



ДОНСКОЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ
УПРАВЛЕНИЕ ДИСТАНЦИОННОГО ОБУЧЕНИЯ И ПОВЫШЕНИЯ
КВАЛИФИКАЦИИ

Кафедра «Лингвистика и иностранные языки»

**Методические указания и
контрольные задания**
по дисциплине

**«Иностранный язык
в профессиональной
сфере»**

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Аннотация

Методические указания и контрольные задания по дисциплине «Иностранный язык в профессиональной сфере» (английский язык) предназначены для студентов заочной формы обучения направления 18.03.01 Химическая технология.

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Общие требования к выполнению контрольной работы

Памятка студенту

Контрольная работа предназначена для студентов заочной формы обучения направления 18.03.01 Химическая технология.

Количество контрольных работ выполняемых студентом по дисциплине «Иностранный язык в профессиональной сфере», устанавливается учебным планом университета.

Студенты заочной формы обучения направления 18.03.01 Химическая технология должны выполнить контрольную работу, которая предлагается в четырех вариантах. Номер варианта определяется по последней цифре номера зачетной книжки студента:

1, 2, 3	–	1-й вариант;
4, 5, 6	–	2-й вариант;
7, 8	–	3-й вариант;
9, 0	–	4-й вариант.

Контрольная работа должна быть выполнена в отдельной тетради. На обложке тетради необходимо указать следующие данные: факультет, курс, номер группы, фамилию, имя и отчество, дату, номер контрольного задания и вариант.

Первую страницу необходимо оставить чистой для замечаний и рецензии преподавателя.

Все предлагаемые к выполнению задания (включая текст заданий на английском языке) переписываются на левой стороне разворота тетради, а выполняются на правой.

Контрольная работа должна быть написана четким подчерком, для замечаний преподавателя следует оставить поля.

Контрольная работа, выполненная не полностью или не отвечающая вышеприведенным требованиям, не проверяется и не засчитывается.

Проверенная контрольная работа должна быть переработана студентом (та часть ее, где содержатся ошибки и неточности перевода или неправильное выполнение заданий) в соответствии с замечаниями и методическими указаниями преподавателя. В той же тетради следует выполнить «Работу над ошибками», представив ее на защите контрольной работы.

Четыре варианта контрольной работы имеют одинаковую структуру. Все задания должны быть выполнены в письменной

форме.

Темы:

1. Инфинитив и его функции.
2. Инфинитивные обороты.
3. Герундий.
4. Герундиальные обороты.
5. Причастие (I и II).
6. Причастные обороты.

КОНТРОЛЬНАЯ РАБОТА № 1

Вариант 1

1. Прочитайте текст и переведите в письменной форме абзацы 2, 3.

Petroleum, Chemical Composition, Properties

1) The word petroleum comes from the Greeks. Petro means rock, and oleum means oil. In its strictest sense, petroleum includes only crude oil. By usage, however, petroleum includes both crude oil and natural gas. The two most important elements in both crude oil and natural gas are carbon and hydrogen. Because of this, crude oil and natural gas are called hydrocarbons.

2) The difference between crude oil and natural gas is the size of the hydrocarbon molecules. Under surface temperature and pressure, any hydrocarbon molecule that has one, two, three, or four carbon atoms occurs as a gas. Natural gas is composed of a mixture of the four short hydrocarbon molecules. Any hydrocarbon molecule with five or more carbon atoms occurs as a liquid. Crude oil is a mixture of more than 100 hydrocarbon molecules that range in size from 5 to more than 60 carbons in length. The hydrocarbon molecules in oil form straight chains, chains with side branches, and circles.

