

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ  
ФЕДЕРАЦИИ

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ  
«Национальный исследовательский ядерный университет «МИФИ»

**Нововоронежский политехнический институт –**

филиал федерального государственного автономного образовательного учреждения высшего образования  
«Национальный исследовательский ядерный университет «МИФИ»  
**(НВПИ НИЯУ МИФИ)**

УТВЕРЖДЕН:

Педагогическим советом

«17» марта 2023 г., протокол № 550

**ФОНД  
ОЦЕНОЧНЫХ СРЕДСТВ**

**Иностранный язык в профессиональной деятельности  
3 семестр**

**Направление подготовки:** 13.03.02 Электроэнергетика и

электротехника **Наименование образовательной программы:**

Электрические станции **Уровень образования:** бакалавриат

**Форма обучения:** очная

Нововоронеж 2023 г.

## Паспорт фонда оценочных средств

### 1. Модели контролируемых компетенций (перечень компетенций) по направлениям подготовки:

УК-4 Способен осуществлять деловую коммуникацию в устной и письменной формах на государственном языке Российской Федерации и иностранном(ых) языке(ах)

УК-4 Знать: принципы построения устного и письменного высказывания на русском и

иностранном языках; правила и закономерности деловой устной и письменной коммуникации

У-УК-4 Уметь: применять на практике деловую коммуникацию в устной и письменной формах, методы и навыки делового общения на русском и иностранном языках; методикой составления суждения в межличностном деловом общении на русском и иностранном языках

УК-4 Владеть: навыками чтения и перевода текстов на иностранном языке в профессиональном общении; навыками деловых коммуникаций в устной и письменной форме на русском и иностранных языках; методикой

составления суждения в межличностном деловом общении на русском и иностранном языке

### 2. Программа оценивания контролируемой компетенции по направлениям подготовки:

№ п/п	Контролируемые модули, разделы (темы) дисциплины*	Код контролируемой компетенции (или ее части)	Наименование оценочного средства	
			текущий	рубежный
1	Профессия инженера – основные понятия	УК-4	3 КА	5Т
2	Наука и технология	УК-4	9 КС	11 Т
3	Моя будущая профессия	УК-4	14 КП	16 Т

4	Влияние технического прогресса на окружающую среду	УК-4	3 КА	5Т
5	Применение современных информационных технологий в профессиональной деятельности	УК-4	9 КС	11 Т
6	Основные открытия и достижения науки и техники	УК-4	14 ЛД	16 Т
7	Challenges and Success в профессиональной деятельности	УК-4	3 КА	5Т
8	Профессиональная коммуникация	УК-4	9 КС	11 Т
9	Культура безопасности на производстве	УК-4	14 КП	16 Т

КС - контрольное собеседование, КА-контрольное аудирование, КП –контрольный перевод, ЛД – лексический диктант, Т- тест за раздел.

**Перечень видов оценочных средств освоения дисциплины и шкала оценивания уровня усвоения содержания обучения по дисциплине ( в соответствии с кредитно-модульной системой)**

№	Оценочные средства	код	max	min
1	Контрольное аудирование	КА	10	6
2	Тест за раздел	Т	10	6
3	Мировые достижения в науке и технике	КС	10	6
4	Тест за раздел	Т	10	6
5	Контрольный перевод	КП	10	6
6	Тест за раздел	Т	10	6
7	Контрольное аудирование	КА	10	6
8	Тест за раздел	Т	10	6
9	Производство, обработка и хранение радиоактивных отходов	КС	10	6

**Перечень оценочных средств**

Характеристика оценочных средств по дисциплине представлена в таблице:

№ п/п	Наименование оценочного средства	Краткая характеристика оценочного средства	Представление оценочного средства в фонде
1	2	3	4
1	Контрольное аудирование	Ряд заданий для контроля понимания воспринимаемой на слух иноязычной речи.	Задания для контрольного аудирования
2	Контрольное собеседование	Средство контроля, организованное как специальная беседа преподавателя со студентами на темы, связанные с изучаемой дисциплиной, и рассчитанное на выяснение объема	Темы для контрольного собеседования

		знаний обучающегося по определенному разделу, теме, проблеме и т.п.	
3	Контрольный перевод текста	Контрольный перевод текста с английского языка на русский предназначен для контроля понимания иноязычного текста и адекватности перевода.	Тексты для контрольного перевода
4	Лексический диктант	Письменная проверочная работа предназначена для контроля усвоения лексического материала раздела, включает несколько заданий и представлена по двум вариантам.	Фонд заданий для лексического диктанта

### 3. ТИПОВЫЕ КОНТРОЛЬНО-ОЦЕНОЧНЫЕ МАТЕРИАЛЫ ПО ДИСЦИПЛИНЕ

#### 3.1. Типовые контрольные задания или иные материалы, необходимые для оценки знаний и умений в процессе освоения дисциплины

##### 3.1.1. Типовые контрольные задания для текущего контроля по дисциплине «Иностранный язык (английский язык)»

Complete these sentences using the correct variant:

1. Circuit a consists of
  - a) resistors and conductors.
  - b) a voltage source and resistors.
  - c) a voltage source, a resistors and conductor.
  
2. A voltage source
  - a) conducts current.
  - b) reduces current.
  - c) supplies current.
  
3. A conductor
  - a) connects the elements .
  - b) supplies voltage.
  - c) conducts current.
  
4. a resistor
  - a)connects the elements.
  - b) supplies current.
  - c) reduces current.
  
5. No current results from
  - a) an open.

b) a short.

Complete these sentences using the correct variant :

1. A parallel circuit has  
a) parallel branches only.  
b) The main line and parallel branches.
  
2. A parallel circuit is used  
In order  
a) to have the same value of current in all  
the elements.  
b) to have the same value of voltage in all  
the elements.
  
3. In a parallel circuit a trouble  
In one branch  
a) results in no current in that branch only.  
b) results in no trouble in the whole circuit.
  
4. No current in a parallel  
circuit  
a) result from a trouble in one branch.  
b) results from a trouble in the main line.
  
5. The sum of IR voltage  
drops  
a) equals the value of voltage in circuit.  
b) is less than the smallest voltage drop.  
c) is more than the value of voltage in the circuit.

Complete the sentences using the correct variant:

1. The ammeter is  
a) a common meter.  
b) an uncommon meter.
  
2. IN order to measure the  
value of current  
a) the ohmmeter is used.  
b) the voltmeter is used.  
c) the ammeter is used.
  
3. A meter has  
a) positive terminals only.

- b) negative terminals only.
  - c) positive and negative terminals .
- 4. When the ammeter is used
  - a) the circuit should be opened.
  - b) the circuit should not be opened.
- 5. The ammeter should be connected
  - a) in series.
  - b) in parallel.
- 6. One should take into consideration that
  - a) the positive terminal should be connected to the negative terminal.
  - b) the positive terminal should be connected to the positive terminal of the source.

Complete the sentences using the correct variant:

1. Resistor is used
  - a) to measure the resistance.
  - b) to reduce the current.
  - c) to change the resistance.
  - d) to produce IR voltage drop.
2. When current passes through a resistor
  - a) its temperature drops.
  - b) its temperature rises.
3. Resistor are rated
  - a) in ohms.
  - b) in volts.
  - c) in watts.
4. Power is given
  - a) in amperes.
  - b) in watts.
5. Fixed resistors have
  - a) a constant value.
  - b) a variable value.
6. The value of a variable resistor
  - a) is fixed.
  - b) is varied.
7. A two-ohm resistor rated
  - a) has a current-carrying capacity

as a 8,000,000-w resistor equal to 2,000 amp.

b) has a current-carrying capacity  
equal to 200 amp.

8. The higher the value of current,
- a) the lower is the temperature of a resistor.
  - b) the higher is the temperature of a resistor.

Complete the sentences using the correct variant:

1. A cell is used
  - a) to increase the voltage output.
  - b) to reduce the current capacity.
  - c) to supply electric energy.
  
2. The terminals of a cell are used
  - a) to conduct current.
  - b) to increase voltage.
  - c) to connect the battery to a circuit.
  
3. When cells are connected in series
  - a) all the positive terminals are connected together.
  - b) all the negative terminals are connected together.
  - c) the positive terminal of one cell is connected to the negative terminal of the second.
  
4. Cells are connected in series in order
  - a) to increase the current capacity.
  - b) to increase the voltage output.
  
5. In order to increase the current capacity
  - a) cells are connected in series.
  - b) cells are connected in parallel.

complete these sentences using the correct variant:

1. A capacitor is used
  - a) to supply voltage.
  - b) to increase the voltage output.
  - c) to store energy.

2. The main parts of a capacitor are
- a) insulators only.
  - b) metal plates only.
  - c) metal plates and insulators between them
3. The function of insulators is
- a) to store energy.
  - b) to isolate the metal plates.
  - c) to prevent a short between the metal plates.
4. The capacity of a capacitor Depends on
- a) the size of the plates .
  - b) the distance between the plates.
  - c) the material of the insulators.
5. The capacity of a fixed capacitor
- a) is constant
  - b) is varied.
6. The plates of a variable capacitor
- a) can be moved.
  - b) cannot be moved.
7. In order to charge a capacitor a voltage source is applied
- a) to the metal plates.
  - b) to the insulators.
8. The greater the distance between The plates,
- a) the greater is capacity of a capacitor .
  - b) the less is capacity.
9. Variable capacitors have
- a) air insulators.
  - b) paper insulators.
  - c) ceramic insulators.
10. Electrolyte capacitors have
- a) a very low capacity.



b) a very high capacity.

11. In case a capacitor has a                    a) it operates.

Trouble    b) it stops operating.

complete the sentences using the correct variant:

1. Insulators are materials having                    a) low resistance.

b) high resistance.

2. Current passes through                    a) easily.

conductors    b) with great difficulty.

3. Copper and silver are                    a) common insulators.

b) common conductors.

5. In case a high voltage is an insulator                    a) it does not conduct current.

b) it conducts current.

c) to prevent a short between conducting wires.

6. Insulators are used                    a) to store electric charge.

b) to reduce voltage.

c) to prevent a short between conducting wires.

7. Metals increase their resistance                    a) when the temperature decreases.

b) when the temperature increases.

8. Carbon decreases its resistance                    a) when the temperature increases.

b) when the temperature increases.

9. Metals have                    a) a positive temperature coefficient

of resistance.

b) a negative temperature coefficient

of resistance.

complete the sentences using the correct variant:

1. Transformer is used                    a) to store charge.

- circuit.
2. Electric power is transferred at a high voltage and reduced to any value
3. A transformer consists of windings.
4. The function of the primary is
5. The function of the secondary is
6. A step-up transformer is used
7. A step-down transformer is used
8. A transformer with an iron core
- b) to prevent the change of energy.  
c) to transfer energy.  
d) to change the voltage and current value in a
- a) due to resistors.  
b) due to capacitors.  
c) due to transformers.
- a) cores only.  
b) the primary and the secondary windings.  
c) a core and the primary and secondary
- a) to prevent the change of voltage.  
b) to supply energy.  
c) to receive energy.
- a) to receive energy.  
b) to supply energy.  
c) to transfer energy.  
d) to decrease the value of charge.
- a) to step down or decrease the secondary voltage.  
b) to step up or increase the primary voltage.
- a) to step down the secondary voltage.  
b) to step down the primary voltage.
- a) is used for high-frequency currents.  
b) is used for low-frequency currents.

9. A transformer with an air core is used
- a) for high-frequency current and for low-frequency current only.
  - b) for high-frequency current only.
10. In a step-up transformer
- a) the number of turns of the secondary winding is greater than the number of turns of the primary.
  - b) the number of turns of the primary winding is greater than the number of turns of the secondary.
11. A transformer should be substituted
- a) in case it has an in the winding.
  - b) in case it has a short between the primary and the secondary.
  - c) in case it has a short between turns.

### Проверочная работа 1

1. Расставьте слова в правильном порядке:

1. the/is/ living-room / There / in / a /sofa
2. in / is/ the/not/ kitchen / There / a /mirror.
3. the/ bedroom / there / in / Are / beds / 2 / ?
4. Are / wardrobes / the/ hall / there / in / 8 /?
5. a/ lamp/there/Is/room/your/in/?

2. Поставьте предложения во множественном числе:

1. This cup is dirty.
2. That biscuit was tasty.
3. This hotel is very expensive but it's very nice.
4. There is a children's playground in the park.
5. That is a new supermarket in our town.
6. It's a delicious lemon pie for dessert.
7. It's a nice cotton dress for my niece.
8. This man is an engineer.
9. That woman is my sister.
10. This child is my son.

3. Вставьте глагол "to be" в требуемой форме Present Simple:

1. I ... a student.

2. My father ... not a shop-assistant, he ... a scientist.
3. ... your aunt a nurse? - Yes, she ... .
4. ... they at home? - No, they ... not. They ... at school.
5. ... you an engineer? - Yes, I....
6. ...they lions? – No, they ... They ... horses.
7. ... you a teacher? – Yes, I ...

4. Образуйте множественное число существительных:

Face, portfolio, swine, house, tomato, hearth, mother-in-law, clergyman, ox, cry, key, fox, downfall, rock, bush, enemy, leaf, roof, genius, hero.

Темы докладов и научных сообщений:

Домашнее чтение текстов

About myself

Let me introduce myself. My name is Ann. I am twenty. I am a student. I study at the university. I am a prospective economist. I like this profession, that's why I study with pleasure. My parents are not economists, but they support me in my choice. We are a friendly family and try to understand and support each other in any situation. Understanding and support is what I need in friendship as well. Some of my friends study at the same university.

After classes we usually gather together, discuss our plans or problems and have some fun. We have a lot of hobbies.

Sometimes we go to the disco, sometimes organize a picnic in the open air, play sports or watch a nice film. One of my hobbies is cooking. So when my friends come to my house, I bake their favorite apple pie. I also like reading. One of my favorite authors is Chekhov. I like his books, because I can analyze the characters, their way of life and find answers to my questions. My friends also like reading. We sometimes discuss our favorite authors, their books, the style of their writing and ideas depicted in their books. I like making new friends, so, if you like, you may become my friend as well.

Словарь

Let me introduce myself – позвольте представиться

a prospective economist – будущий экономист

to support – поддерживать

to gather together – собираться вместе

to have some fun – развлекаться

to analyze – анализировать

Составьте рассказ о себе и своей семье

Составьте рассказ о своем рабочем дне

Напишите свою биографию.

Заполните анкету

## Проверочная работа 2

1. Переведите на английский язык:

1. Не закрывайте окна.
2. Позовите носильщика, пожалуйста.
3. Пойдемте домой.
4. Не сердитесь на меня.
5. Прочитайте эту статью.
6. Покажите мне эти документы.
7. Пусть он пойдет туда один.
8. Пусть она сделает эту работу сама.
9. Пусть они подождут меня внизу.
10. Пусть он не ходит туда сегодня вечером.
11. Пусть они не ждут меня.

2. Раскройте скобки, употребляя глаголы в Present, Past или Future Simple.

