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автомобильного транспорта и дорожного строительства» в поселке  
Улькан

**МЕТОДИЧЕСКИЕ УКАЗАНИЯ ПО ВЫПОЛНЕНИЮ  
ПРАКТИЧЕСКИХ РАБОТ ПО ДИСЦИПЛИНЕ**

**ОП.06. Иностранный язык в профессиональной деятельности**


по программе подготовки квалифицированных рабочих и служащих  
**15.01.31 Мастер контрольно-измерительных приборов и автоматики**

2021 г.

Методические указания по выполнению практических работ по дисциплине разработаны на основе ФГОС СПО по профессии 15.01.31 Мастер контрольно-измерительных приборов и автоматики и рабочей программы дисциплины ОП.06. Иностранный язык в профессиональной деятельности

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## 1. Пояснительная записка

Результатом освоения программы учебной дисциплины является овладение обучающимися профессиональными (ПК) и общими (ОК) компетенциями

ОК 01. Выбирать способы решения задач профессиональной деятельности, применительно к различным контекстам.

ОК 02. Осуществлять поиск, анализ и интерпретацию информации, необходимой для выполнения задач профессиональной деятельности.

ОК 03. Планировать и реализовывать собственное профессиональное и личностное развитие.

ОК 04. Работать в коллективе и команде, эффективно взаимодействовать с коллегами, руководством, клиентами.

ОК 05. Осуществлять устную и письменную коммуникацию на государственном языке с учетом особенностей социального и культурного контекста.

ОК 06. Проявлять гражданско-патриотическую позицию, демонстрировать осознанное поведение на основе традиционных общечеловеческих ценностей, применять стандарты антикоррупционного поведения.

ОК 07. Содействовать сохранению окружающей среды, ресурсосбережению, эффективно действовать в чрезвычайных ситуациях.

ОК 08. Использовать средства физической культуры для сохранения и укрепления здоровья в процессе профессиональной деятельности и поддержания необходимого уровня физической подготовленности.

ОК 09. Использовать информационные технологии в профессиональной деятельности.

ОК 10. Пользоваться профессиональной документацией на государственном и иностранном языках.

ОК 11. Использовать знания по финансовой грамотности, план

ПК 1.2. Определять последовательность и оптимальные способы монтажа приборов и электрических схем различных систем автоматики в соответствии с заданием и требованиями технической документации.

ПК 2.1. Определять последовательность и оптимальные режимы пусконаладочных работ приборов и систем автоматики в соответствии с заданием и требованиями технической документации.

ПК 3.2. Определить последовательность и оптимальные режимы обслуживания приборов и систем автоматики в соответствии с заданием и требованиями технической документации.

В результате изучения учебной дисциплины обучающийся должен: уметь:

- понимать общий смысл четко произнесенных высказываний в пределах литературной нормы на известные темы (профессиональные и бытовые);

- понимать тексты на базовые профессиональные темы;

- участвовать в диалогах на знакомые общие и профессиональные темы;
- строить простые высказывания о себе и о своей профессиональной деятельности;
- кратко обосновывать и объяснить свои действия (текущие и планируемые);
- писать простые связные сообщения на знакомые или интересующие профессиональные темы.
- осуществлять поиск, отбор профессиональной документации с помощью справочно-правовых систем и др.;
- переводить (со словарем) иностранную профессиональную документацию;
- владеть навыками технического перевода текста;
- понимать содержание инструкций и графической документации на иностранном языке в области профессиональной деятельности.

знать:

- правила построения простых и сложных предложений на профессиональные темы;
- основные общеупотребительные глаголы (бытовая и профессиональная лексика);
- лексический минимум, относящийся к описанию предметов, средств и процессов профессиональной деятельности;
- особенности произношения;
- правила чтения текстов профессиональной направленности;
- лексический и грамматический минимум, необходимый для чтения и перевода (со словарем) профессиональной документации.

При разработке содержания заданий учитывался уровень сложности освоения обучающимися соответствующей темы, общих и профессиональных компетенций.