3) Sulfur is an undesirable impurity in fossil fuels such as crude oil, natural gas, and coal. When sulfur is burned, it forms sulfur dioxide, a gas that pollutes the air and forms acid rain. During the refining process, the refiner must remove the sulfur as the crude oil is being processed. If not, the sulfur will harm some of the chemical equipment in the refinery. Crude oils are classified as sweet and sour

on the basis of their sulfur content. Sweet crudes have less than 1% sulfur by weight, whereas sour crudes have more than 1% sulfur. The refiner usually pays a US \$1 to \$3 per barrel premium for sweet crude. In general, heavy oils tend to be sour, whereas light oils tend to be sweet. At a refinery, low sulfur crude has 0 to 0.6% sulfur. Intermediate sulfur crude has 0.6 to 1.7% sulfur, and high sulfur crude has above 1.7% sulfur. Most of the sulfur in crude oil occurs bonded to the carbon atoms. A very small amount can occur as elemental sulfur in solution and as H₂S gas.

4) The color of crude oil ranges from colorless through greenish-yellow, reddish, and brown to black. In general, the darker the crude oil, the lower the °API. The smell varies from gasoline (sweet crude) to foul (sour crude) to fruity (aromatic crude). Crude oil has a calorific heat value of 18,300 to 19,500 Btu/lb.

2. Ответьте на следующие вопросы, используя информацию из текста:

1. What are crude oil and natural gas composed of?
2. Why are crude oil and natural gas called hydrocarbons?
3. Which hydrocarbon molecules do occur as a liquid or a gas?
4. Why is sulfur undesirable impurity?
5. What does the colour of oil depend on?

3. Переведите предложения и определите функцию инфинитива в них (выполняет инфинитив функцию подлежащего, дополнения, определения, обстоятельства или является частью составного сказуемого).

1. To remove sulphur from petroleum feedstock is of great importance in refining.

2. A model to predict the change of octane numbers expected in naphtha hydro treating process is presented.

3. Petroleum is believed to have originated from organic matter deposited along with rock particles during the formation of sedimentary rock.

4. To transport oil from oil fields to consumers one can use pipelines, tankers, barges, tank trucks and railroad tank cars.

5. Natural gas is considered to be a valuable raw material.

6. SO₂ decomposes to yield sulphur and oxygen.

7. Oil in its primary state in the Earth is known to be often associated with gas.

8. Ancient Chinese manuscripts describe wells drilled as early as the 3rd century A.D. to tap underground strata for brine.

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9. The only way to get underground oil is to make a borehole through the rock, earth and sand.

10. To move oil from the place of production to the place of consumption is of prime importance.

4. Переведите предложения на русский язык, определяя форму и синтаксическую функцию герундия и причастия.

1. When speaking about oxygen it is necessary to say that it is colorless, odorless gas having density at standard pressure and temperature of about one seven – hundredth that of water. It is soluble in water becoming liquid at about 180°C.

2. Dissolved gas lowers the viscosity of the oil making the oil easier to move up the wellbore.

3. Carrying out this reaction was hindered by the presence of admixtures.

4. The process of separating a mixture of liquids into fractions which differ in their boiling points is called fractional distillation.

5. Oil being a complex mixture of hydrocarbons makes it possible to separate it into various fractions.

6. Having been heated, the crude oil is directed to the settling tank.

7. The desalted crude leaving the dehydrating tank passes through heat exchangers and coolers into storage tanks.

8. Having partly rejected its water and sediment, the crude flows into a line where a caustic solution is added to it.

9. The heated residue is introduced into a drum, the residence time being sufficient for coke to form.

10. Besides being important as a fuel, natural gas is an important raw material for chemical industry.

5. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний.

- | | |
|---------------------|------------------------------|
| 1. accumulate | а) соединение |
| 2. recovery | б) производить, давать выход |
| 3. to dissolve | с) молекулярный вес |
| 4. compound | д) горючий, воспламеняемый |
| 5. decomposition | е) маслянистый |
| 6. odour | ф) разложение, распад |
| 7. to yield | г) накапливать(ся) |
| 8. molecular weight | h) добыча (газа) |
| 9. combustible | и) растворять |
| 10. oily | ж) запах |

6. Вставьте необходимые слова вместо пропусков.