1. I (to go) to bed at ten o'clock every day. 2. I (to go) to bed at ten o'clock yesterday. 3. I (to go) to bed at ten o'clock tomorrow. 4. I (not to go) to the cinema every day. 5. I (not to go) to the cinema yesterday. 6. I (not to go) to the cinema tomorrow. 7. You (to watch) TV every day? 8. You (to watch) TV yesterday? 9. You (to watch) TV tomorrow? 10. When you (to leave) home for school every day? 11. When you (to leave) home for school yesterday? 12. When you (to leave) home for school tomorrow? 13. My brother (to go) to work every day. He (to leave) home at a quarter past eight. As the office he (to work) at (to be) near our house, he (to walk) there. He (not to take) a bus. Yesterday he (not to go) to work. Yesterday he (to get) up at nine o'clock. 14. You (to have) a PT lesson yesterday? — No, I... . 15. What you (to buy) at the shop yesterday? -I (to buy) a book. 16.

Yesterday my father (not to read) newspapers because he (to be) very busy. He (to read) newspaper tomorrow.

Темы докладов и научных сообщений:

Домашнее чтение текстов

My house and flat

I live in a new nine-storied house in Borodiya Street. In front of the house there is a flower bed and a children's playground. My family lives on the third floor. We have two rooms in our flat: a living room and a bedroom. Our living room is the largest in our flat. There is a big bookcase in it. My parents are teachers. Literature is their hobby. That's why we have a lot of books at home. I also like to read, and when the weather is bad, I usually sit in our living room and read my favorite book. Besides reading, you may also watch TV in this room. There is a big TV-set here and we often watch TV in the evening in a family circle. In front of the TV-set there is a big sofa and two armchairs. We like to sit here and discuss our family life. My bedroom is my study as well. It is not big. But I have here everything I need. There is a desk, a chair, some bookshelves and a sofa. My favorite place the room is my desk. It is the best place to work and to dream. My parents sleep in our bedroom. Before going to sleep, we all gather together in the kitchen, drink tea with biscuits, and discuss our plans for tomorrow. Our kitchen is also very cozy. There is little furniture in it. That's why it looks wider. There is also a small round table in the middle of the room. We have here our meals.

Словарь

nine-storied – девятиэтажный

a flower bed – клумба

a bookcase – книжный шкаф

furniture – мебель

Составьте сообщение на тему «Сходство и отличие жилья в своей стране и англоязычных странах».

Опишите интерьер гостиной, кухни и спальни в Вашей квартире/доме.

Проверочная работа 3

1. Выберите подходящий модальный глагол:

1. Jack has got a headache. He ... sleep well recently.

a) can't

b) couldn't have

c) hasn't been able to

2. I ... sleep for hours when I was a little girl.

a) could

b) am able to

c) can

3. Tom ... play tennis well but he ... play a game yesterday because he was ill.

a) couldn't, could

b) can, was able

c) can, couldn't

4. I didn't want to be late for the meeting. We ... meet at 5 sharp.

a) were to

b) had to

c) could

5. Where are my gloves? — I ... put them on because it's cold today.

a) can't

b) have to

c) needn't

6. You ... take an umbrella today. The Sun is shining.

a) needn't

b) mustn't

c) can't

7. I'm sorry, you didn't invite me to your birthday party. You ... invite me next time.

a) must

b) should

c) need to

8. Well, it's 10 o'clock. I ... go now.

a) can

b) has to

c) must

9. You ... smoke so much.

a) would

b) can't

c) shouldn't

10. We have got plenty of time. We ... hurry.

- a) must
- b) needn't
- c) should

2. Исправьте ошибки в предложениях.

1. He is the most oldest student in his group.
2. You are taller then me.
3. My car is beter than his.
4. It is one of most beautiful lakes in the world.
5. These flowers are more cheap than those ones.

Темы докладов и научных сообщений:

Домашнее чтение текстов

My every day meals

My name is Anya. I study at the university. As I am a student, I do not have much time for my meals. Usually I have two or three meals a day. I often go to bed late at night and then I do not have enough time for breakfast in the morning. Some of my friends do not eat in the morning at all. I prefer not to eat a lot in the morning. I drink tea or coffee and eat sandwiches with butter and cheese, or sometimes jam. At about 12 o'clock I have a snack. I drink orange juice with pies or eat an apple. My dinner is at three o'clock. There is a canteen at the university and a lot of students and teachers have their dinner there. Here everyone may find something to their taste: soup or borsch for the first course, meat or fish with vegetables for the second course. I usually choose fish soup, fried fish with mashed potatoes, and biscuits with tea. It is usually loud in the canteen at dinner time. Students discuss their student life here and make plans for the evening. I do not usually have supper. But before going to bed I often drink a glass of warm milk with biscuits or a cup of tea with honey. It helps me sleep well and feel healthy next morning.

Словарь

a snack – закуска

a canteen – столовая

for the first course – напервое

for the second course – навторое

mashedpotatoes–картофельноепюре

Напишите рецепт блюда русской кухни.

Опишите свой рабочий день.

Подготовьтесь к ролевой игре «Бронирование столика в ресторане».

Подготовьтесь к ролевой игре «Заказ блюд в ресторане».



## Проверочная работа 4

### 1. Выберите в скобках подходящее слово.

1. The bus moved very ... (slow/slowly) and I arrived home late. (Автобус двигался очень медленно, и я прибыл домой поздно.)
2. Miss Jones ran ... (quick/quickly) to the chemist's. (Мисс Джонс быстро побежала в аптеку.)
3. I'm afraid I wrote the test very ... (bad/badly). (Боюсь, я написал тест очень плохо.)
4. She drives the car quite ... (good/well). (Она водит машину довольно хорошо.)
5. Dad looked at me ... (angry/angrily). (Папа посмотрел на меня сердито.)
6. Mr. Potter was ... (deep/deeply) touched by our greetings. (Мистер Поттер был глубоко тронут нашими поздравлениями.)
7. We ... (hard/hardly) know each other. (Мы почти не знаем друг друга.)
8. The Internet is ... (wide/widely) used all over the world. (Интернет широко используется по всему миру.)
9. Hurry up, kids! It's ... (near/nearly) midnight. (Поторопитесь, дети! Уже почти полночь.)
10. The police officer examined the car ... (close/closely). (Полицейский тщательно осмотрел машину.)

### 2. Раскройте скобки, поставив глагол в нужную форму

1. This book (write) many years ago.
2. His car (break) so he had to take a taxi.
3. This castle (build) in the 16th century.
4. I've missed the news block! When it (repeat)?
5. This dress is brand new, it never (wear).
6. I am reading a book while my car (repair).
7. At what time the dinner usually (serve) here? To my great surprise the problem (solve) yet.

### 3. Поставьте глаголы из скобок в форму простого пассивного инфинитива.

1. He wants ... (register) as a volunteer. (Он хочет, чтобы его зарегистрировали в качестве волонтера.)
2. This picture seems ... (draw) in crayons. (Наверное, эта картина нарисована мелками.)
3. We like ... (visit) by our sons. (Нам нравится, когда нас навещают сыновья.)
4. They can't ... (tell) the truth about the money. (Им нельзя рассказывать правду о деньгах.)
5. That's a nice house ... (buy). (Этот дом прекрасен для того, чтобы его купить.)
6. She demanded ... (hear). (Она требовала, чтобы ее выслушали.)
7. Laws are not made ... (break). (Законы пишут не для того, чтобы их нарушали.)
8. Nancy hated ... (laugh at) because of her ignorance. (Нэнси ненавидела, когда над ней смеялись из-за ее невежества.)

Темы докладов и научных сообщений:

Домашнее чтение текстов

Myworkingday

I am a student of the second year of study. My name is Vadim. I am a prospective teacher of mathematics. Every day I have my hands full. Usually I do not have a lot of free time, so I have to plan everything beforehand. I get up at 6.30. I wash my face, clean my teeth, dress my sportswear and go to a sports ground. Jogging in the morning wakes me up, brings me energy and fills me with a good mood. After my morning exercises, I go home, take a cold shower and have my breakfast. I do not eat much in the morning, a sandwich with butter and cheese or jam and a cup of tea. I am glad all the members of my family have their breakfast at the same time. We may wish each other a good day and discuss our plans for the evening. After breakfast I take my coat and a bag, and go to the university. It doesn't take me much time, so I am not usually late for classes. I have 3–4 classes a day. After classes I have dinner with my friends in the university canteen. Then I have to go to the library and get ready for my classes or to write a report. After that I meet my friends and spend the rest of the evening with them. We go for a walk, discuss our student life, and make plans for the weekend. Sometimes we visit a sports center and play bowling or skate there. I come home at about 8. We have our supper, which is usually light, watch TV, communicate with my parents, listen to my favorite music. Then I go to bed at 11 o'clock.

Словарь

cheese – сыр

beforehand – заранее

jogging – пробежка

to wake up – пробуждать

Сделайте сообщение о системе образования в России

Составьте расписание занятий в колледже

Проверочная работа 5

1. Распределите следующие предложения по группам:

1. The garden was full of children, laughing and shouting. (Сад был полон детей, смеющихся и кричащих.)
2. Could you pick up the broken glass? (Ты не мог бы поднять разбитый стакан?)
3. The woman sitting by the window stood up and left. (Женщина, сидевшая у окна, встала и ушла.)
4. I walked between the shelves loaded with books. (Я прошел между полками, нагруженными книгами.)
5. Be careful when crossing the road. (Будь осторожен, переходя дорогу.)
6. Having driven 200 kilometers he decided to have a rest. (Проехав 200 км, он решил отдохнуть.)
7. If invited, we will come. (Если нас пригласят, мы придем.)
8. I felt much better having said the truth. (Мне стало гораздо лучше, когда я сказал правду.)
9. He looked at me smiling. (Он взглянул на меня, улыбаясь.)
10. She had her hair cut. (Она подстригла свои волосы.)
11. Built by the best architect in town, the building was a masterpiece. (Построенное лучшим архитектором города, здание было шедевром.)
12. Not having seen each other for ages, they had much to talk about. (Не видя друг друга вечность, им было много о чем поговорить.)

Причастие I	Перфектное причастие I	Причастие II

Темы докладов и научных сообщений:

Домашнее чтение текстов

Education in Britain

In England and Wales compulsory school begins at the age of five, but before that age children can go to a nursery school, also called play school. School is compulsory till the children are 16 years old.

In Primary School and First School children learn to read and write and the basis of arithmetic. In the higher classes of Primary School (or in Middle School) children learn geography, history, religion and, in some schools, a foreign language. Then children go to the Secondary School.

When students are 16 years old they may take an exam in various subjects in order to have a qualification. These qualifications can be either G.C.S.E. (General Certificate of Secondary Education) or "O level" (Ordinary level). After that students can either leave school and start working or continue their studies in the same school as before. If they continue, when they are 18, they have to take further examinations which are necessary for getting into university or college.

Some parents choose private schools for their children. They are very expensive but considered to provide a better education and good job opportunities.

In England there are 47 universities, including the Open University which teaches via TV and radio, about 400 colleges and institutes of higher education. The oldest universities in England are Oxford and Cambridge. Generally, universities award two kinds of degrees: the Bachelor's degree and the Master's degree.

Сделайте сообщение на тему «Обучение в Великобритании».

Сделайте сравнительный анализ системы образования в разных странах.

Подготовьтесь к беседе о профессиональном образовании в России, в Великобритании.

Проверочная работа 6

1. Выберите верный ответ:

1. Lisa has (gone, went) home already.
2. The prize-winning essay was (wrote, written) by my brother.
3. (Examined, examining) by a doctor, his wrist will heal soon.
4. I shook the bright (wrapping, wrapped) gift before opening it.
5. (Waking, being walked) slowly, the dog stretched its legs.
6. The pet (choosing, chosen) by Tim is a baby rabbit.
7. The athlete, (sweating, sweated) heavily, grabbed a towel and a bottle of water.
8. I didn't want to eat the (burned, being burned) potatoes that my sister had (cook, cooked).
9. Everyone (involved, having involved) in the discussion expressed his or her opinion.
10. (Smiled, smiling) I opened my birthday present.

11. The (married, marrying) couple set out on their honeymoon.
12. (Surrounded, surrounding) by the smell of apples,
13. I walked through the orchard.
14. I often buy cheese (imported, importing) from Paris.
15. We all praised the cake (baking, baked) by my mother.
16. When (playing, played) tennis he slipped and broke his leg.

2. Образуйте герундий от глагола в скобках и переведите предложение. Почему надо в данном случае использовать герундий?

1. Start ... about pleasant things – and you'll be happy! (think)
2. Americans enjoy ... houses and ... to new places. (change/ move)
3. Would you like to go ... in the sea? (sail)
4. Most people enjoy ... in the sun. (lie)
5. I haven't had my lunch yet. Do you mind ... outside for ten minutes? (wait)
6. John likes ... at a high speed. (drive)
7. Stop ... about your troubles. (worry)
8. Jack was proud of ... the first prize for.... (get/ jump)
9. Helen was so angry that she left without... a word. (say)

Темы докладов и научных сообщений:

Домашнее чтение текстов

My plans for future

My name is Lena. I am a fifth-year-student. In a year I will graduate from the university and become an economist. As I am only 21, I have a lot of plans for future. But everything I want to do, I have to discuss with my husband. We have been married for one year. We are not only a husband and a wife, but also close friends. It is a family tradition to discuss everything and come to a mutual decision. Of course. I dream about my own successful career. I also want to have children and a happy family. That's the question, every young family has to answer nowadays: career or children? There are many possible answers: first career, then children; first children, then career; career without children, etc. My parents and my parents-in-law have three children. We are a big and friendly family. My husband dreams about having two or more children. That's my dream too. My husband has worked hard in order to become a good lawyer. I am also ready to do best and achieve success in my profession. Along with that, I would like to have my own house and a car. I would also like to spend my vacation abroad and see the places I have only dreamed about. It would be nice to travel somewhere with my family.

Словарь mutual – общий

to have to do smth. e.g. I have to do it. – Я должен это сделать

to do one's best – сделать всевозможное

to achieve – достигать

a vacation – каникулы

Напишите эссе «Профессия моей мечты».

Проверочная работа 7

1. Заполните пропуски соответствующим предлогом.

- a. I applied \_\_\_\_\_ the job that I saw advertised \_\_\_\_\_ the paper.
- b. I think you're quite right. I absolutely agree \_\_\_\_\_ you.
- c. They are arguing \_\_\_\_\_ who's going to win the World Cup.
- d. Water consists \_\_\_\_\_ hydrogen and oxygen.
- e. After six months of working overtime, she succeeded \_\_\_\_\_ paying off her debts.
- f. It took him a long time to recover \_\_\_\_\_ the injuries he sustained in the car crash.
- g. I'd like to complain \_\_\_\_\_ the manager \_\_\_\_\_ the state of my room. It isn't very tidy.
- h. Compared \_\_\_\_\_ many countries, the cost of living in Spain is quite low.
- i. She was concentrating so hard \_\_\_\_\_ her book that she didn't hear me come into the room.
- j. Do you believe \_\_\_\_\_ reincarnation? I do.
- k. Who does that car belong \_\_\_\_\_? It's in my way.
- l. Could I speak \_\_\_\_\_ you for a moment \_\_\_\_\_ our plans for next month? It's rather important.
- m. Gold is not affected \_\_\_\_\_ moisture.
- n. The work was divided \_\_\_\_\_ four students.
- o. The ship cruises \_\_\_\_\_ Odessa and Batumi.

2. Продолжите предложения в косвенной речи, соблюдая правила согласования времен.