Выполнение обучающимися заданий по ОП.06 Иностранный язык в профессиональной деятельности способствует:

- расширению знаний о системе русского и английского языков, совершенствованию умения использовать грамматические структуры и языковые средства в соответствии с нормами данного языка, свободное использование приобретенного словарного запаса;
- совершенствованию умений в основных видах речевой деятельности (аудировании, говорении, чтении, письме), а также в выборе лингвистической формы и способа языкового выражения, адекватных ситуации общения, целям, намерениям и ролям партнеров по общению;
- развитию способности использовать определенную стратегию и тактику общения для устного и письменного конструирования и интерпретации связных текстов на английском языке по изученной проблематике, в том числе демонстрирующие творческие способности обучающихся;

- овладению национально-культурной спецификой страны изучаемого языка; умению выделять общее и различное в культуре родной страны и англоговорящих стран;

- развитию умения вступать в коммуникацию и поддерживать ее;

- развитию умения использовать знания и навыки, формируемые в рамках дисциплины «Иностранный язык в профессиональной деятельности», для будущей профессиональной деятельности.

Основными этапами практического занятия являются:

- проверка знаний обучающихся – их теоретической подготовленности к занятию;

- инструктаж, проводимый преподавателем;

- выполнение заданий, работ, упражнений;

- последующий анализ и оценка выполненных работ и степени овладения обучающимися запланированными умениями.

## 2. Планирование практических работ

№ п/п	Наименование раздела, темы	Наименование практической работы	Кол- во часов
	<b>Раздел 1. Профессиональная деятельность специалиста</b>		
	Тема 1.1 Наука и техника.		
1	Введение. Роль английского языка при освоении профессий СПО. Работа с текстом "Современные профессии".	Практическая работа № 1. <i>"Роль английского языка при освоении профессий СПО. Современные профессии"</i> .	2
2	Работа с текстом "Инновационная техника в быту".	Практическая работа № 2. <i>"Инновационная техника в быту"</i> .	2
3	Местоимения. Прилагательное. Наречие.	Практическая работа № 3. <i>Местоимения. Прилагательное. Наречие.</i>	2
4	Глагол to be. Конструкции be going to, there be. Предлоги места, времени, направления. Фразовые глаголы.	Практическая работа №4. <i>Глагол to be. Конструкции be going to, there be. Предлоги места, времени, направления. Фразовые глаголы.</i>	2
5	Работа с текстом "Промышленная электроника".	Практическая работа № 5. <i>"Промышленная электроника"</i> .	2
6	Множественное число существительных. Артикль. Притяжательный падеж существительных.	Практическая работа №6. <i>Множественное число существительных. Артикль. Притяжательный падеж существительных.</i>	2
7	Работа с текстом: "Роль технического прогресса".	Практическая работа №7. <i>"Роль технического прогресса"</i> .	2
8	Работа с текстом "Карьера в области электроники". Времена Действительного залога.	Практическая работа №8. <i>"Карьера в области электроники". Времена Действительного залога.</i>	2
	<b>Раздел 2. Электричество.</b>		
9	Тема 2.1 Электрическая цепь		
10	Работа с текстом "Арифметические	Практическая работа №9.	2

	действия, Числительные", " Закон Ома. Решение задач "	<i>"Арифметические действия, Числительные", " Закон Ома. Решение задач".</i>	
11	Работа с текстом: "Электрическая цепь".	Практическая работа № 10. <i>"Электрическая цепь".</i>	2
12	Работа с текстом: "Трансформатор".	Практическая работа №11. <i>"Трансформатор".</i>	2
	<b>Раздел 3. Электроника и микроэлектроника</b>		
13	Тема 3.1. Развитие электроники. Времена Страдательного залога.	Практическая работа №12. <i>Развитие электроники. Времена Страдательного залога.</i>	2
14	Тема 3.2. Техническое чтение	Практическая работа №13. <i>"Техническое чтение".</i>	2
	<b>Раздел 4. Автоматизация технологических процессов.</b>		
15	Тема 4.1. Автоматизация производства.	Практическая работа №14. <i>"Автоматизация производства".</i>	2