1. The most important processes in ____ are distillation and cracking.
a) refining; b) refinery
2. Carbon dioxide is a bad ____ of the atmosphere.
a) pollution; b) pollutant
3. ____ is a characteristic feature of sedimentary rocks,
a) Permeable ; b) Permeability
4. Different hydrocarbon fractions ____ petroleum.
a) make; b) make up
5. ____ oil is being produced all over the world.
a) Current; b) Currently
6. Oil and gas are important ____ of fuel.
a) sources; b) resources
7. The first ____ well was drilled in this region in 1980.
a) commercial; b) industrial
8. The early wells were all drilled by the cable tool method in which a driller had to ____ and drop a heavy tool.
a) raise; b) rise
9. Oil industry has to ____ a lot of environmental problems.
a) solve; b) decide
10. The company has extensive professional ____ in analyzing gas reservoirs.
a) experience; b) experiment

7. Напишите резюме и сопроводительное письмо к нему на вакансию инженер-исследователь.

Вариант 2

1. Прочитайте текст и переведите в письменной форме абзацы 3, 4.

Crude Oil. Hydrocarbon Molecules.

1) Four types of hydrocarbon molecules, called the hydrocarbon series, occur in each crude oil. The paraffin or alkane molecule is a straight chain of carbon atoms with saturated (single) bonds between the carbon atoms

2) The relative percentage of each hydrocarbon series molecule varies from oil to oil, controlling the chemical and physical properties of that oil. The hydrocarbons series includes paraffins, naphthenes,

aromatics, and asphaltics. Hydrocarbons that have only single bonds between carbon atoms are called saturated. If they contain one or more double bonds, they are unsaturated.

The formula for paraffins is C_nH_{2n+2} . They are five carbon atoms and longer in length. If the paraffin molecule is longer than 18 carbons in length, it is a wax and forms a waxy crude oil.

3) The naphthene or cycloparaffin molecule is a closed circle with saturated bonds between the carbon atoms. The general formula for naphthenes is C_nH_{2n} . These molecules are five carbon atoms and longer in length. Oils with high naphthene content tend to have a large asphalt content that reduces the value of the oil.

The aromatic or benzene molecule is a closed ring with some unsaturated (double) bonds between carbon atoms. Their general formula is C_nH_{2n-6} . Aromatic molecules are six carbon atoms and longer in length.

4) At the refinery, an aromatic-rich crude oil yields the highest-octane gasoline and makes a valuable feedstock for the petrochemical industry. The refiner often pays a premium for aromatic crude oil. Fresh from the well, normal crude oil has a pungent odour of gasoline. An aromatic-rich crude oil, however, has a fruity odor. The asphaltic molecule has 40 to more than 60 carbon atoms. Asphalt is brown to black in color and is solid to semisolid under surface conditions. It has a high boiling point. There are two types of crude oils at the refinery. An asphalt-based crude oil contains little or no paraffin wax. It is usually black. When refined, it yields a large percentage of high-grade gasoline and asphalt. Paraffin-based crude oil contains little or no asphalt. It is usually greenish. When refined, it yields a large percentage of paraffin wax, high-quality lubricating oil, and kerosene. A mixed-base crude oil is a combination of both types.

2. Ответьте на следующие вопросы, используя информацию из текста:

1. What are types of hydrocarbon molecules?
2. What crude does yield the highest-octane gasoline?
3. What odour can oil have?
4. How many types are there at the refinery?
5. What are they?

3. Переведите предложения и определите функцию инфинитива в них (выполняет инфинитив функцию подлежащего, дополнения, определения, обстоятельства или является частью составного сказуемого).