1. She said, "I speak French." – She said that she ...
2. She said, "I am speaking French."
3. She said, "I have spoken French."
4. She said, "I spoke French."
5. She said, "I am going to speak French."
6. She said, "I will speak French."
7. She said, "I can speak French."
8. She said, "I may speak French."
9. She said, "I have to speak French."
10. She said, "I must speak French."
11. She said, "I should speak French."
12. She said, "I ought to speak French."

Темы докладов и научных сообщений:

Домашнее чтение текстов

Climate in Great Britain

The British Isles which are surrounded by the ocean have an insular climate.

There are 3 things that chiefly determine the climate of the United Kingdom: the position of the islands in the temperate belt; the fact that the prevailing winds blow from the west and south-west and the warm current – the Gulf Stream that flows from the Gulf of Mexico along the western shores of England. All these features make the climate more moderate, without striking difference between seasons. It is not very cold in winter and never very hot in summer.

So, the British ports are ice-free and its rivers are not frozen throughout the year. The weather on the British Isles has a bad reputation. It is very changeable and fickle. The British say that there is a climate in other countries, but we have just weather. If you don't like the weather in England, just wait a few minutes.

It rains very often in all seasons in Great Britain. Autumn and winter are the wettest. The sky is usually grey and cold winds blow. On the average, Britain has more than 200 rainy days a year. The English say that they have 3 variants of weather: when it rains in the morning, when it rains in the afternoon, and when it rains all day long. Sometimes it rains so heavily, that they say «It's raining cats and dogs».

Britain is known all over the world for its fogs. Sometimes fogs are so thick that it's impossible to see anything within a few meters. The winter fogs of London are, indeed, awful; they surpass all imagination. In a dense fog all traffic is stopped, no vehicle can move from fear of dreadful accidents. So, we may say that the British climate has three main features: it is mild, humid and very changeable.

Подготовьте сообщение по одной из следующих тем:

1. Географическое положение Великобритании
2. Государственное устройство Великобритании.
3. Экономика Великобритании.
4. Описание карты Великобритании.

Проверочная работа 8

1. Закончите вопросы необходимым предлогом:

- a. What are you worrying \_\_\_\_ ?
- b. What do you hope \_\_\_\_ ?
- c. What exam are you preparing \_\_\_\_ ?
- d. Where are you hurrying \_\_\_\_ ?
- e. Who are you waiting \_\_\_\_ ?
- f. What are you listening \_\_\_\_ ?
- g. What railway station does this train arrive \_\_\_\_ ?
- h. What have you congratulated John \_\_\_\_ ?
- i. Who do you agree \_\_\_\_ ?

- j. Who did you cooperate \_\_\_\_ ?
- k. Who have you just danced \_\_\_\_?
- l. What disease did she die \_\_\_\_ ?
- m. Who has it happened \_\_\_\_ ?
- n. Who have you learned it \_\_\_\_ ?

Темы докладов и научных сообщений:

Домашнее чтение текстов

A man needs rest after hard work. Very often we are eagerly looking forward to weekends and holidays to enjoy ourselves.

The word "holiday" comes from the words "holy day". Holidays were first religion festivals. Now many holidays have nothing to do with religion. Almost every country has holidays honouring important events in its history.

Some holidays come on the same date of the same month, for instance, New Year's Day or Christmas. But some do not. Some, such as Easter, are movable holidays.

New Year's Day is very popular all over the world. It is my favourite holiday. We usually get together, we like celebrate this holiday at home.

We celebrate the first day of Christmas on the 7th of January. On the 6th of January people tidy the whole house, cook much tasty food because the day after we must not work, we must have a rest. On this day we have a sacred supper. It begins when the first star lights up. As the legend says, this star announced the birth of the God's Son. We celebrate Christmas for two days. In the evening a group of boys comes. They sing songs. By these songs they congratulate on holiday, wish good crops, long life, no illness and so on. It is interesting to know that only boys must congratulate.

Women's Day is on the 8th of March.

Then on the 1st of May goes next holiday the Day of Labor.

Another religious holiday is Easter. It is movable. It is usually the first Sunday after the first full moon after the beginning of spring. In Russia we have special attributes of Easter: Easter eggs, and Easter "paska" that are baked according to the special recipe. It is a very nice spring holiday.

Victory Day is on the 9th of May. It is a sacred holiday for every Russian citizen. We are thankful to our grandfathers for the victory in the World War II.

Опишите свой отдых.

Подготовьте сообщение о плюсах и минусах изучения иностранного языка.

Проверочная работа 9

1. Поставьте глаголы в нужную форму.
1. If Peter \_\_\_\_\_ (come) to my place, we \_\_\_\_\_ (go) to play in the yard.

2. If Peter \_\_\_\_\_ (not come) to my place, I \_\_\_\_\_ (watch) TV.
3. If Frank's parents \_\_\_\_\_ (have) their holidays in summer, they \_\_\_\_\_ (go) to the seaside.
4. If they \_\_\_\_\_ (have) their holidays in winter, they \_\_\_\_\_ (stay) at home.
5. If the fog \_\_\_\_\_ (thicken), Harold \_\_\_\_\_ (put up) the tent for the night.
6. When I \_\_\_\_\_ (finish) my work, I \_\_\_\_\_ (go) to the cinema.
7. We \_\_\_\_\_ (buy) this book as soon as our mother \_\_\_\_\_ (give) us some money.
8. When we \_\_\_\_\_ (come) to your place you \_\_\_\_\_ (show) us your present.
9. I \_\_\_\_\_ (return) you your ring when you \_\_\_\_\_ (ask) me.
10. I \_\_\_\_\_ (wait) for my friend until he \_\_\_\_\_ (come) from the shop.
11. My father \_\_\_\_\_ (start) writing before the sun \_\_\_\_\_ (rise).
12. As soon as you \_\_\_\_\_ (finish) your study I \_\_\_\_\_ (present) you with a new flat.

2. Вставьте фразовые глаголы:

1. Can I ... these sandals, please? (Можно примерить эти сандалии?)
2. It's too cold outside. ... a warm coat and a hat. (На улице слишком холодно. Надень теплое пальто и шапку.)
3. It's too hot inside. Can I ... my jacket? (В помещении слишком жарко. Могу я снять куртку?)
4. Mary is going to become a doctor when she ... . (Мэри собирается стать врачом, когда вырастет.)
5. Don't forget to ... the light when you leave the bathroom. (Не забудь выключать свет, когда выходишь из ванной.)
6. Please ... this registration form. (Пожалуйста, заполните этот регистрационный бланк.)
7. We're ... to meeting your wife. (Мы с нетерпением ждем встречи с твоей женой.)
8. Ann is so tolerant and kind. She likes ... children and old people. (Аня так терпелива и добра. Ей нравится ухаживать за детьми и пожилыми людьми.)
9. ...! The baby is going to fall! (Осторожно! Малыш может упасть!)
10. Sorry. I can't ... with you tonight. I am very busy. (Извини. Я не могу пойти прогуляться с вами вечером. Я очень занят.)
11. He is ... a job as a lawyer. (Он ищет работу на должность юриста.)
12. Bob smoked for 20 years but he ... six months ago. (Боб курил 20 лет, но бросил 6 месяцев назад.)
13. I'd like to watch the news. Could you ... the TV, please? (Я бы хотел посмотреть новости. Не мог бы ты включить телевизор?)
14. This word is new for me. I have to ... it ... in my dictionary. (Это слово для меня новое. Мне нужно отыскать его в словаре.)
15. We must ... our reports tomorrow morning. (Мы должны сдать наши отчеты завтра утром.)
16. Oh god! We have ... at a wrong station. (О боже! Мы высадились не на той станции.)

Темы докладов и научных сообщений:

Домашнее чтение текстов

Ecological Problems



Since ancient times Nature has served Man, being the source of his life. For thousands of years people lived in harmony with environment and it seemed to them that natural riches were unlimited. But with the development of civilization man's interference in nature began to increase.

Large cities with thousands of smoky industrial enterprises appear all over the world today. The by-products of their activity pollute the air we breathe, the water we drink, the land we grow grain and vegetables on.

Every year world industry pollutes the atmosphere with about 1000 million tons of dust and other harmful substances. Many cities suffer from smog. Vast forests are cut and burn in fire. Their disappearance upsets the oxygen balance. As a result some rare species of animals, birds, fish and plants disappear forever, a number of rivers and lakes dry up.

The pollution of air and the world's ocean, destruction of the ozone layer is the result of man's careless interaction with nature, a sign of the ecological crises.

The most horrible ecological disaster befell Ukraine and its people after the Chernobyl tragedy in April 1986. About 18 percent of the territory of Belarus were also polluted with radioactive substances. A great damage has been done to the agriculture, forests and people's health. The consequences of this explosion at the atomic power-station are tragic for the Ukrainian, Byelorussian and other nations.

Environmental protection is of a universal concern. That is why serious measures to create a system of ecological security should be taken.

Some progress has been already made in this direction. As many as 159 countries – members of the UNO – have set up environmental protection agencies. Numerous conferences have been held by these agencies to discuss problems facing ecologically poor regions including the Aral Sea, the South Urals, Kuzbass, Donbass, Semipalatinsk and Chernobyl.

An international environmental research center has been set up on Lake Baikal. The international organization Greenpeace is also doing much to preserve the environment.

But these are only the initial steps and they must be carried onward to protect nature, to save life on the planet not only for the sake of the present but also for the future generations.

Подготовьте сообщение на тему «Берегите природу!»

Темы докладов и научных сообщений:

Домашнее чтение текстов

There could not be any development without inventions. Modern world can be called the world of technology, but the way to this title was rather long. Nowadays there are numerous laboratories discovering something new on a daily basis, but there are some inventions that date back centuries, but are still the core of the modern science. Almost all of contemporary discoveries have been based on previous inventions, so we should give credit to those talented inventors, who laid the foundation for our comfort. Let us remember the most crucial inventions and their creators, who paved the way to our easy-going life.

Wheel is one of the most ancient people's inventions. It is the thing that lets us move nowadays, but became a revolt in manufacturing hundreds of years ago. It is supposed that a wheel was discovered 3,000 years ago by potters and helped to carry different goods. It was a real boost

when the wheel was enhanced to the extent that it became a part of the vehicle. The invention of the wheel is a concept that lay grounds for many other inventions we can not live without.

Steam engine invention can be called a key to our modern transportation and industries. Though we use more developed engines nowadays, all of them work in the same way – burning fuel is converted into kinetic energy. James Watt is considered to be a leading inventor of steam engine, but there are numerous successors, who were improving it decade after decade. This invention had a dramatic impact on the world industry allowing factories to be free from water power, developing coal industry, increasing the speed of trains and becoming a core of modern transportation system.

Electric light is another crucial invention that influenced the development of the mankind. Thomas Edison managed to invent a light bulb lasting for 1,500 hours, while William David Coolidge is credited as the inventor of incandescent bulb familiar to us.

Telephone is one more revolutionary idea for people's communication. Though the idea of it is rather simple, it took many years to realize it in real life. Michael Faraday, Johann Reis, Alexander Graham Bell have worked on the telephone equipment and the last inventor managed to reach his target and even founded the first telephone company. This company is also regarded to have developed the first mobile phones for police and later set the pace for cells development.

Выражение мнения о новых технологиях

Интервью с изобретателем

Работа с текстами

Вопросы:

1. Аналитическая работа с текстами (индивидуальными для каждого студента) на изучаемую тему.

2. Составление глоссария и тезисов к тексту.

3. Специфика перевода модальных глаголов.

4. Страдательный залог.

Темы докладов и научных сообщений:

Домашнее чтение текстов

Мнение о прочитанном тексте

Краткая характеристика текста

Составление глоссария

Заполнение дневника

Вопросы:

1. Аналитическая работа с текстами (индивидуальными для каждого студента) на изучаемую тему.

2. Составление глоссария и тезисов к тексту.

3. Местоименные наречия

4. Придаточные предложения (определительные; бессоюзные).

Темы докладов и научных сообщений:

Домашнее чтение текстов

Мнение о прочитанном тексте

Краткая характеристика текста

Составление глоссария

Заполнение дневника

Вопросы:

1. Аналитическая работа с текстами (индивидуальными для каждого студента) на изучаемую тему.

2. Составление глоссария и тезисов к тексту.

3. Специфика перевода служебных слов, парных союзов.

Темы докладов и научных сообщений:

Домашнее чтение текстов

Мнение о прочитанном тексте

Краткая характеристика текста

Составление глоссария

Заполнение дневника

Вопросы:

1. Аналитическая работа с текстами (индивидуальными для каждого студента) на изучаемую тему.

2. Составление глоссария и тезисов к тексту.
3. Специфика перевода придаточных предложений,
4. Специфика перевода предложений с модальными глаголами

Темы докладов и научных сообщений:

Домашнее чтение текстов

Мнение о прочитанном тексте

Краткая характеристика текста

Составление глоссария

Заполнение дневника

Вопросы:

1. Аналитическая работа с текстами (индивидуальными для каждого студента) на изучаемую тему.
2. Составление глоссария и тезисов к тексту.
3. Типы вопросов.

Темы докладов и научных сообщений:

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2. Составление глоссария и тезисов к тексту.

### 3. Специфика перевода сослагательного наклонения в научной литературе.

Темы докладов и научных сообщений:

Домашнее чтение текстов

Мнение о прочитанном тексте

Краткая характеристика текста

Составление глоссария

Заполнение дневника

Тексты профессиональной направленности для домашнего чтения    Тексты для изучающего чтения

1. Read the text and find in it the answers to the questions that follow it

An electric cell supplies electric energy provided its electrodes are of different materials. In case the electrodes are of the same material they become charged but there is no difference of potential across the terminals. Iron and zinc plates are commonly used for producing negative electrodes since these materials produce a high charge. Carbon is commonly used to produce positive electrodes.

The voltage output of cells in use nowadays is from 1 to 2 V. The value of the output depends only on the materials used for the electrodes.

Besides, it depends on the electrolyte of a cell. It does not depend on the size of a cell and its construction, while the current capacity of a cell depends on the size of the electrodes. The larger the size of the electrodes, the more current capacity they can supply. When the size of the electrodes is increased the current capacity also increases while the voltage output does not increase. Such is the relation between the size of the electrodes and the current capacity.

1. What element is described in the text?
2. In what case does a cell supply energy?
3. What materials are commonly used for producing negative electrodes?
4. Explain why iron and zinc are used.

5. What is the voltage output of cells in use nowadays?
6. What does the value of the output depend on?
7. What is the relation between the size of the electrodes and the current capacity?
8. Give the title to the text.

2. Read the text and find in it the answers to the questions that follow it

The capacity of a capacitor is measured in farads. A capacitor has a capacity of one farad when a charge of one coulomb increases the potential between its plates by one volt.

The capacity depends on four things:

first, the higher the voltage used to charge the capacitor the more energy it will store;

second, the larger the size of plates and the greater their number the more energy will be stored;

third, the closer are the positive and negative plates the greater is the charge;

fourth, some insulators store greater charge than others.

1. What does the capacity of a capacitor depend on?
2. Give the title to the text.
3. Read the text and find in it the answers to the questions that follow it.

Wattmeter

A wattmeter is used to measure the value of power. It is connected to the circuit directly. A wattmeter consists of coils: two fixed coils and a coil which moves in the magnetic field produced by the fixed coils.

Wire used for the coils must have a high resistance; the fixed coils are in series with the load, the moving coil is connected across the line in series with a resistance. When a wattmeter is used, the readings on its scale show the value of power being used.

1. What is the wattmeter used for?
2. What does it consist of?
3. In what way are the elements connected?
4. What do the readings on the scale show?