### 3. Критерии оценки выполненных заданий и степени овладения запланированными умениями

Оценка	Требования к знаниям
отлично	Оценка «отлично» выставляется обучающемуся, если он глубоко и прочно усвоил программный материал, исчерпывающе, последовательно и логически стройно его излагает, умеет тесно увязывать теорию с практикой, свободно справляется с вопросами и другими видами применения знаний, причем не затрудняется с ответом при видоизменении вопросов; имеет необходимые практические навыки устной и письменной речи; свободно выполняет перевод текста и задания к нему.
хорошо	Оценка «хорошо» выставляется обучающемуся, если он твердо знает материал, грамотно и по существу излагает его, имеет необходимые практические навыки устной и письменной речи; не допускает существенных неточностей в ответе, в ходе выполнения практических заданий имеются незначительные грамматические погрешности, но в целом практические навыки сформированы; перевод текста и задания к нему выполнены, хотя некоторые ответы могут содержать лишь незначительные ошибки.
удовлетворительно	Оценка «удовлетворительно» выставляется обучающемуся, если он имеет знания только основного материала, но не усвоил его деталей, допускает неточности, недостаточно правильные формулировки, нарушения логической последовательности в изложении программного материала, необходимые практические навыки работ с текстом не сформированы, большинство заданий выполнено с ошибками.
неудовлетворительно	Оценка «неудовлетворительно» выставляется обучающемуся, который не знает значительной части программного материала, допускает существенные ошибки, неуверенно, с большими затруднениями выполняет практические работы. Как правило, оценка «неудовлетворительно» ставится обучающимся, которые не могут продолжить обучение без дополнительных

	занятий по соответствующей дисциплине.
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## *Практические работы*

### ПРАКТИЧЕСКАЯ РАБОТА №1

Задание: Прочитайте и переведите текст «Современные профессии». Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

#### Modern professions

The modern labor market is very variable. And according to the results of the research of a well-known European company in the near future we expect even more changes in the scale of demanded professions.

You can say for sure that very soon the demand of employers will be directed to completely different specialties. Already at the present time, graduates of the faculties of natural sciences, specialists in the field of high technologies and IT specialists are much more appreciated.

But let's sort out the order and make the rating of the new professions of the future. Engineers. One of the leading positions in the ranking of demanded professions of the future is occupied by such a profession, forgotten by the young generation, as an engineer. Already, on a crowded economists and managers of the labor market, this profession is especially valued. There is a clear lack of technical specialists and professional engineers.

In this regard, *their wages will grow*, and the demand to rise. If you have *several entities* – for example, economic, technical and legal, then you will have a high career in the future. IT professionals

Of course, few of us can imagine their lives without a computer. The same goes for almost any work area. Not surprisingly, IT specialists and programmers will become one of the most needed specialties of the future. The rapidly evolving progress of computer technology leads to the fact that the demand for such professions will only grow with time. Experts in the field of nanotechnology. Science all over the world is rapidly moving forward. Nanotechnology is the greatest field of research that will cover virtually all areas – mechanical engineering, space objects, medicine, food industry, and many others. Therefore, absolutely all specialties related to nanotechnology will be in demand. Nanotechnology is one of the newest professions of the future, which will only develop over time, and employers' demand for it will grow. Occupations related to the service

The incomes of the population grow every year. People often go to rest, make large purchases, visit beauty salons, use the services of home staff and so on. In this regard, professionals who can provide quality service, in the future will not remain without work.

Chemist. It is a well-known fact that oil reserves will last for another 10 years. Therefore, research on the search for and development of clean energy sources is already being actively conducted in our time. And, as a result, highly skilled specialists-chemists are required.

Logists. One of the modern and new professions that will also be in demand in the future is the logistician. This sphere of activity covers quite a wide range of responsibilities – such as the organization of the delivery of goods from the manufacturer or supplier to the final buyer, the formation of commodity stocks, the competent tracking of the entire supply chain. Therefore, in our century of trade and market relations, the logistics profession will be in demand for a long time and highly paid.

Ecologist. Probably, very few people can argue with the fact that the ecological situation in the world is steadily deteriorating every year. Abnormal phenomena and ozone holes, problems of environmental pollution and global warming will make ecologists one of the most indispensable people for saving the planet in the very near future.

Physician. The profession of doctors was always in demand. Now the growing demand for certain specialists in the field of medicine is associated with research in the field of life extension. They invest a lot of money, so the scientific specialists specializing in finding means for extending life will be very much in demand in the future.  
Working professions with increasing demand in the labor market

Some new *professions that do not require higher education will also be in demand in the future, but this does not become less payable.*

*Groomer. Groomer provides professional care for pets. The scope of services includes haircut, washing, trimming, painting, cosmetic procedures, complete preparation of the pet for the exhibition. Professional groomers are always in demand, as preparation for an exhibition is never without their services. And owners of non-exhibition breeds also constantly turn to animal care specialists, which makes this profession always necessary and highly paid.*

*Shopper. In fact, a shopper is a stylist. Higher education does not require such a profession. She is trained in image-maker courses for two to three months. Shoppers accompany the client to the shops and help him decide on the choice of clothing and style. In our time of constant business meetings and trips, many people need to look respectable and stylish at the same time, therefore such assistants in the fashion industry will be highly appreciated in the future.*