1. The petroleum industry is traditionally considered to have been born in 1859.
2. Steel pipes known as casing were run from time to time to prevent the hole from caving and to keep back any water flow.
3. However, the method has some application where high-grade steel is difficult to obtain.
4. The most important parameter to be examined is the rock porosity of the formation.
5. To reach the planned depth is a job so serious and so complex that the drillers must calculate literally every step.
6. To recover more oil from existing formations and traps oil companies are turning to sophisticated secondary and tertiary (третичный) techniques.
7. A model to predict the change of octane numbers expected in naphtha hydrotreating process is presented.
8. To avoid external corrosion is to prolong the life of a pipe line.
9. The only way to know for sure if a trap contains commercial amounts of gas and oil is to drill a well.
10. To look for and find petroleum the knowledge of such sciences as geology, physics, chemistry, mathematics and some others should be applied.

4. Переведите предложения на русский язык, определяя форму и синтаксическую функцию герундия и причастия.

1. The thermofor catalytic cracking process is a continuous catalytic cracking process with a moving bead type operation having one chamber for the reaction and another for regenerating the catalyst.
2. A varying amount of product is obtained depending on charge stock and process conditions.
3. Catalyst make-up rates being very low, regeneration facilities are unnecessary.
4. The charge being cracked under mild conditions, coke formation is minimized.
5. The admixtures remaining in the end product were distilled off.
6. The above formula is for a column operating under total reflux, that is, with no distillate being removed.
7. Injection of gas and water into the well is the best method of maintaining the formational pressure, ensuring high rates of oil production.
8. Superdeep drilling is a very labour-consuming process.

9. Most up-to-date instruments and automatic control devices for controlling various refining processes are widely used in our refineries.

10. Oil and gas field development is a complex work consisting in drilling of the field and lifting of oil and gas to the surface.

5. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний.

- | | |
|---------------------|--------------------------------|
| 1. impurity | a) скважина |
| 2. specific gravity | b) просачиваться |
| 3. rainbow film | c) выходы нефти на поверхность |
| 4. sedimentary | d) свойство |
| 5. to seep | e) осадочный |
| 6. surface seeps | f) радужная пленка |
| 7. lubricant | g) удельный вес |
| 8. nitrogen | h) примесь, загрязнение |
| 9. well | i) азот |
| 10. property | j) смазочный материал |

6. Вставьте необходимые слова вместо пропусков.

1. Large resources of oil and gas ____ a country powerful and politically independent.

- a) make; b) make up

2. Oil and gas are the major natural ____ of energy.

- a) sources; b) resources

3. Originally oil and gas ____ to the surface by means of reservoir pressure.

- a) raise; b) rise

4. The engineers ____ to drill a well to the depth of 100 m.

- a) solved; b) decided

5. The company has conducted a lot of ____ in analyzing gas reservoirs.

- a) experiences; b) experiments

6. ____ 1,000 km of seismic data were processed.

- a) near; b) nearly

7. ____ in the region began with surface mapping, gravity surveys and the drilling of several wells.

- a) exploration; b) exploitation

8. Gas is considered to be an ____ attractive fuel.

- a) increasing; b) increasingly

9. Sakhalin-1 project consists of three ____ oil and gas fields in the sea of Okhotsk of Sakhalin Island.

- a) offshore; b) onshore
10. The process of distillation was followed by other _____ processes.
- a) refining; b) refinery

7. Напишите резюме и сопроводительное письмо к нему на вакансию инженер-химик.

Вариант 3

1. Прочитайте текст и переведите в письменной форме абзацы 3, 4.

Natural Gas

1) Natural gas is composed of hydrocarbon molecules that range from one to four carbon atoms in length. The gas with one carbon atom in the molecule is methane (CH₄), two is ethane (C₂H₄), three is propane (C₃H₈), and four is butane (C₄H₁₀). All are paraffin-type hydrocarbon molecules.

2) Many natural gas fields contain almost pure methane. The gas from pipelines that is burned in homes and industry is methane gas. Propane and butane burn giving off more heat than methane. They are often distilled from natural gas and sold separately. Liquefied petroleum gas (LPG) is made from propane gas.