4. Read the text and find in it the answers to the questions that follow it.

### Rheostat

A rheostat is a resistor whose resistance value may be varied. Thus, a rheostat is a variable resistor.

It is used to change the resistance of circuits, and in this way to vary the value of current.

A rheostat consists of a coil and a switch. Take into consideration that wire used for the coil must have a very high resistance. When a rheostat is used its terminals are connected in series with the load. The switch is used to change the length of the wire through which the measured current passes. The resistance may be changed to any value from zero to maximum.

The longer the rheostat wire used in the circuit, the greater is the resistance.

1. What type of resistor is a rheostat?
2. What is a rheostat used for?
3. In what way does a rheostat vary the value of current?
4. What elements does a rheostat consist of?
5. In what way are the terminals connected with the load?
6. What is the function of the switch?

5. Read the text and find in it the answer to the question that follows it

### Voltage Values

Voltages up to about 250 V are called low. The common electric lighting circuit operates either at about 127 or 200 V, and the voltage used on the main circuit of large houses is usually the same. One can get an electric shock, when one touches an uninsulated wire of such a circuit.

Voltages above 250 V are high voltages. They are used in industry.

Medium-powered motors are usually operated at 380 V. Large motors are supplied by voltages of from about 500 up to 6,000 V.

What have you read about?

6. Read the text and find in it the answer to the question that follows it.

### High-Frequency Current

Alternating current with frequency of 50 c/s is widely used in industry.

Therefore this frequency is called an industrial frequency and the current, an industrial frequency current.

During sound transmission, current flowing in telephone wires changes with the frequency of sound oscillations, which ranges from 50 to 10,000 c/s. The currents of such frequencies are called audio- or low-frequency currents.

Radio transmission is based on the use of alternating currents with frequencies of hundreds, thousands, millions and even tens of million cycles per second. These currents called high-frequency currents are produced by means of an oscillatory circuit consisting of a coil and a capacitor. Moving along the turns now in one direction now in another, the electric charges oscillate in an oscillatory circuit.

By what means are high-frequency currents obtained?

7. Read the text and find in it the answers to the questions that follow it

#### H V Power Transmission

A high-capacity hydrogenerator produces an a.c. current at 22,000 V.

The current with the potential difference of 220,000 V is produced by means of the transformers at a step-up station and then transmitted over the power lines.

The current potential difference is lowered to medium 6,600 V at the main step-down substation at the end of the line. From here the power is transmitted to the next substations. Transformers stepping the voltage down from 6,600 V are installed at those substations.

Due to voltage conversion, alternating current is used widely in industry.

Direct current for battery charging for trams, trolleybuses and electric locomotives is changed from alternating current by means of rectifiers.

1. Where is the current potential difference lowered?

2. Where is the main step-down substation installed?

8. Read the text and find in it the answers to the questions that follow it



## Meters

One of the important things that an engineer should take into consideration is “how much?” How much current is this circuit carrying?

What is the value of voltage in the circuit? What is the value of resistance?

In fact, to measure the current and the voltage is not difficult at all. One should connect an ammeter or a voltmeter to the circuit and read off the amperes and the volts.

Common ammeters for d. c. measurements are the ammeters of the magneto-electric system. In an ammeter of this type an armature coil rotates between the poles of a permanent magnet; but the coil turns only through a small angle. The greater the current in the coil, the greater the force, and, therefore, the greater the angle of rotation of the armature.

The deflection is measured by means of a pointer connected to the armature and the scale of the meter reads directly in amperes.

When the currents to be measured are very small, one should use a galvanometer. Some galvanometers detect and measure currents as small as  $10^{-6}$  of an ampere per 1 mm of the scale.

A voltmeter is a device to be used for measuring the potential difference between any two points in a circuit. A voltmeter has armatures that move when an electric current is sent through their coils. The deflection, like that of an ammeter, is proportional to the current flowing through the armature coil.

A voltmeter must have a very high resistance since it passes only very small currents which will not disturb the rest of the circuit. An ammeter, on the other hand, must have a low resistance, since all the current must pass through it. In actual use the ammeter is placed in series with the circuit, while the voltmeter is placed in parallel with that part of the circuit where the voltage is to be measured.

In addition to instruments for measuring current and voltage, there are also devices for measuring electric power and energy.

1. What is the above article about?

2. What is a voltmeter used for?

9. Read the text and find in it the answers to the questions that follow it

#### Negative Transconductance Oscillator

A negative transconductance oscillator consists of a pentode with the screen and suppressor grids coupled together. The screen is more positive than the plate. The cathode supplies electrons to both the screen and the plate. If the screen voltage rises, this increase is transferred over to the suppressor. It becomes more positive than before. A large quantity of electrons passes to the plate and a small quantity of electrons passes to the screen. Thus, the screen current is reduced. A negative resistance characteristic is produced in the screen circuit at the terminals.

A tuned circuit is connected to the terminals and in this way oscillations are produced.

1. In what way is the screen current reduced?

2. What does negative transconductance oscillator consist of?

10. Read the text and find in it the answer to the question that follows it

#### What are the Names of Oscillators?

Many types of oscillator circuits are used nowadays. Their tube types, tank circuits, and feedbacks are different.

Examine the diagrams given below. What are the names of the oscillators?

To answer this question read the following texts.

1. The Electron-coupled Oscillator uses a multi-grid vacuum tube with a cathode and two grids operating in common. In this device the plate circuit load is coupled to the oscillator through the electron stream. The diagram shows a tetrode variant using a series-fed oscillator.

2. The Dynatron Oscillator uses the negative resistance characteristic of a tetrode tube to eliminate the resistance of its tank circuit in order to keep oscillations.

3. The Blocking Oscillator uses a plate transformer to provide the feedback voltage.

4. A Multivibrator is a form of oscillator using two RC-controlled

triodes.

5. The Tuned Plate - Tuned Grid oscillator has parallel or resonant circuits in both plate and grid circuits. The necessary feedback is supplied by the plate-to-grid interelectrode capacitance.

Name the five oscillators in Fig. 20.

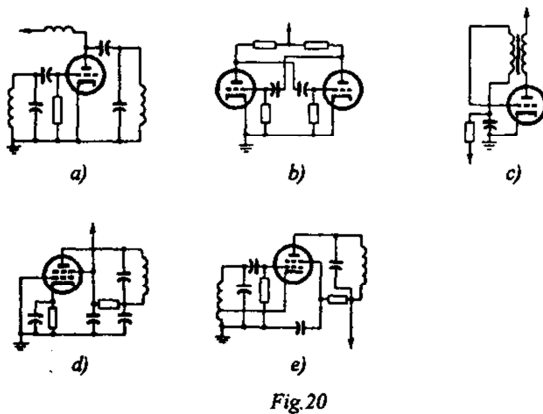


Fig.20

11. Read the text and find in it the answer to the question that follows it.

### Solar Energy

The Sun radiates to our planet great amounts of energy. This energy input fuels all our biological processes and is the original source for hydropower, wind power, and fossil fuel resources. Environmentally and economically, the Sun is our greatest energy source. Why then is the direct use of solar energy so limited for industrial, domestic, commercial, and transportation purposes?

First, solar energy arrives in small quantities - only about one kW per square meter; second, it does not arrive at all during night hours.

Third, it is very difficult to transform it into useful energy forms except low-grade heat.

Why is the direct use of solar energy limited nowadays?

12. Read the text and find in it the answer to the question that follows it.

### Superconductivity

In the electric generating field, as well as in the electric-transmission and storage-technology areas, considerable attention is focused on the use of superconductivity conductors. Cooling an electric conductor to

temperatures close to absolute zero ( $-273^{\circ}\text{C}$ ) results in the conductors' losing their resistance to electric current. Accordingly, their ohmic losses also drop greatly. Current densities of tens of millions amperes per sq cm can be tolerated in such conductors.

Cryogenic technology being now mastered, one can foresee the possibility of supercooling not only generators but also underground transmission lines and storage coils.

Are these statements true or false?

- a) Conductors can never lose their resistance to the flow of electric current.
- b) Generators and underground transmission lines can be supercooled.

13. Read the text and find in it the answer to the question that follows it.

#### Metals Used as Conductors

The use of electricity depends upon a means of conducting it from its source to the point where it is to be used. Copper has been used as a conductor since the beginning of the industry and no proper substitute has been found. Only one metal, silver, is more efficient, but it has too high cost to be extensively used.

Aluminium, because of its lightness, is used in common practice for transmission lines where long spans are necessary. It has, compared to other metals, a conducting capacity of about 60 per cent of that of copper.

Why cannot silver be extensively used?

14. Read the text and find in it the answers to the questions that follow it

#### Switchboard

Switchboard is an assemblage of switches, controlling or indicating devices mounted upon a frame for the purpose of control or an inspection of an electric path, circuit or system of circuits. Usually it is a metal frame carrying vertical slabs with switches, controlling handles and indicating or controlling instruments mounted thereon in an electric central station or distributing centre.

- 1. What is described in the text?
- 2. Where is the device used?

15. Read the text and find in it the answers to the questions that follow it

### Dynamo

Dynamo is a common device for converting mechanical energy into electric energy. This process depends on the fact that if an electrical conductor moves across a magnetic field, an electric current flows in the conductor.

Usually a dynamo includes an electromagnet, called the field magnet, between the poles of which a suitable conductor, usually in the form of a coil, called the armature, is rotated. The mechanical energy of the rotation, in the form of a current in the armature, is thus converted into electric energy.

1. What device is described in the text?
2. What types of the device do you know?

16. Read the text and find in it the answers to the questions that follow it

### Test Blocks Types B-4 and B-6

The types B-4 and B-6 test blocks with test plugs are designed as multipole connectors in the circuits of protective relays and measuring instruments.

The test blocks provide an easy and safe checking and replacement of relays and instruments during operation without breaking connections in wiring and on terminal blocks.

The test blocks are made in several versions which differ in the number of poles and in the way of wire connection.

Design. The test blocks consist of two units: the base and the removable cover.

While testing, the cover is removed and is replaced by the test plug which is inserted into the base and is electrically connected to the circuit for testing purposes.

Technical data. Rated voltage: 250 V; rated current: 5 A. Test voltage: 2 kV, a.c. 50 c.p.s. Transient stability: 300 A. The insulation resistance at ambient temperatures of  $20 \pm 5^\circ\text{C}$  should be not less than

2 megohms at relative humidity up to 80%, and not less than 2 megohms at relative humidity of 95%.

**Mounting.** Test blocks are mounted on the front panel. Before mounting, blocks should be provided with current-carrying pins.

**Operating conditions.** The blocks are designed for indoor use in stationary installations at ambient temperature and relative air humidity which are indicated. The blocks are produced in three types of desipis:

1. conventional; 2. export; 3. tropicalized. Ambient temperatures for the blocks of the first type of design are from -20 up to +35; for blocks of the second type - from -10 up to +35, and for the third type - from -10 up to +55. As to relative air humidity, it is also different for different types of devices. For the first type it is 80% at 20°C; for the second type it is also up to 80% in the same range of temperatures, and for the third type it is 95% at 40°C.

The test blocks are not to be used a) in an atmosphere containing current-conducting dust or gases which damage metals and insulation; b) where shock and vibration can take place; c) in an explosionhazardous atmosphere.

The delivery set includes a) base; b) cover; c) fastenings for mounting blocks and connections of wires.

**Order form.** When ordering, state the type of the block, kind of wire connection and number of units. For example, ORDER: Test block type B-6 for back connection - 3 pcs (=pieces).

1. What are the main characteristics of test blocks types B-4 and B-6?

2. When are the test blocks described not to be used?

17. Read the text and find in it the answers to the questions that follow it.

**Compressed-gas-insulated Transmission**

Transmission lines in which compressed gas is used as insulator have a number of advantages. The main advantages are simplicity of construction and low cost.

What is the construction of compressed-gas-insulated transmission

lines? It is rather simple. They comprise a number of phase conductors; each phase conductor is placed inside a tube and centered by means of circular spacers. The tube space is filled with compressed gas - usually sulphur hexafluoride. Each tube in a 345-kV line has a diameter about 50 cm. The system including compressed-gas-insulated transmission has the following advantages: its losses are rather low, they are considerably lower than those of cable transmission. Unlike cables, compressed-gas-insulated transmission system can be designed for ultra high frequencies. No external electric field appears in the system. The shunt capacitance is considerably less for a gas-insulated line than for a cable. A gas-insulated line can thus transmit power over larger distances than cable lines. The system should be protected against metallic particles. In case metallic particles get into the system, they cause a fault - a dielectric breakdown.

1. Does the system described have any advantages? What are they?
2. What gas is the space filled with?
3. Why should the system be protected?

18. Read the text and find in it the answers to the questions that follow it.

#### Starting Resistors Types 50-51

The electrical block resistors are generally used in starting and regulating installations for motors of any type and power.

Starting resistors have the capacity to support very high temperature variations, to which they are subjected due to their operating duty, without alteration or distortion.

Resistors consist of silicon sheet-steel or of special cast iron elements. Said elements are grouped in an assembly by means of steel rods interlocked by bolts in order to obtain rigid assemblies. These units are suitable for use in any type of machine and operate under high vibration conditions. For protection purposes, the resistor units are assembled in sheet-steel cases supplied with ventilation slits.

Starting resistors have a number of advantages; they are unbreakable,

light, rigid; they can withstand, without variation, vibration and shocks. They are also easily detachable; their elements are interchangeable.

Resistors are intended for operation in an ambient temperature of up to 300°C.

1. What device is described in the article?
2. What is the device used for?
3. What elements does it consist of?
4. What are the advantages of the device?

19. Study Fig. 21 and complete the sentences stating what metals are used for producing the devices *a-e*.

What Metals Are Used in Making Electrical Devices?

1. *Alnico* is an alloy of iron, aluminium, nickel, and cobalt used in making....
2. *Phosphor bronze* springs are used to produce . . . .
3. *Tungsten* is used in ... .
4. *Nickel* and *cadmium* are used in ... rechargeable.
5. *Nichrome* is high-resistance alloy of nickel and chromium used for... .



a) meter pointer



b) permanent magnet



c) battery cell



d) lamp



e) heater element

Fig.21

20. Arrange the paragraphs of the text in the logical order.

Aviation Signal

A glass tube filled with neon gas was found to be suitable for this kind of work. Instead of a neon lamp, in some cases, a low current filament lamp may also be used as a signalling source.

In order to assist the aviator in locating the transmission line, a signal



marking its position is provided; this signal is a luminous lamp attached to the conductors of the transmission line; the lamp is lighted by the potential on the line and serves to indicate its position. This signal also makes a safety device. If the line is under tension, the attending personnel working on it will know that potential is on the line.

A high tension transmission line leading from one city to another makes a guideway for aviators during the day time, since it is visible from great distances. However, at night the high tension transmission line becomes a danger for the aviator, rather than a help.

21. Read the text and find in it the answers to the questions that follow it.

### Thermal Steam-turbine Power Plants

Large steam-turbine plants have two forms: condensing plants or electric power plants.

The great masses of hot steam, having accomplished the mechanical work in the turbines of condensing steam-turbine plants, are condensed, i.e. are cooled down and turned back into distilled water, and returned to the boiler for production of steam to activate the turbine.