*Food stylist. Professional cameras now have many. And if you still have a creative vein and you have a rich imagination, then it is possible that such a new profession as a food stylist will suit you. The duties of a food stylist include such a task as photographing food nicely, brightly and deliciously. In connection with the development of information resources on the Internet, quality illustrations will always be required, so professional photographers in the future will have an increasing demand from employers.*

## PROFESSIONS

Задание 1. Сопоставьте слова и их переводы:

Job	библиотекарь
Nurse	работа
Librarian	зубной врач
Lawyer	адвокат, юрист
Dentist	медсестра

Engineer	программист
Computer programmer	инженер
Farmer	водитель
Housewife	писатель
Driver	домохозяйка
Actor	спортсмен
Writer	фермер
Sportsman	актер
Actress	актриса
Artist	художник
Doctor	повар
Waiter	доктор
Cooker	продавец
Politician	переводчик
Shop-assistant	политик
Translator	певец
Coach	официант
Singer	тренер

*Задание 2. Сопоставьте профессии и их определения:*

- |                   |                               |
|-------------------|-------------------------------|
| 1) an architect   | a) works with the computer    |
| 2) a teacher      | b) designs buildings          |
| 3) a dentist      | c) plays football             |
| 4) a vet          | d) teaches children at school |
| 5) a doctor       | e) looks after peoples teeth  |
| 6) a photographer | f) looks after sick people    |
| 7) a secretary    | g) plays a musical instrument |
| 8) a lawyer       | h) takes photos               |
|                   | i) looks after sick animals   |
|                   | j) does projects              |
|                   | k) knows laws                 |
|                   | l) works with papers          |

*Задание 3. Постарайтесь выбрать подходящую профессию:*

*Possibilities: doctor, driver, artist, stewardess, director, singer*

1. She speaks foreign languages. She works very long hours, but she doesn't work every day. She likes people and travel, and she travels a lot in her work.. She is a ...
2. She doesn't work in an office. She is not a teacher. She works very long hours, and she often works at night – it's a hard job. She likes people and she helps them. She loves her job. She is a ...
3. He gets up at half past seven every day, has breakfast at eight o'clock, and starts work at half past nine. He works in an office. He has two secretaries and two telephones. He does not work on Sundays. He likes people. He is a ...
4. He usually gets up at eleven o'clock, and has breakfast at 12. He works at home. Sometimes he may work outside. He works in the afternoons, but not every day. Sometimes he works long hours, sometimes he does not work at all. He loves his job. He is an ...
5. She lives in a big city. She gets up late and has a late breakfast. She works late in the evening. She goes to and from work by taxi. People like to listen to her and sometimes they send her flowers. She is a ...

6. He gets up at five o'clock in the morning. He has breakfast and lunch in motorway restaurants. He works sitting down and travels a lot in his work. He likes his job. He is a ...

*Задание 4. Назовите профессию:*

- 1) I work outside and I love flowers. I'm a .....
- 2) I look after sick people in a hospital, but I'm not a doctor. I'm a .....
- 3) I work in a small restaurant. I prepare food for out quests. I'm a .....
- 4) I love animals. Some people call me an animal doctor. I'm a .....
- 5) I'm an artist and my job is taking photographs. I'm a .....
- 6) I'm interested in fashion. I make clothes for women. I'm a .....

## ПРАКТИЧЕСКАЯ РАБОТА №2

Задание: Выучите новую лексику, прочитайте и переведите текст «Инновационная техника в быту». Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

Text

It goes without saying that life was much more difficult before technology had developed as much as it has now. When it took two weeks for a letter to reach Australia, you couldn't keep in touch with people easily. Or just travelling from your home to another town a few kilometres away could take hours. And if you didn't live in a big city, you didn't have much information because there was no television or the Internet.

We have seen major technological advances over the last twenty years and the next years or so are going to be equally exciting. I believe that in the not-too-distant future, we won't have to carry our mobile phones around but will implant them somewhere in the body - maybe in our teeth or in our shoulders. I think that we won't have cash or credit cards any longer. It will mainly be digital money. And supermarkets will probably have iris recognition systems, so the money for our groceries will automatically be transferred from your bank account into the supermarket's bank account as you're standing at the checkout. Many people say it's science fiction but I think it's our future. Soon we'll all have more time for our hobbies and interests because robots will do all the work for us! I'm sure that new technology will change our lives for the better.

