школы, академических лицеев;
	71 - 85 баллов "хорошо" *• способность самостоятельного мышленая;* *• уметь применять полученные знания в аудитории;* *• знать суть темы;* *• объяснение терминологии и понятий, связанных с курсом «Частная методика преподавания математики»;* *• решение всех задач и примеров включенных в курс математики средной общеобразовательной школы, академических лицеев;*
	55 - 70 баллов "удовлетворительно" *• понимание сути методических ситуаций;* *• знать суть темы;* *• объяснение терминологии и понятий, связанных с курсом «Частная методика преподавания математики»;*

	0 - 54 балла "неудовлетворительно" *• понимать суть методических ситуаций;* *•отсутствие четкого понимания курса «Частная методика преподавания математики»;* *• неспособность объяснить термины и понятия, связанные с курсом «Частная методика преподавания математики»;*

Критерий оценки письменной работы в итоговом контроле

Итоговый контроль проводится в форме письменной работы, которая состоит из15 вариантов. Каждый вариант содержит 2 теоретических вопроса и 3 практических заданий. Теоретические вопросы составлены на основе опорных и фразах охватывающих все разделы курса.

Ответы на каждый теоретический вопрос оцениваються в диапазоне 0-6 баллов. Каждое практическое задание также оценивается в диапазоне 0-6 баллов. При этом студент может набрать максимум 30 баллов.

Чтобы определить общий уровень знаний студентов в итогом контроле баллы полученные за каждый вопрос варианта слагаются; их результат (сумма) и будет результатом итогового контроле.