Condensation of steam takes place in condensers where the hot steam is cooled when it comes in contact with tubes through which cold water, supplied from a water reservoir (river or lake), is circulated. This cooling water, after it takes the heat from the spent steam, is returned to the water source carrying along with it the unutilized heat energy. This water is called the circulating water. The importance of the distilled water for feeding steam boilers is extremely great since chemically clean water decreases the formation of scale in the boiler tubes, and, thus, makes their service life longer.

Condensing plants of large generating capacity are built close to sources of fuel, in order not to transport large quantities of fuel over considerable distances.

The electric power generated in such plants is transmitted over long distances for the supply of large industrial regions. So these plants are

called regional thermal power plants.

Heat and electric power plants, in addition to electric power generation, also supply heat to closely located consumers (within a radius of 50 km), i.e. serve as district heat plants. To such heat consumers belong all kinds of industrial enterprises that require heat for production purposes, and also municipal consumers such as baths, laundries and the heating systems of dwelling houses and other buildings.

The electric power developed by the generators is fed to the switchboard of the plant, whence it is delivered by overhead transmission and cable lines to the consumers.

1. In what part of the power plant does condensation of steam take place?

\* 2. Why is distilled water used for feeding steam boilers?

22. Arrange the paragraphs of the text below in the logical order.

#### Testing Motors and Generators

It is of great importance, therefore, to make regular tests of insulation resistance of all machinery so as to detect possible faults. Different conditions may influence the value of the insulation resistance.

It is advisable, therefore, to make the test of the machine as soon as possible after it has been shut down as possible, when the insulation resistance is likely to be lowest. If, after the motor has just been shut down, the insulation resistance is found to be satisfactory, it may be assumed that it will be better at any other time provided that the machine does not stand idle for long in a humid atmosphere.

; Faults on electrical machinery must be due to one of two causes.

One is the absence of continuity in the conductor which is supposed to be carrying the current. The other is the absence, or partial absence, of insulation. The latter is by far the more common and the more dangerous of the two. A burnt out armature, for example, is usually due to insulation failure.

A drop in insulation resistance may often be accounted for, for example, by damp weather.

As regards the effect of temperature it should be noted that the insulation resistance of motors and generators is generally lower when they are hot than when they are cold as the insulating varnishes used in the building of the machines have a lower resistance when hot than when cold

Read the text and find in it the answer to the question that follows it.

a) Insulation tests to earth.

Disconnect the supply by opening the main switch and withdrawing the main fuses.

Insert all fuses at the distribution board (see Fig. 22).

Insert all lamps.

Close all single-pole switches.

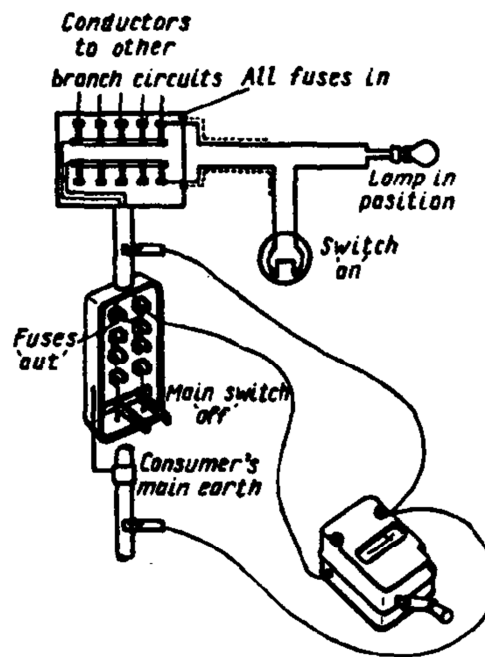
Join together the two contacts on the installation side on the main switch, and connect them to one terminal of the Insulation Tester used.

Connect the other terminal of the Tester to the conduit in which the wiring is run or, if lead-covered cable is used, to the lead sheathing. A second connection should also be made to the consumer's main earth.

This second connection is, however, unnecessary if the continuity and earthing of the conduit had been previously tested.

Turn the handle of the Tester at about 160 r.p.m. and take a reading.

In case the result of the test is considered satisfactory the installation is in proper order so far as resistance to earth is concerned.



**Fig.22. Insulation test to earth**

If, however, the values obtained are not sufficiently high, withdraw all fuses at the distribution fuse board and test again. This test should include only the portion of the installation between the main switch and the busbars of the fuse board. If the fault is not detected, one should proceed to the distribution fuse board and test each branch circuit in turn till the faulty circuit or circuits are discovered. These should be subjected to further tests till the actual fault is detected.

**b) Insulation test between conductors.**

Remove all lamps.

The main switch should be opened, all fuses inserted at the distribution board, and all single-pole switches in the closed or “on” position.

Connect one terminal of the Insulation Tester to fuse contact and the other to another contact and make a test.

Two readings should be taken on an insulation containing two-way switches, one with both switches on the “on” position and the other with both switches in the “off” position.

If the result of the test between conductors is also satisfactory, no further insulation tests are necessary and the insulation may be considered to be in order.

If, however, the results of the tests are unsatisfactory, proceed to the distribution board, withdraw all fuses and test each branch circuit individually between conductors until the faulty circuit or circuits are located.

What elements should be disconnected, inserted, closed, joined together, connected, etc. for making test on installations?

24. Read the text and find in it the answers to the questions that follow it.

#### Contactors Type 370

These contactors consist of the following main parts:

- one fixed bar
- one magnetic circuit which may be either a.c. or d.c.
- one or more auxiliary contacts (the maximum number of auxiliary contacts is 4)
- one or more poles for use with a.c. or d.c. loads.

These components are to be installed.

Their functions are as follows:

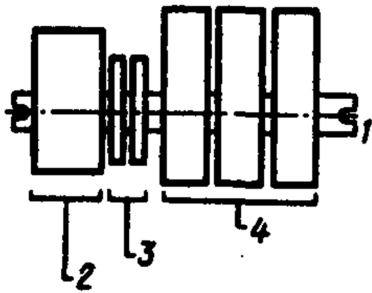
fixed bar has the function of supporting all the stationary parts of the contactor. At both ends it is provided with holes for mounting the contactor.

Moving shaft is made of steel. It is insulated for the installation of both main pole and auxiliary moving contacts.

1. What are the main parts of the contactors?

2. Which are the functions of each of these parts?

3. Describe Fig. 23.



**Fig.23. Schematic positioning of the different contactor components:**

**1 – fixed bar; 2 – magnetic circuit;  
3 – auxiliary contacts; 4 – poles**

25. Read the text and find in it the answers to the questions that follow it

#### Disconnecting Switches

Application. Indoor disconnecting switches are devices that are intended to make and break electric circuits rated at 6 to 10 kV, a.c. with no load currents. The single-pole disconnecting switches are controlled manually, by means of an insulated rod. The triple-pole disconnecting switches are controlled by means of manual lever-type operating mechanisms.

Mounting Instructions. 1. Clean the switch from dust and dirt. 2. Inspect it on the outside. 3. When insulating the switch, see that the bolts and switch terminals are reliably protected.

1. What are indoor disconnecting switches intended for?
2. What means are the single-pole switches controlled by?
3. What means are the triple-pole switches controlled by?
4. What recommendations do the mounting instructions include?

26. Think of 8-10 questions covering the contents of the text below. Use them in a talk with your groupmate.

Electric power is generated by converting heat, light, chemical energy, or mechanical energy to electrical energy. Most electrical energy is produced in large power stations by the conversion of mechanical energy or heat. The mechanical energy of falling water is used to drive turbine generators in hydroelectric stations, and the heat derived by burning coal, oil, or other fossil fuels is used to operate steam turbines or internal-combustion engines that drive electric generators. Also, the heat from the fissioning of uranium or plutonium is used to generate steam for the turbine generator in a nuclear power plant.

Electricity generated by the conversion of light or chemical energy is used mainly for portable power sources. For example, a photoelectric cell converts the energy from light to electrical energy for operating the exposure meter in a camera, and a lead-acid battery converts chemical energy to electrical energy for starting an automobile engine.

Electric power produced in large power stations generally is transmitted by using an alternating current that reverses direction 25, 50, or 60 times per second. The basic unit for measuring electric power is the watt - the rate at which work is being done in an electric circuit in which the current is one ampere and the electromotive force is one volt. Ratings for power plants are expressed in kilowatts (1,000 watts) or megawatts (1 million watts). Electric energy consumption normally is given in kilowatt-hours - that is, the number of kilowatts used times the number of hours of use. Electricity is clean, inexpensive, and easily transmitted over long distances. Since the 1880's, electricity has had an ever-increasing role in improving the standard of living. It now is used to operate lights, pumps, elevators, power tools, furnaces, refrigerators, air-conditioners, radios, television sets, industrial machinery, and many other kinds of equipment. It has been counted that in developed countries about 43% of the electric power is generally used for industrial purposes, 32% in homes, and 21% in commercial enterprises.

27. Read the text and find in it the answer to the question that follows it.

## Electric Power Interruptions

On November 9, 1965, at 5:16 p.m., a back-up relay failed at one of the five main transmission lines at No. 2 station near Toronto, Canada. As the load had shifted to the other four lines, they became overloaded, and as a result the relays failed in all four lines. The failure resulted in the load being shifted to the other plants in the system. The plants got overloaded, which caused them to shut down. Within minutes, power plants in Canada, New York, and the New England states got out of service. The blackout affected 30 million people and covered an area of 306,000 sq m. In some areas, such as New York City, power was not restored for about 13 hours.

This massive power blackout resulted in the construction of the national Electric Reliability Council in June 1958. This council sets standards for the design, operation, and maintenance of generating and transmission systems. These standards serve to prevent a failure in one power system from spreading to other systems. Yet local system failures cannot be avoided.

Nowadays in some European countries and in the US there are from 60 to 80 power interruptions per year, in which there is a loss of service for customers for more than 15 minutes. Mostly these interruptions are caused by weather conditions - ice, freezing snow, lightning or storms. There can be also failures of equipment - transformers, relays, insulators and so on. However, the reliability of electric service is extremely high. Have you been a witness to an electric service failure? Describe it, please.

28. Read and translate the text. What do you think is meant by “Member countries”?

Give the new units for the following: röntgen, rad, rem, curie.

## Quantities and Units

For many years, special measurement units for quantities of interest in radiation protection were used, which were not coherent with the International System of Units (SI). These old units (*röntgen*, *rad*, *rem* and



*curie*) have been superseded in the last few years by a new set of units which are coherent with the SI system.

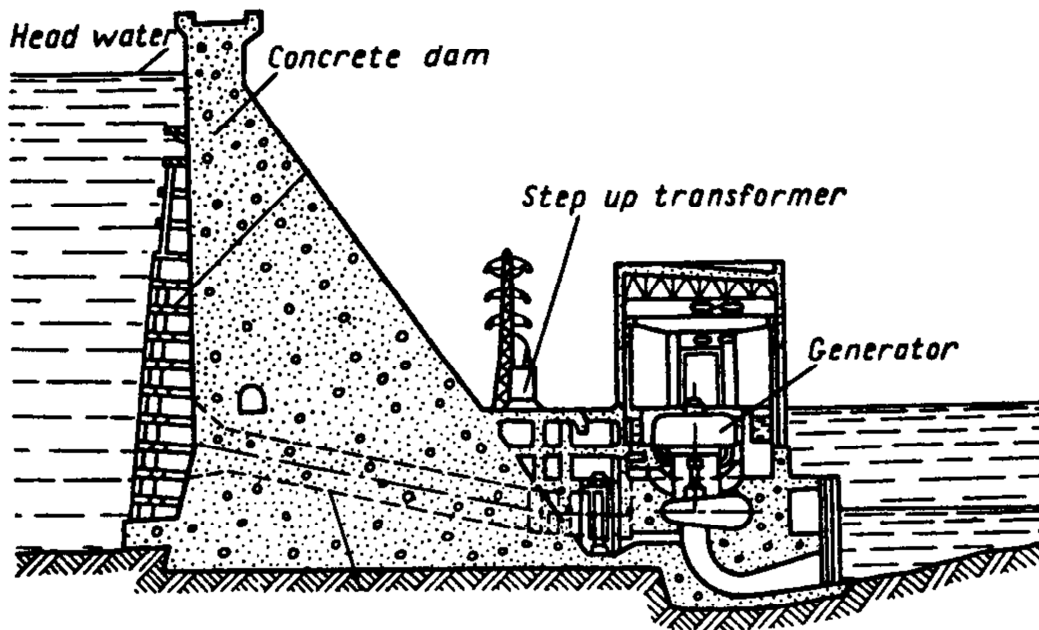
These new units, the *gray* for absorbed dose, the *sievert* for dose equivalent, and the *becquerel* for activity of radioactive materials, have been progressively adopted in Member countries, although some residual cases of use of the old units are still being observed. The relationships between the new SI units and those previously used are shown in the following table:

<i>Quantity</i>	<i>SI Unit</i>	<i>New Name and Symbol</i>	<i>Old Unit and Symbol</i>	<i>Conversion Factors</i>
Exposure	kg <sup>-1</sup>	–	röntgen (R)	1 C kg <sup>-1</sup> = 3876 R 1 R = 2.5 × 10 <sup>-4</sup> C kg <sup>-1</sup>
Absorbed dose	J kg <sup>-1</sup>	gray (Gy)	rad (rad)	1 Gy = 100 rad 1 rad = 10 <sup>-2</sup> Gy
Dose equivalent	J kg <sup>-1</sup>	sievert (Sv)	rem (rem)	1 Sv = 100 rem 1 rem = 10 <sup>-2</sup> Sv
Activity	s <sup>-1</sup>	becquerel (Bq)	curie (Ci)	1 Bq = 2.7 × 10 <sup>-11</sup> Ci 1 Ci = 3.7 × 10 <sup>10</sup> Bq

29. Read the text and find in it the answers to the questions that follow it.

#### Electric Power Plants

The two main types of power plants traditionally have been the fossil-fuel steam-electric plant and the hydroelectric plant. Other types, including internal-combustion-engine plants and nuclear plants also have been built. The selection of a particular type of generating plant and its location involves consideration of a number of factors such as plant, fuel, and transmission line costs; availability of cooling water; and environmental considerations.



**Fig.24. Cross-section through the main structures and units of hydroelectric power plant**

For several reasons, the relative importance of the various types of power plants has been shifting. Good sites for new hydroelectric plants have become scarce in many countries. Distribution networks have been extended so that less expensive power from large steam-electric stations has been replacing power from smaller diesel-generator units. Nuclearelectric power plants have been built instead of fossil-fuel steam-electric plants because the cost of coal and oil has been increasing.

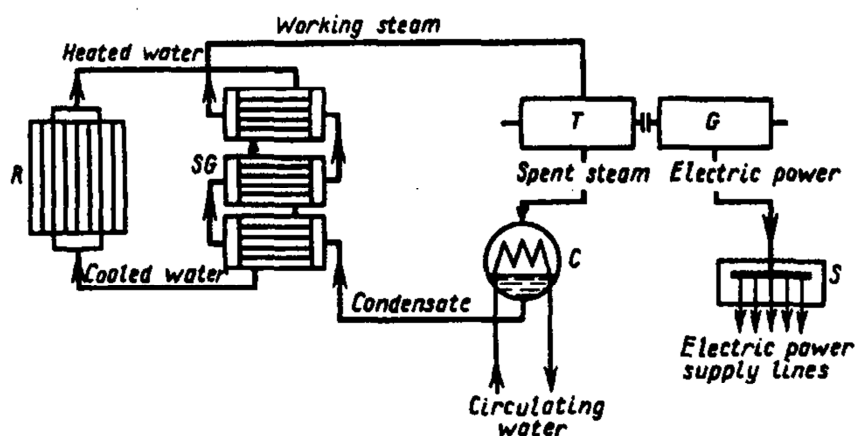
In the United States in 1970, fossil-fuel steam-electric plants accounted for 76% of the power generated, hydroelectric plants for 16%, and nuclear plants for 2%.