3) The nonhydrocarbon, gaseous impurities that don't burn in natural gas are called inerts. A common inert is water vapor (steam). Another inert is carbon dioxide (CO₂), a colorless, odorless gas. Because it doesn't burn, the more carbon dioxide natural gas contains, the less valuable the gas is. In some gas reservoirs, carbon dioxide is greater than 99% of the gas. Large fields of almost pure carbon dioxide probably formed by the chemical reaction of volcanic heat on limestone rock. Carbon dioxide can be used for inert gas injection, an enhanced oil recovery process, in depleted oil fields. Nitrogen (N), another inert, is also a colorless, odorless gas that can be used for inert gas injection. Helium is a light gas used in electronic manufacturing and filling dirigibles. Gas from the Hugoton gas field in western Texas, Oklahoma, and Kansas contains 0.5 to 2% helium. It is thought to have been formed by the radioactive decay of K₄₀ in granite. Amarillo, Texas, near the giant gas field, is called the "helium capital of the world."

4) Hydrogen sulfide (H₂S) is a gas that can occur mixed with

natural gas or by itself. It is not an inert and is a very poisonous gas that is lethal in very low concentrations. The gas has the foul odor of rotten eggs and can be smelled in extremely small amounts. It is associated with the salt domes of the Gulf of Mexico and ancient limestone reefs of Mexico, West Texas, and Louisiana. Hydrogen sulfide is common in Alberta, the overthrust belt of Wyoming, offshore Southern California, Utah, and the Middle East. Hydrogen sulfide gas is very corrosive. When it occurs mixed with natural gas, it causes corrosion of the metal tubing, fittings, and valves in the well. Hydrogen sulfide must be removed before the natural gas can be delivered to a pipeline. Sweet natural gas has no detectable hydrogen sulfide, whereas sour natural gas has detectable amounts of hydrogen sulfide.

2. Ответьте на следующие вопросы, используя информацию из текста:

1. What gases do you know?
2. What is the most common gas and why?
3. What are inerts? Give examples.
4. How can inerts be used?
5. What do you know about hydrogen sulfide?

3. Переведите предложения и определите функцию инфинитива в них (выполняет инфинитив функцию подлежащего, дополнения, определения, обстоятельства или является частью составного сказуемого).

1. To recover more oil from existing formations and traps oil companies are turning to sophisticated secondary and tertiary (третичный) techniques.

2. A model to predict the change of octane numbers expected in naphtha hydrotreating process is presented.

3. To avoid external corrosion is to prolong the life of a pipe line.

4. The new discoveries to be spoken of were made in this field.

5. To evaluate the well, a service company runs a wireline well log.

6. Once an offshore field is located, a production platform is then installed to drill the rest of the wells and produce the gas and oil.

7. The majority of scientists considers oil to be of organic origin.

8. The pipeline to transport oil from the place of production to the place of consumption is under construction.

9. A well drilled to find a new gas or oil field is called a wildcat well.

10. To avoid external corrosion the pipeline was coated with asphalt-containing material

4. Переведите предложения на русский язык, определяя форму и синтаксическую функцию герундия и причастия.

1. Having passed through heat exchangers, the crude oil enters the steam heater.

2. The process is carried out at elevated temperatures, the temperature depending upon the type of crude being processed.

3. The heat lowers the surface tension of the oil allowing water particles to coagulate easier.

4. The heat reduces the viscosity of the oil giving less resistance to separation of the salt water.

5. On being heated these salts decompose.

6. Before being sent to refining the crude oil was dehydrated and desalted.

7. This apparatus is used for recording the pressure.

8. The processing units being equipped with control instruments, the number of operating personnel can be reduced to a minimum.

9. There is no hope of our getting high yields in the near future.

10. Without being treated oil is of little economic value.

5. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний.