In 2000 45% of the electric power in the United States is generated from fossil-fuel steam-electric plants, 45% from nuclear plants, and 10% from hydroelectric plants.

1. What kinds of power plants are in use nowadays?
  2. What does the selection of a type of generating plant depend on?
  3. For what reason are nuclear-electric power plants being built instead of fossil-fuel steam-electric plants?
30. Study Fig. 25 and read the text. Describe a nuclear power plant.

## Nuclear Power Plants

The energy for operating a nuclear power plant comes from the heat released during the fissioning of uranium or plutonium atoms in a nuclear reactor. This fission heat is used to generate steam, which drives a turbine generator. Thus, there are two main differences between a nuclear power plant and a steam-electric power plant: the nuclear plant uses a nuclear fuel instead of a fossil fuel, and it uses a nuclear reactor instead of a boiler.



**Fig.25. Simplified production process diagram of nuclear power plant:**

**R – nuclear reactor; SG – steam generator; T – steam turbine; G – electric power generator; C – steam condensor; S – switchboard**

The fissioning of uranium-235 or plutonium-239 atoms - the primary nuclear fuels - is caused by the impacts of neutrons on these atoms.

The fission process not only produces heat but also several additional neutrons that can cause fissioning of other uranium-235 or plutonium-239 atoms. Thus, by proper arrangement of the atoms of the fuel, a sustained chain reaction can be maintained to provide a steady source of heat for operating a power plant. This chain reaction is controlled by regulating the number and the energy of the neutrons as they proceed from one fission reaction to another.

There are various types of nuclear reactors. The major differences between them are the form of the fuel, the methods for controlling the number and energy of the neutrons, and the type of liquid or gas used to remove the heat from the reactor core.

31. Read the texts and And in them the answers to the questions that follow.

a) Windscale Accident

Throughout the years, accidents causing a release of radioactive material to the environment have occurred. Since World War II all over the world large scale nuclear facilities have been built and operated both for civil and defense purposes. Some of the sites on which these facilities were located are heavily contaminated with radioactive substances. One of the first nuclear reactor accidents of environmental concern was the Windscale accident in October 1957. During the accident the military air-cooled graphite-moderated natural-uranium reactor used for plutonium production caught fire during the liberation of energy in the graphite. Emission from the Windscale lasted for 18 hours. Radioactive material was detectable in many parts of Western Europe but the majority of it was deposited in the United Kingdom.

1. How long did the emission from the Windscale reactor last?

2. What did the emission result in?

b) Chernobyl Accident

The accident, which was of global concern was the accident in Ukraine in the Chernobyl power plant located in Polesye on the River Pripyat.

On 26 April, 1986, Unit 4 of the Chernobyl nuclear plant suffered a major accident. The Chernobyl 4 reactor was a graphite-moderated, lightwater-cooled system. The installed electrical generating capacity was 1 GW. The accident followed some engineering tests of a generator.

During the tests, basic operating safety rules were being violated.

Most control rods were withdrawn from the core and the safety systems were switched off. Two explosions and a fire that followed them damaged the reactor and the containment building. The graphite started to burn. Explosive energy was released, which resulted in the 1000 ton cover plate of the reactor being lifted up.

A prolonged release of large quantities of radioactive products

transported by the cloud from Chernobyl was detected not only in northern and southern Europe but also in Canada, Japan, and the US. The major part of the release took place over the period of about ten days. There were two peaks in release rate (26th April and 5th May). Later on, the release continued for many weeks at a lower rate before the destroyed reactor was finally sealed, which took place some five months later.

Initially the cloud of radioactive material was carried over the Baltic Sea into Scandinavia. After a few days the wind direction rotated clockwise and the cloud travelled eastwards across the USSR and southwards to Turkey.

The total mass of the radioactive particles released in the accident was about 6000-8000 Kg. More than half of it was deposited near the plant but the rest travelled thousands of kilometres (see Fig. 26).

There is no doubt that the nuclear plant accidents offer a number of lessons to be learnt.

At present, over 200 nuclear power reactors for commercial electricity production operate in Europe.

The accident at the Chernobyl nuclear plant has shown that largescale accidents in nuclear power plants can lead to contamination of the entire continent.

1. What was the cause of the Chernobyl accident?
2. What was the path of the radioactive material released in the accident?
3. What can accidents at the nuclear plants lead to?
4. Make a talk on the Chernobyl accidents (use Fig. 26).

Тексты для просмотрового чтения

1. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What did the man tell when they began to speak about robbers?

2. What did the highwayman demand?
3. How did the woman explain the matter?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

#### Case on the road

In the old days a number of people were travelling from Bristol to London. During the long journey the passengers became friendly and didn't hide anything from each other. When the conversation turned upon robbers, a man told he had ten guineas in gold but didn't know where best to hide them. A woman advised him to put them into his boots.

Later on really a robber stopped the coach and demanded the money. Then to the astonishment of all others, the woman who had advised to hide her neighbour's money in his boot said: «I have no money, but this man has ten guineas in his boot». «The robber took the ten guineas and left. The robbed man began to accuse the woman of being in league with the robber. But the woman said: «Wait till London and I'll explain the thing to you».

When they came to London she told that she had had a large sum of money with her and that she had told the man's secret to turn the robber's attention from her. She begged now to excuse her and awarded the man with one hundred pounds.

Отвечьте на вопросы

2. Прочитайте вопросы. Вам нужно ответить на них после прочтения текста

1. What did the man hear?
2. What did the man think?
3. What did the man at the station say?

Начинайте просматривать текст. Не забудьте отметить время начала и конца работы.

#### Not a robber

A young man was going from the railway station. It was a dark night and there was nobody in the street. He was walking as fast as he could when suddenly he heard that somebody was following him. The faster he went, the faster the man behind him followed him. The man decided to turn into a side-street. After some time he looked back and saw that the other man was still following him. «That man behind me wants to rob me», thought the first man and seeing a high wall around a garden jumped over it. The other man jumped over the wall too. Now he was quite sure that this man was a robber, but he couldn't understand why the robber was not in a hurry to attack him.

The man didn't know what to do. Then he turned round and said: «What do you want? Why are you following me?»

«I'm going to Mr. White and the man at the station told me to go after you because Mr. White lives next door to you. Excuse me please but will you have some more jumping tonight or will you go straight home?»

Отвечьте на вопросы

3. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Why was Hugh Boggs worried?
2. Where was his bicycle picked up?
3. When did he leave it?

Начинайте просматривать текст. Не забудьте отметить время начала и конца работы.

His name and address was on the wheel

Hugh Boggs was worried all day. In the morning he received a letter from the police. They asked him to call at the station. Hugh couldn't understand why the police wanted him. He didn't do anything wrong. It was perhaps a mistake.

At the police station a policeman told him that his bicycle had been found. It was picked up in the hills in Wales about a hundred miles away. His name and address were written on the wheel.

The bicycle was sent to his home by train. Hugh was very much surprised when he heard the news. He was amused, too, because it was his old broken bicycle he had left behind last summer when returning to town after his holidays. Now when he receives his bike, he will have to think how to get rid of it again.

Ответьте на вопросы

4. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What did the judge's wife ask him to do?
2. What did the judge do with the box?
3. What was there in the box?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Caught in his own trap

It happened in England not very long ago. A judge was going for an assize (выездная сессия суда) to a distant town. His wife asked him to allow her to go with him. The judge agreed but told her not to take a lot of boxes. Next morning they started in a carriage. On the way the judge wanted to stretch his legs and his feet struck against something under the seat. It was a box. The judge was very angry, he opened the window and threw the box out. The coachman stopped the horses to pick up the box but the judge ordered to drive on.

The next day the travellers reached the town. The judge put on the robes and was ready for going to the court, but he couldn't find his wig (парик) which is a very important attribute of an English judge. Then he cried: «Where in all the world is my wig?»— «Your wig, my Lord? Why, your Lordship threw it out of the carriage window yesterday», explained the coachman who was watching the scene.

Ответьте на вопросы.

5. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What does the merchant take with him?
2. What is the monkey doing when the thieves attack the merchant?
3. Where does the monkey lead the magistrate with his men?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

#### The monkey detective

A merchant goes to Calcutta on some business. He takes with him a large sum of money and some valuable jewels. A monkey, of which he is very fond, also travels with him. Some thieves decide to attack and to rob merchant. On a lonely part of the road they catch him, murder him and take his things. Then they throw the body into a dry well, cover it over with leaves and go away. All this time the monkey is watching them from the tree. When the murderers are out of sight, the monkey goes to the magistrate's house and is crying and moaning and finally makes the magistrate follow him to the well. The magistrate brings some men with him, and one of them goes down into the well where the body of the murdered man is found. The monkey then leads them to the bazaars, and as soon as he sees one of the murderers he runs at him and bites him in the leg. The magistrate's servants come and seize the man. In this way all the murderers are detected by the monkey. They are all caught and punished accordingly.

(202 words)

Отвѣтьте на вопросы.

6. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Who was murdered once?
2. Who guarded the body?
3. What did the king order to do with the body and the dog?
4. What did the dog do when he saw the murderers?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

#### Crime Will Be Out Sooner or Later

Once during the civil wars of Rome a slave was murdered in one of the city squares, and nobody knew who committed the crime. The murdered slave's dog guarded the body and didn't allow anybody to touch it. The king, travelling that way, saw the animal watching the body. When he learnt that the dog had been there for three days without food or drink he ordered to bury the body and bring the dog to him.

After some time the review of the king's troops took place, and every soldier had to march past the king. All this time the dog lay quietly by the king's side, but on seeing the murderers of his late master, he flew at them with extraordinary fury barking and tearing their clothes. The king took notice of it. He ordered to make an inquest and the criminals confessed the crime. Later they were tried and sentenced to death.

Отвѣтьте на вопросы.



7. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. How many members must be present at the session of the House of Commons?
2. When do most of the members of House of Lords appear in the House?
3. When must the members bow to the chair?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

From Monday to Thursday the House of Commons, when in session, meets daily in the early afternoon. Most members of the House of Commons do not attend Parliament all the time it is in session, but at least 50 members must be present. If a member calls for a «Count» and fewer than this number are present, the House is adjourned.

The House of Lords meets on only three days a week, for hours. Not more than 100 peers take part in the regular work of the House. The rest of them appear only on ceremonial occasions.

There is a chair at the top of the House of Commons, in which sits Mr Speaker or his deputy when the House is in session. Every member entering or leaving the House is supposed to bow to the chair – not to the occupant, for the chair may be empty; still they must bow. Some members make quite a ceremony of it.

Отвечайте на вопросы.

8. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Where did he think he lost the lighter?
2. What did he take with him when he went to the police station?
3. What did he realize when he got home?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

How I lost my lighter

The last time I went to Exham I lost my lighter. The lighter was old but it had been a present from my mother. I tried hard to remember where and how I could have lost it. I wondered when I had last used it. At first I could not remember. Then I knew. It had been on that bus I had taken on my way back from the National Gallery to the boarding-house. An old man had asked me to give him a light and I had. I well remembered how he handed the lighter back to me, so it must have disappeared either while I was on the bus or later, in the street, between the bus stop and my boarding-house because it was there that I discovered my loss.

So I decided to get in touch with the police. Off I went. The moment I stepped outside the door I realized it was raining hard, so I returned to my room to take my umbrella.

I reported my loss to the officer on duty at the enquiry desk saying that the lighter had my initials engraved on it: N. S. «Very well. Let's see the lost-and-found book». The police officer lifted a heavy black book on to his desk, opened it, and ran his finger down the page. «Quite a few things have been brought in from all over the district today. Keys, wallet, glasses, handbag, bottle of whisky, right glove, umbrella, pocket transistor, two books, camera...» The officer continued his list of objects for a

little longer and then suddenly he raised his voice: «Lighter! What did you say your initials are, sir?» «N. S., sergeant». «And N. S. they are».

The rest was a simple formality. The officer gave me my lighter and filled out a form for me to sign. I left a ten-shilling note as a reward for the finder, and left the police-station. I took a taxi home, and only after I had got home did I realize that I had left my umbrella at the police-station.

Ответьте на вопросы.

9. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What did the daughter's friend phone to say?
2. Where did Mr Barker have to go with the money?
3. Where did he put the money?
4. What was his daughter's explanation?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Kidnap!

Mr and Mrs Barker were having a quiet day at home. Their 17-year-old daughter was away in Scotland staying with a friend. At 12 noon, Mr and Mrs Barker got a phone call from the friend where their daughter was supposed to be staying, saying that she had disappeared. They were just about to call the police when the phone rang again. A hoarse voice informed Mr Barker that his daughter had been kidnapped and that unless he paid a ransom of \$ 1000 he would never see his daughter alive again. When Mr Barker inquired who the caller was, the voice answered that it was someone he knew well. The voice then gave him instructions about where and when to hand over the money. He was warned not to tell the police or to attempt to have the phone call traced. Mr Barker went to the bank and immediately withdrew the money out of his bank account and left on the next train to Brighton. When he arrived, he entered the Grand Hotel at five to six and carefully placed the briefcase beside a sofa as arranged. At six o'clock precisely, a woman in a scarf and raincoat approached, took the briefcase and walked quickly away.

At 10 p.m. the same evening, to his great relief, his daughter returned home. She could hardly refrain from laughing. Imagine his surprise when she handed him his briefcase containing the \$ 1000. It turned out that she and her friend had decided to play a practical joke. It was she who had put on a hoarse voice to phone her father and it was she who had collected the briefcase in Brighton. The joke had succeeded but, strangely enough, Mr And Mrs Barker did not appreciate it as much as their daughter did.

Ответьте на вопросы.

10. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What was a man charged with?
2. Who defended the criminal?
3. What was the verdict of the jury?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

A strange sentence

A man was brought up before a judge and charged with burglary. He had cut a hole in the side of a tent, had put his head, his right arm and his right shoulder through the hole and had stolen several things belonging to the people sleeping in the tent.

The lawyer of the defendant said that as the man had not entered the tent, he couldn't be convicted of burglary and ought to be set free. The judge however said that while the man as a whole had not committed burglary, his head, his right arm and his right shoulder had.

The jury brought in a verdict of guilty against these parts, which were sentenced to two years imprisonment with hard labour in the state prison. All the rest of the man was found not guilty and discharged.

Отвeтьте на вопросы.

11. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What was the verdict for the students?
2. When was the diplomat kidnapped?
3. What did the prosecution say about him?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Two students convicted of diplomat's murder

Two students who took part in the killing in February last year of an Indian diplomat, Mr. Ravindra Mhatre, were convicted of murder at Birmingham Crown Court.

Mohammed Riaz, aged 23, a student, of Jarrom Street, Leicester, and Abdul Raja, aged 21, a student, of rue de la Butte, Blauchet, Paris, both Kashmiris, were convicted on a majority verdict of eleven to one.

They were remanded in custody for sentencing with four others who have admitted taking part in the kidnapping plot.