- | | |
|---------------------------|--|
| 1. inflammable | а) извлечение, добыча |
| 2. liquid and solid fuels | б) разложение, распад |
| 3. borehole | в) залегать |
| 4. extraction | г) под высоким давлением |
| 5. diluent | е) высокосернистая сырая нефть |
| 6. under great pressure | ж) месторождение, залежь |
| 7. sour crude | з) скважина |
| 8. to occur | и) разбавляющий, разжижающий |
| 9. decomposition | к) жидкие и твердые виды топлива |
| 10. deposit | л) легко воспламеняющийся, огнеопасный |

6. Вставьте необходимые слова вместо пропусков.

1. Siberia is rich in mineral ____ such as: oil, gas, gold and others.

- а) sources; б) resources

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2. The basin covers ____ 174 sq km northeast of the Puesto Hemaudez oil field.

a) near; b) nearly

3. The ____ history of the pipeline will start in 3 years.

a) exploration; b) exploitation

4. ____ C O₂ in the atmosphere effects the quality of the air that we breathe.

a) increasing; b) increasingly

5. Oil will be moved by pipeline for further processing at a new ____ plant on the island.

a) offshore; b) onshore

6. Every oil ____ country must have an energy policy that forecasts oil supply for the future but meets current demand for oil.

a) production; b) producing

7. In the practice of reservoir engineering, the reservoir engineer determines the properties of the reservoir matrix and of its fluids, interprets these data to predict reservoir-fluid behavior, and recommends the development and production program.

a) engineer; b) engineering

8. Petroleum is also a source of political ____ for such countries because many other nations depend on them for fuel.

a) power; b) energy

9. The ever-increasing use of petroleum products, ____ in developed countries, has helped raise the living standards of many people.

a) specially; b) especially

10. The ____ of home heating oil has been affected by the slowdown in the economy .

a) consume; b) consumption

7. Напишите резюме и сопроводительное письмо к нему на вакансию химик.

Вариант 4

1. Прочитайте текст и переведите в письменной форме абзацы 1, 3.

Refining

1) During the refining process, various components of crude oil are separated by their boiling points. In general, the longer the

hydrocarbon molecule, the higher its boiling temperature. At the refinery, crude oil is first heated in a furnace until most is vaporized. The hot vapor is then sprayed into a distilling column. Gasses rise in the distilling column and any remaining liquid falls. In the distilling column bubble trays are filled with liquid. The rising vapors bubble up through the trays and are cooled. The cooling vapors condense into liquid on the trays where they are then removed by side draws. Each liquid removed by cooling is called a cut. Heavy cuts come out at high temperatures, whereas light cuts come out at low temperatures. In order of cooling temperatures, the cuts are heavy gas oil, light gas oil, kerosene, naphtha, and straight run gasoline. Gasoline is the refining product in most demand.

2) A process called cracking is used to make gasoline from the other cuts. Gasoline is composed of short molecules with 5 to 10 carbon atoms. The longer, less valuable, molecules of other cuts are used as cracking stock. Cracking stock is put into cracking towers at the refinery where high temperatures and pressures and caustic chemicals split the longer molecules to form gasoline.

3) There are several types of cracking, each giving different products:

- Steam cracking: The feedstock is preheated, vapourized and mixed with steam and then converted at 1250-1400°C to give high yields of low molecular mass alkenes.

- Catalytic cracking : The use of a silica/alumina catalyst enables the cracking to take place at the relatively lower temperatures of about 1000°C.

- Hydrocracking: The feedstock is mixed with hydrogen at a pressure of about 80 atm and cracked over a platinum or silica/alumina catalyst. This process has a high yield of branched alkanes, cyclic alkanes and aromatic compounds for use in unleaded gasoline(petrol).

4) Refineries also produce pure chemicals, called feedstocks, from crude oil. In general, the longer the hydrocarbon molecule, the higher its boiling temperature. These feedstocks are sold to the petrochemical industries, where the molecules are reformed, and a large variety of products are made. Plastics, synthetic fibers, fertilizers, Teflon, polystyrene, drugs, dyes, explosives, antifreeze, and synthetic rubber are examples.

2. Ответьте на следующие вопросы, используя информацию из текста:

1. What does the boiling temperature depend on?

2. What is cracking stock?
3. What types of cracking process do you know?
4. What is distinctive features of steam cracking?
5. What are common feedstocks?