The court heard how Mr. Mhatre, the assistant commissioner at the Indian High Commission in Birmingham, was kidnapped as he returned to his home in Bartley Green, on the outskirts of city.

He was held prisoner in Birmingham for three days before being driven to a lane in Leicestershire, where he was shot three times at point-blank range.

Mr. Igor Judge, QC, for the prosecution, said: «This happened to a man with no known enemies. It happened to a man who had never caused offence to the defendants or any of those involved in the problems thousands of miles away».

Отвeтьте на вопросы.

12. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Why did Mr. Newbery shoot?

2. What was the judgement?
3. What did the judgement cause?
4. Was Mr. Newbery right, trying to defend himself?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

82-year-old man who shot burglar must pay him \$ 4000

An 82-year-old man who shot a burglar who was trying to break into his allotment shed was ordered to pay him \$ 4000 damages yesterday. Ted Newbery had been sleeping in a shed to try to stop vandals destroying his allotment. He fired through a hole in the door when he heard voices outside. Mark Revill, 28, was hit in the chest and arm by 50 shotgun pellets as he and another man tried to smash their way into the shed.

They had gone there to steal, knowing that the pensioner had a television set and a washing machine in the shed.

Mr Newbery had slept in the shed every night for four years because of vandalism, the court was told by the defense. That night, he heard a loud banging on the door and a voice saying: «If the old man's in there, we'll do him». He was absolutely terrified, and fired the gun in self-defense. As the result of the incident, Mr Revill lost two fingers, and has partially lost the use of one arm

Mr Justice Rougier ruled that Mr. Newbery had acted out of all proportion to the threat. He had not acted in panic, but had planned his response in advance, and it had been reckless to shoot the shotgun through a hole in the door, while not being able to see what he was shooting at. Mr Justice Rougier awarded Revill \$4000 for his injuries and loss of earnings.

The judgement caused an immediate public outcry. Tim Molloney the Mayor of Erewash, launched an appeal to raise money to pay Mr Newbery's bill, and started the fund with a contribution of \$100. Since then, money has been pouring in from all over the country. A London restaurateur was one of the dozens to call «The Times» to express his anger over the affair. Husseyin Ozer, 42, said he would sell his Rolex watch to pay the award. «I'm outraged. The old saying that an Englishman's home is his castle doesn't seem to be true any more», he said.

Отвечьте на вопросы.

13. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Who was placed behind the doors?
2. What would happen if the door which concealed the tiger was opened?
3. What would happen if the door which concealed the lady was opened?
4. What was the princess' decision?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

The lady or the tiger?

Once a king had decreed that every person accused of crime should be placed in a large room, where, in the presence of the king and the court he is to open one of two doors which were exactly alike. Behind one door was a hungry, man-eating tiger and behind the other a beautiful lady, dressed as a bride. If he opened the door which concealed the tiger he was considered to be guilty and put to death,

if he opened the door which concealed the lady, he was considered innocent and was immediately married to her. No previous ties were allowed to be an obstacle to marriage. The disposition of the lady and the tiger was, of course, a secret.

Now it happened that a young noble man who was rather poor won the love of the king's daughter; and being suspected by the king was imprisoned and brought to trial before two doors. The princess discovered behind which doors the lady and the tiger were to be placed. She didn't want, of course, her lover to be eaten by tiger, but she also didn't want him to become the husband of some other lady. At length her mind was made up. On the day of the trial she managed to signal her lover to open the right-hand door. This he immediately did. The author leaves the question to you: «Who came out of the opened door – the lady or the tiger?»

ОТВЕТЬТЕ НА ВОПРОСЫ.

14. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Who was Mr Aristos Constantinou?
2. When and where the murder was committed?
3. What are the police looking for?
4. How many intruders were there according to the police?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Burglary theory after wealthy businessman is shot dead

A big police investigation was under way in north London after a wealthy businessman died when intruders broke into his luxury home.

Mr. Aristos Constantinou, aged 40, was shot a number of times after he and his wife Elena arrived home at their detached house in the Bishop's Avenue, Hampstead, after a New Year party.

Detectives were waiting to interview Mrs. Constantinou, who is in the twenties, to discover what happened in the house at about 1.30 in the morning. The house was empty apart from Mr. and Mrs. Constantinou, whose three children were staying with friends for the night.

Police believe the intruders were burglars and discount any connection between the shooting and Mr. Constantinou's Cypriot origin. A police spokesman said that although a full inventory was not complete some cash is thought to be missing.

The police need to discover whether the couple came home and chanced upon the intruders, whether the intruders broke in after the Constantinous had arrived home and whether there was an attempt to force the couple to reveal the whereabouts of jewellery and cash.

The dead man was an extremely wealthy dress manufacturer with offices in London's West End. His home is in one of the most expensive roads in London.

Running up to the Kenwood estate in Hampstead, the road is known locally as «Millionaire's Row». Many of the houses are large, detached buildings with elaborate security precautions. Many foreign families live in the area.

The investigation is being headed by Det Sup Robert Green, who has set up a squad of detectives at Finchley police station. The police are looking for witnesses who may have seen anything suspicious in the area of Hampstead Heath between midnight and 1.45 a.m.

It is likely that the intruders had a car nearby, but police have not disclosed any sightings.

A Scotland Yard spokesman said the victim was shot «several times» but he refused to say what type of gun was used. «There were signs of forced entry to the house and first indications suggest there were two intruders» he said.

Ответьте на вопросы.

15. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What did a Spaniard do?
2. Where did the Indian apply?
3. What kind of a man was the judge of the court?
4. What did the Indian invent?
5. What did the Indian tell the judge?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Bribery stopped

It happened in America not long after its colonization by the Spaniards. A Spaniard stole an Indian's horse. The Indian however found the thief and demanded the horse to be returned to him, but the Spaniard refused to do it. The Indian applied to the court and brought witnesses who could testify that it was his horse. But the judge of the court was a bad man and used to take bribes from the parties who came to the court. The Indian knew this, and he invented a trick how to deceive the judge. Before going to the court on the day of the trial, he took a big stone and put it under his arm. The judge at once noticed that the Indian had something under his arm and decided the case in the Indian's favour. He ordered the horse to be returned to the Indian and punished the Spaniard for theft. After the trial, when the judge and the Indian were left alone, the judge asked the former what it was under his arm and whom it was meant for. The Indian showed him the stone and told it was meant for the judge in case he would had decided in the Spaniard's favour. It was a good lesson for the bad judge, and he gave up the habit of taking bribes.

Ответьте на вопросы.

16. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. How did the criminals manage to hijack the helicopter?
2. Who were the hijackers?
3. How did the prisoners escape?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Helicopter plucks two from jail

Rome. Two gunmen yesterday hijacked a Red Cross helicopter, lifted two inmates from a Rome prison courtyard and flew off in a hail of automatic gunfire. A third prisoner ran to the helicopter, but slipped in the rain.

After taking off from the prison, the helicopter landed in a Rome football field where a match was underway, and the hijackers and escapees fled by car.

Officials said the two hijackers spoke French and that one of the escapees, a Tunisian-born Frenchman, was sought by French authorities for a Paris bank robbery and murder. The other one was suspected of supplying arms to Italian terrorists.

Police said the hijackers walked into San Camilo Hospital in Western Rome and cornered the helicopter pilot, Mr. Mauro Pompa, aged 42. They handcuffed the pilot's 10-year-old son to a radiator and forced Mr. Pompa at gunpoint to take them to the helicopter, parked across the street.

The white helicopter with red crosses painted on each side then flew across the city to Rebibbia prison in eastern Rome. There, it hovered a yard above the courtyards where about 50 inmates were exercising, deputy warden, Mr. Giancarlo Baldassini, said. As the hijackers fired automatic weapons for cover and lowered a rope ladder, two inmates dashed to the helicopter and jumped in. A guard at Rebibbia prison was slightly injured by flying glass during the gun battle.

Two shots fired by a guard hit the helicopter.

Ответьте на вопросы.

17. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. What is a barrister according to Mr. Staughton?
2. What does the phrase «With respect» really mean?
3. What does the judge want?
4. What does the judge say about some words?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

Judge's «respectful» plea for plainer English

A barrister is a man born with a silver spoon in his mouth in place of a tongue. Or so it would appear to Mr Justice Staughton, a judge in the Commercial Court.

The learned judge has become irritated at the linguistic duplicity of counsel, and the way in which they use archaic words to camouflage what is at bottom, an insult.

Writing in the current edition of the quarterly legal journal «Counsel», a learned magazine read by upper echelons of the legal profession, the judge tells about barristers who preface a statement to him with the phrase «With respect». What that really means, says the judge, is «you are wrong».

A statement prefaced with the words «With great respect» means «you are utterly wrong». And if a barrister produces the ultimate weapon of «With utmost respect» he is really saying to the court, «Send for the men in white coats».

The judge wants more plain English used in courts, and less of the legal language of the obscure past, some of which he says has been «obsolete» in ordinary speech almost since the Bible.

Words like «humbly» and «respectfully» are not only unnecessary in written legal documents, they are generally untruthful in oral argument, says the judge with utmost respect.

Judges themselves are, of course, not entirely free of guilt in the matter of exchanges which are not very understandable.

As the courtroom clock moves towards 1 pm, counsel might say: «It might be of value to your Lordship if I were to inform you at this juncture that I have several more questions to ask of to this witness which would take some little while». The judge will reply: «This seems a useful time to adjourn». Whattheyreallymeanislunch.

Отвечьте на вопросы.

18. Прочитайте вопросы. Вам нужно будет ответить на них после прочтения текста.

1. Whom did the police arrest in connection with the killing?
2. Why did the police free him three months later?
3. What does the test involve?
4. What does the DNA form?
5. How much time and money does test take?

Просмотрите текст. Не забудьте отметить время начала и конца работы.

DNA prints

(A foolproof crime test)

Dawn Ashworth, 15, left a friend's house last July to walk to her home in Enderby, a village in England's East Midlands. She never made it. Two days later her body was found; she had been raped and strangled. Soon after, police arrested a 17-year-old youth in connection with that killing and an earlier, similar murder.

But three months later, convinced that the suspect was innocent of both crimes, the police freed him. How could they be so sure? By using the new technique of DNA fingerprinting they had proved that man was innocent. This month the police began using the test on blood from 2,000 Midlands men, hoping that if one of them is guilty, his DNA print will give him away.

The test involves comparing the DNA of blood or hair roots found at the scene with the DNA of a suspect. What makes it foolproof is that no two people (other than identical twins) have the same genetic characteristics. While considering this fact in 1983, Alec Jeffreys, a geneticist at the University of Leicester in England, realized it might be the basis for an important new tool in criminal investigations. The DNA from each individual, he found, formed a unique pattern – in effect a DNA fingerprint.

In the Midlands case, Jeffreys established that the DNA pattern of the 17-year-old suspect did not match those obtained during the murder investigations. The patterns of each of the 2,000 Midlands men will undergo similar scrutiny. But that may take a while. Each test involves a complicated series of steps over a period of 2 1/2 weeks. Still, Jeffreys believes, with further refinements, and despite \$ 300 price tag, the test will more than pay for itself in criminal investigations.

Отвечьте на вопросы.



### 3.1.2. Типовые контрольные задания для промежуточной аттестации по итогам освоения дисциплины «Иностранный язык (английский язык)»

Изучение дисциплины предполагает промежуточную аттестацию (контрольные работы).

#### Контрольная работа 1

1. Употребить глагол *to be* в правильной форме.

- 1) My father ... a teacher.
- 1) He ... a pupil twenty years ago.
- 3) I ... a doctor when I grow up.
- 1) My sister ... not... at home tomorrow.
- 2) They ... in Moscow last year.

2. Употребите глагол *to have* в правильной форме.

- 1) I ... an interesting book about Repin.
- 2) My sister ... two little children.
- 3) ... you ... some time in the evening to discuss this question?
- 4) I ... a lot of work yesterday.
- 5) Who ... any questions now?

3. Употребите оборот *there is/are* нужном времени.

- 1) How many rooms ... there in your flat?
- 1) There ... 30 pupils in our class last year.
- 2) There ... no school near our house 5 years ago.
- 3) How many people ... there ... at the party next Sunday?
- 4) There ..a new cinema near my house now.

4. Напишите указанные существительные во множественном числе.

Class, ox, baby, leaf, sheep, advice, shoe, hero, roof, factory

5. Напишите степени сравнения следующих прилагательных.

Tall, big, grey, angry, careful, narrow, expensive, cold, clever, difficult, bad.

6. Вставьте *some, any или no*.

- 1) Do you want... milk in your coffee?
- 2) There is ... snow in the street because it is warm.
- 3) I can see ... children in the yard. They are playing.
- 4) There were not... flowers on the table.

7. Поставьте глаголы, данные в скобках, в нужном времени.

- 1) My friend (to work) at the factory.
- 2) This group (to go) to the theatre next month.
- 3) We (to get) books from the library last week.
- 4) I (to come ) home later than usual yesterday.
- 5) This student (to answer ) well at the last lesson

Контрольная работа 2

1. Образуйте множественное число

Face, portfolio, swine, house, tomato, hearth, mother-in-law, clergyman, ox, cry, key, fox, downfall, rock, bush, enemy, leaf, roof, genius, hero.

2. Поставьте предложение во множественное число:

1. This cup is dirty. 2. That biscuit was tasty. 3. This hotel is very expensive but it's very nice. 4. There is a children's playground in the park. 5. That is a new supermarket in our town. 6. It's a delicious lemon pie for dessert. 7. It's a nice cotton dress for my niece. 8. This man is an engineer. 9. That woman is my sister. 10. This child is my son.

3. Вставьте *some, any/no*.

1. We haven't got ... milk. We can't make an omelet. 2. Bob always likes ... sugar in his coffee. 3. Poor Oliver was hungry. He wanted ... bread. 4. They haven't got... stamps. I can't post my letter. 5. He has got ... money. He can't spend his holidays in Switzerland any more and stay at luxury hotels. 6. There are ... schools in this street. 7. Are there ... pictures in your book? 8. There are ... flowers here in winter. 9. I can see ... children in the yard. They are playing. 10. Are there ... new buildings in your street?

4. Вставьте *much, many, (a) few, (a) little*.

1. Robert wrote so ... letters that he's never going to write a letter again. 2. She ate so ... ice cream that she's going to have a sore throat ( больноегорло). 3. His father earned ... money, but he enjoyed his job. He loved teaching English very ... . 4. There are ... cookies (печенье) in the box. I should have bought them last Monday. 5. Does your sister read ... ? – Yes, she does. And your brother? – Oh, he doesn't. He has so ... books, but he reads very ... .

5. Образуйте предложение:

1. the / is/ living-room / There / in / a /sofa
2. in / is/ the/not/ kitchen / There / a /mirror.
3. the / bedroom / there / in / Are / beds / 2 / ?
4. Are / wardrobes / the/ hall / there / in / 8 /?
5. a / lamp / there / Is / room / your / in/?

6. Переведите предложение:

1. Рядом с отелем есть чистый пляж.
2. На диване три кошки.
3. В холодильнике есть бутылка молока.
4. В корзине нет клубники.
5. На автобусной остановке есть люди?

Контрольное работа 3

1. Поставьте существительное во множественное число:

flower

man

language

country

address

2. Напишите 3 формы глагола:

build

lose

give

drive

forget

3. Поставьте прилагательное в сравнительную и превосходную степень:

Hot, long, short, clever, silly, great, red, black, white, thin, thick, fat, nice, warm, cold.

4. Используйте нужную степень сравнения:

1. – How do you like Smucker's Sweet Orange Marmalade, Mrs. Johnson? – I think it's (delicious). It's much (delicious) than the marmalade I usually buy. – We agree with you, Mrs. Johnson. We think Smucker's Sweet Orange Marmalade is (delicious) marmalade in the world. 2. The rivers in America are much (big) than those in England. 3. The island of Great Britain is (small) than Greenland. 4. What is the name of the (high) mountain in Asia? 5. The English Channel is (wide) than the Straits of Gibraltar.

5. Выберите правильный вариант глагола:

- 1) ... she in the park yesterday? (were, is was)
- 2) Mike and Nick ... at 3 o'clock tomorrow. (are, were, will be)
- 3) Did you ... English last week? (has, have, had)
- 4) They ... 5 lessons tomorrow. (had, have, will have)
- 5) The teacher ... us at the next lesson. (asked, asks, will ask)
- 6) Usually our lesson ... at 8.30. (will begin, begins, begin)
- 7) He ... this book when he was a child. (has, have, had)

Изучение дисциплины предполагает выполнение домашних контрольных работ для заочной формы обучения.

#### Домашняя контрольная работа №1

Задание 1. Проверка знания правил образования и употребления Present Simple.

- 1) При помощи какого/каких вспомогательных глаголов образуются вопросительные и отрицательные предложения в Present Simple?
- 2) Какое окончание имеет глагол в Present Simple при употреблении в первом лице единственного числа?
- 3) Какое окончание имеет глагол в Present Simple при употреблении в третьем лице единственного числа?
- 4) Напишите не менее трех обстоятельств времени, которые обычно употребляются в предложениях во времени Present Simple.

Задание 2. Составьте вопросительные предложения из утвердительных. Вопрос должен начинаться с вопросительного слова, указанного в скобках.

1. People do stupid things. (Why?)
2. Tom works. (Where?)
3. I have dinner in the evening. (What time / usually?)
4. The car breaks down. (How often?)
5. I go to the cinema. (How often?)

Задание 3. Соедините части предложения из правой и левой колонок таблицы.

What does	you come from?
In summer Tom usually	patients in hospitals.

Where do	this word mean?
Nurses look after	grow in Britain.
Rice doesn't	plays tennis twice a week.

Задание 4. Выберите из двух вариантов один верный.

- 1) The Earth goes / go round the sun.
- 2) Does your wife arrive / arrives on Monday?
- 3) I don't understand / understands this sentence.
- 4) Don't / doesn't talk so loudly, I hear / hears you well.
- 5) How often do / does you go / goes to the dentist?

Задание 5. Решите 5 тестов (только один ответ верный).

1. We usually ... a bus or a taxi early in the morning to get to work.

- |                |  |       |
|----------------|--|-------|
| a)             |  | took  |
| b)             |  | take  |
| c)             |  | taken |
| d) were taking |  |       |

2. I ... to work now. Good-bye!

- |         |    |       |
|---------|----|-------|
| a)      |    | go    |
| b)      |    | went  |
| c)      | am | going |
| d) goes |    |       |

3. This is a great party. Everyone ...

- |                |    |         |
|----------------|----|---------|
| a)             |    | dance   |
| b)             | is | dancing |
| c)             |    | dances  |
| d) are dancing |    |         |

4. Nurses ... after people in hospital.

- |         |      |         |
|---------|------|---------|
| a)      |      | looks   |
| b)      | is   | looking |
| c)      | will | look    |
| d) look |      |         |

5. My sister seldom ... our parents.

- |           |      |       |
|-----------|------|-------|
| a)        |      | visit |
| b)        | do   | visit |
| c)        | does | visit |
| d) visits |      |       |

Домашняя контрольная работа №2

1. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний:

- |                             |  |
|-----------------------------|--|
| 1. sole proprietorship      | a. управление  |
| 2. partnership              | b. доляпотерь  |
| 3. shareofprofit            | c. партнерство с ограниченной юридической ответственностью |
| 4. incometax                | d.партнерство  |
| 5. management               | e. недостатки  |
| 6. corporation              | f. налог на доходы   |
| 7. advantages               | g. льготы по налогообложению                               |
| 8. taxadvantages (benefits) | h. доля прибыли  |
| 9. disadvantages            | i. единоличное владение                                    |
| 10. share of lossk          | j. преимущества  |
| 11. life insurance          | к.корпорация   |
| 12. limited partnership     | 1. страхованиежизни  |

2. Переведите на русский язык встречающиеся в тексте интернациональные слова:

form, formal, business, organization, position, title, president, documentation, corporation, economical, product, partner, service, industry, personal, professional, manager, state, financial, resources, sum, registration, specialist.

Прочтите текст и выполните следующие за ним упражнения:

SOLE PROPRIETORSHIP, PARTNERSHIP, CORPORATION

1. There are three forms of organization of your business. These forms are the sole proprietorship, the partnership and the corporation. Which of these forms of organization you choose depends on such questions as the size of your business, whether you are the only owner of your business or you have partners.

2. Sole Proprietorship. A sole proprietorship is the simplest organizational form. There is one owner of the business, who usually takes the title of President. So he or she can make any decision without consulting anyone. Such kinds of business are in the service industries, such as repairing shops, restaurants, etc.

3. Partnership. A partnership means that there is more than one owner to carry out business. And each partner declares his or her share of profit or loss on the personal income tax return.

There is a special type of partnership, called a limited partnership, where the limited partner is not involved in the management of the firm.

4. This form of organization is useful in such professional fields as law, insurance, and some industries, for example, oil prospecting.

But partnership has some disadvantages. Partnership business fails when one of the partners loses his interest or disagrees with the other.

5. Corporation. A corporation is a more formal way of organization. It is established for the purpose of making profit and operated by managers. Corporation involves registration with a state department of commerce. There are some advantages, such as being able to attract financial resources, and to attract talented specialists and managers due to high salaries. In general, this form is economically better for business when its profit reaches a great sum of money.

4. Переведите на русский язык в письменной форме абзацы 2, 3 и 5.

5. Найдите соответствующие ответы на вопросы и напишите их в той последовательности, в которой заданы вопросы:

Вопросы:

1. What forms of business organization do you know?
2. What is a sole proprietorship?
3. What is a limited partnership?
4. What is a corporation?
5. What are the advantages of a corporation?

Ответы:

- a. In this form of organization there is more than one owner, but the limited partner has no right to take part in the management of the firm.
- b. It is a more formal way of organization, which is established to make profit and is operated by managers.
- c. Sole proprietorship, partnership and corporation.
- d. The ability to attract financial resources and to attract talented managers and specialists.
- e. It is the simplest form of business organization. There is only one owner of his or her business.

6. Закончите предложения, выбрав соответствующий вариант окончания:

1. A sole proprietorship is an organizational form of.      a) only one owner;
2. A partnership is a business form of...      b) more than one owner;
3. A corporation is a business form of...      c) an institution operated by managers.
4. The disadvantage of a partnership is...      a) the ability to attract financial resources and talented managers.
5. The advantage of a corporation is...      b) that the partners may disagree with each other.

c) that the owner makes decisions without consulting anyone.

### Домашняя контрольная работа №3

Прочитайте и письменно переведите текст:

I study at the Bookselling College. I get up at a quarter to seven. I switch on the radio and exercise to the radio music. Then I go to the bathroom, wash myself and clean my teeth with a toothbrush. It takes me not more than ten or fifteen minutes. Then I dress and sit down at the table to have my breakfast. I usually have a cup of tea or coffee, eggs and bread and butter.

After breakfast I go to the college. I go there by metro and by bus. My lessons begin at 9.30. At twenty minutes to one we have a lunch hour. We study many subjects. Best of all I like English and literature. When I studied at school, I liked English and literature too. At eight or nine o'clock I have supper. I have some salad, a slice of sausage and bread, sour milk or cereal.

In the evening I do my home-work. I must and can do it well. Sometimes I listen to the radio or watch TV. In the morning I am going to the college again.

Переведите слова и словосочетания на английский язык:  
книготорговый колледж

включать радио

делать утреннюю гимнастику

ванная комната

зубная щетка

чистить зубы

завтракать

хлеб с маслом

учебные занятия

«второй завтрак», означает также «обед» во время обеденного перерыва в учреждении

больше всего

салат

кусоч, ломтик

колбаса

кисломолоко, простокваша

каша

3. Поставьте к тексту пять вопросов на английском языке.



4. Выпишите из текста предложения, которые стоят в прошедшем неопределенном и будущем неопределенном времени.

5. Найдите в тексте предложения, где прилагательное стоит в сравнительной и превосходной степени. Образуйте степени сравнения следующих прилагательных:  
young, long, difficult, bad, good.

6. Переведите на английский язык предложения:

1. На столе много новых книг.
2. Ее книги старые.
3. В книге 5 глав. Книга состоит из 5 глав.
4. Вы очень хорошо говорите по-английски.
5. Я жду моего брата.
6. Я родился в Москве.
7. Жизнь – очень интересная.
8. Знание – сила.
9. Вам лучше обратиться к стоматологу.
10. Где находится автобусная остановка?

7. Выберите правильный ответ:

1. Where are you from?

A I'm France.                      B I'm from France.                      C French.                      D I'm French.

2. How old are you?

A I have 16.                      B I am 16.                      C I have 16 years.                      D I am 16 years.

3. Are you having a nice time?

A Yes, I'm nice.                      B Yes, I'm having it.                      C Yes, I am.                      D Yes, it is.

4. Could you pass the salt please?

A Over there.                      B I don't know.                      C Help yourself.                      D Here you are.

5. Yesterday I went \_\_\_\_\_ bus to the National Museum.

A on                      B in                      C by                      D with

6. Sue and Mike \_\_\_\_\_ to go camping.

A wanted                      B said                      C made                      D talked

7. Who's calling, please?

A Just a moment.                      B It's David Parker.                      C I'll call you back.                      D Speaking.

8. They were \_\_\_\_\_ after the long journey, so they went to bed.

A hungry                      B hot                      C lazy                      D tired

8. Can you tell me the \_\_\_\_\_ to the bus station?  
A road            B way            C direction            D street
10. \_\_\_\_\_ you remember to buy some milk?  
A Have            B Do            C Should            D Did
11. Don't forget to put the rubbish out. – I've \_\_\_\_\_ done it!  
A yet            B still            C already            D even
12. You don't need to bring \_\_\_\_\_ to eat.  
A some            B a food            C many            D anything
13. What about going to the cinema?  
A Good idea!            B Twice a month.            C It's *StarWars*.            D I think so.
14. What would you like, Sue? – I'd like the same \_\_\_\_\_ Michael please.  
A that            B as            C for            D had

Изучение дисциплины предполагает сдачу экзамена вчетвертом семестре изучения дисциплины.

Ситуации для диалогической речи

Getting acquainted

Buying a ticket

**Критерии оценивания: максимум 10 б.**

10-9 б. 100 - 90% верно данных ответов

8-7б. 89-75% верно данных ответов

7-6б. 74-60% верно данных ответов

5-0 б. менее 60 % верно данных ответов – знания не соответствуют требованиям

**4. Методические материалы, определяющие критерии и процедуры оценивания знаний, умений и навыков, характеризующих этапы формирования компетенций**

Опираясь на общеевропейские требования, учитывая специфику лингвообразования в неязыковом (техническом) вузе, оценка освоения содержания по дисциплине проводится по следующим уровням владения языковой компетенцией:

1. элементарный
2. промежуточный
3. профессионально-достаточный

Применительно к языковой коммуникации уровень владения речевыми умениями у студентов по окончании всего курса обучения или на каждом отдельном этапе учебного процесса определяется следующими параметрами:

- 1) умение решать коммуникативные задачи;
- 2) сферы, темы и ситуации общения, то есть предметно-содержательная сторона общения;
- 3) степень лингвистической и прагматической корректности и адекватности решения этих задач.

С учётом основных компетенций выделены следующие критерии успешности и результативности процесса обучения, а также соответствующие им показатели:

1. Владение профессионально-релевантными знаниями (Информационно-фактологическая наполненность общения в соответствии с поставленной коммуникативной задачей).

2. Владение умениями лингвистического оформления общения (Грамматическая правильность; адекватность выбора лексических средств (терминологии, профессиональные клише) решению коммуникативных задач).

3. Скорость речевой реакции (Скорость построения инициативного высказывания; наличие неоправданных пауз; скорость реакции при ответе).

4. Формирование личностных качеств специалистов (Ценностная ориентация студентов при обучении иностранному языку; коммуникативная мобильность в ситуациях общения; способность к корпоративному взаимодействию).

В рамках данного курса используется система непрерывного оценивания и поступательного развития студента. Подобное оценивание включает в себя участие в разнообразных групповых и парных проектах (деловая и ролевая игра, дискуссия), контрольное собеседование, презентацию и традиционные формы оценивания как опрос во время занятия с наводящими вопросами, который обозначается как направляемое тестирование.

**1. За письменные работы** (контрольные работы, тесты, лексические диктанты, ИДЗ) оценка вычисляется исходя из процента правильных ответов:

90% - 100% - max балл, 60 % -min

**2. Устные ответы** (монологические высказывания, контрольное собеседование, пересказы, диалоги и дискуссии, круглый стол, работа в группах, деловая и ролевая игра, презентации, ИДЗ) оцениваются по пяти критериям:

а) Содержание (соблюдение объема высказывания, соответствие теме, отражены все аспекты, указанные в задании, стилевое оформление речи соответствует типу задания, аргументация на соответствующем уровне, соблюдение норм вежливости).

**ПРИ НЕУДОВЛЕТВОРИТЕЛЬНОЙ ОЦЕНКЕ ЗА СОДЕРЖАНИЕ ОСТАЛЬНЫЕ КРИТЕРИИ НЕ ОЦЕНИВАЮТСЯ, И РАБОТА ПОЛУЧАЕТ НЕУДОВЛЕТВОРИТЕЛЬНУЮ ОЦЕНКУ;**

б) Взаимодействие с собеседником (умение логично и связно вести беседу, соблюдать очередность при обмене репликами, давать аргументированные и развернутые ответы на вопросы собеседника, умение начать и поддерживать беседу, а также восстановить ее в случае сбоя: переспрос, уточнение);

в) Лексика (словарный запас соответствует поставленной задаче и требованиям данного курса обучения языку);

г) Грамматика (использование разнообразных грамматических конструкций в соответствии с поставленной задачей и требованиям данного курса обучения языку);

д) Произношение (правильное произнесение звуков английского языка, правильная постановка ударения в словах, а также соблюдение правильной интонации в предложениях).

Весь семестровый курс предлагается оценивать по шкале в 100 баллов. Для получения зачета достаточно набрать 60 баллов. Для дифференцированного зачета или экзамена предлагается следующая шкала, обеспечивающая сопоставимость с международной системой оценок:

Оценка по 5 бальной шкале	Зачет	Сумма баллов по дисциплине	Оценка (ECTS)	Градация
5 (отлично)	Зачтено	90-100	A	отлично
4 (хорошо)		85-89	B	очень хорошо
		75-84	C	хорошо
		70-74	D	удовлетворительно
3 (удовлетворительно)	65-69			

		60-64	E	посредственно
2 (неудовлетворительно)	Не зачтено	Ниже 60	F	неудовлетворительно