3. Переведите предложения и определите функцию инфинитива в них (выполняет инфинитив функцию подлежащего, дополнения, определения, обстоятельства или является частью составного сказуемого).

1. Now oil is found not only on land, but in the sea. To produce oil from offshore fields special platforms of different types are to be constructed.

2. To produce cracking conditions so that the yields of gas oil and gasoline are increased.

3. The hole's purpose is to tap an oil and gas reservoir.

4. Petroleum is believed to have originated from organic matter deposited along with rock particles during the formation of sedimentary rock.

5. To be a productive reservoir the rock body must be of an area large enough and porous enough to contain an appreciable volume.

6. It must be permeable enough to ensure the contained fluids flow at a satisfactory rate when the reservoir is penetrated.

7. This is free water and supplies energy to help to drive Hydrocarbons to surface.

8. To get maximum production from a reservoir, the water should not be produced with the oil.

9. To recognize the presence of oil in the formation it is necessary to use various exploration techniques such as mapping and different types of surveying.

10. These results in the Carbon atom being able to accommodate 4 Hydrogen atoms.

4. Переведите предложения на русский язык, определяя форму и синтаксическую функцию герундия и причастия.

1. Apart from being flexible natural gas demonstrates environmental friendliness.

2. A barrel of oil saved is essentially equivalent to a barrel of oil produced.

3. We know of gas industry experiencing rapid growth thanks to gas being a perfect fuel and a feedstock for the petrochemical industry.

4. Having used modern instrumentation and control system the refinery raised its production and lowered air pollution.

5. Modeling the formation and migration of natural gas prevents from unnecessary wildcatting.

6. The colour of oil influenced by the components present in it may be different.

7. It's no use discussing the fact that natural gas is an oil competitor on the fuel markets.

8. Oil and gas producible and produced reserves should be analyzed.

9. Petroleum being impure makes it impossible to use it without being refined first.

10. When united hydrocarbon molecules form larger molecules known as polymers.

5. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний.

- | | |
|--------------------------|-----------------------------|
| 1. cracking stock | a) колпачковые тарелки |
| 2. caustic | b) неэтилированный (бензин) |
| 3. split | c) тяжелая фракция |
| 4. yield | d) нежелательная примесь |
| 5. heavy cut | e) едкий запах |
| 6. straight run gasoline | f) бензин прямой перегонки |
| 7. pungent odor | g) выход (продуктов) |
| 8. undesirable impurity | h) исходное крекинг-сырье |
| 9. bubble trays | i) едкий |
| 10. unleaded (gas) | j) расщеплять |

6. Вставьте необходимые слова вместо пропусков.

1. Petroleum is referred to as one of the most valuable natural _____ in the world.

- a) sources; b) resources

2. Oil and gas _____ and produced reserves should be analyzed.

- a) producible; b) production;

3. Due to its abundance in _____, its environmental friendliness and its flexibility, the use of natural gas is already showing a tremendous development.

- a) reserves; b) reservoirs

4. Petroleum engineer should be an expert in deep drilling, exploitation, chemistry and technology of oil well as _____.

- a) economics; b) economy

5. Pipelines are unlikely to be the main means of oil _____.

Иностранный язык в профессиональной сфере

- a) transport; b) transportation
6. One can use numerical models to calculate permeability, porosity, and other ____.
- a) qualities; b) quantities
7. To recognize the presence of oil in the formation it is necessary to use various exploration ____ such as mapping and different types of surveying.
- a) techniques; b) technologies
8. Certain raw materials are ____ with chemicals before they can be used.
- a) processing; b) processed
9. Crude oil as it comes from the ground is not a usable ____.
- a) production; b) product
10. Oil reserves are an important ____ of the growth of national economy.
- a) source b) resource

7. Напишите резюме и сопроводительное письмо к нему на вакансию химик-технолог.