However, we must admit, that our technological progress has its drawbacks. For example, cars pollute our atmosphere. There is a lot of radiation from TVs, computers, mobiles and other electronic devices. Moreover, technology makes us lazy! Many teenagers would rather spend their free time in front of their computer than meet their friends. As a result, they don't have enough exercise and are getting fat. That's not healthy at all!

As for me, I'm a fan of modern technology. Now with computers and e-mail we never have to lose contact with anyone. We can travel from one place to another quickly and safely. What is more, because of television, everyone has information about the world around them. I can't imagine my life without technology. Of course, we've got things like a TV, a video player, a computer and different kitchen appliances such as a microwave oven and a dishwasher. But most

of all I enjoy my new mobile because now I can always stay in touch. I never go anywhere without it! I use it all the time and send about twenty text messages every day! To sum up, I want to say that technology has definitely made our lives easier and we couldn't live without it!

*Задание 1. Ответьте на вопросы:*

1. Can you imagine your life without modern technology?
2. Does technology make our life easier?
3. Do you think we rely too much on technology?
4. Would you like to be an inventor? Why? What kind of things would you invent?
5. What technological advances can you see happening in your life?
6. How do you think the world will change over the next fifty years?

*Задание 2. Выучите слова:*

### *Vocabulary*

a dryer, a tumble dryer, a tumble drier – сушилка;  
 an oven – духовка;  
 a blender – блендер;  
 a juicer – соковыжималка;  
 a coffee maker – кофеварка;  
 an espresso maker – аппарат для приготовления эспрессо;  
 an electronic kitchen scale – электронные кухонные весы;  
 an electric pressure cooker – скороварка;  
 a hotplate – небольшая электроплитка;  
 an ice cream maker – мороженица;  
 a hand mixer – ручной миксер;  
 a stand mixer – стационарный миксер;  
 a microwave oven – микроволновая печь;  
 a kettle – чайник;  
 a deep fryer – фритюрница;  
 a food steamer – пароварка;  
 a popcorn maker – аппарат для приготовления попкорна.

Слово	Перевод
to connect	включить, подключить
to disconnect	отключить, отсоединить
to insert	поместить, вставить
to increase the speed	увеличить скорость
to put a lid on smth	накрывать крышкой
to be plugged in	быть включенным в розетку
to press the start button	нажать кнопку «Пуск» (кнопку «Старт»)

to be turned on/off	быть включенным/выключенным
to take out	вынимать
to turn the speed down	уменьшить скорость
to turn up/down	увеличить/уменьшить
to remove	убрать, удалить
to stop working/operating completely	остановить работу (прибора)
to unplug	выдернуть вилку из розетки

*Задание 3. Переведите на русский язык*

1. How is this dishwasher **connected** to the water line?
2. Ben suddenly remembered that he had forgotten to **unplug** the electric kettle.
3. It's utterly important to slowly **increase the speed** of the blender when you blend the ingredients..
4. I forgot to **put a lid on** the blender while making a milkshake. Now my kitchen is a complete mess!
5. Wait! Make sure the coffee machine is **plugged in**.
6. If you don't **press the start button**, the vacuum cleaner will not work.
7. **Turn off** the air conditioner! It's freezing cold in the room!
8. Jessica opened the microwave oven, **took out** the glass of milk and went back to the kitchen table.
9. If you don't want to get your hairdryer broken, **turn the speed down** and then **turn it off**.
10. **Turn down** the temperature in the oven otherwise you'll overcook or burn the meat.
11. Don't try to open an electric pressure cooker until it **stops working/operating completely**.
12. When you leave home you should **disconnect** all the electric appliances.

*Задание 4. Выберите правильный вариант ответа.*

1. ... helps to keep your fruit and vegetables fresher and longer in the fridge.
  - A reversible door
  - A crisp zone
  - A microwave oven
  - A vacuum cleaner
2. You don't need to wash the dishes. The only thing I'm asking you to do is to ...
  - stack the dishes.
  - turn on the vacuum cleaner.
  - turn off the mixer.
  - disconnect the radio.
3. In summer Josh likes icy cold water, so he needs a fridge with ...
  - a coffee maker.
  - a toaster.

- an ice dispenser.
- a deep fryer.
- 4. I wonder if I can open the ... of my washing machine before the wash cycle is completed?
- sleep mode
- drain hose
- filter cover
- door
- 5. A fridge, a washing machine, an air conditioner are considered to be ...
- white goods.
- gadgets.
- brown goods.
- black goods.
- 6. She allows her younger daughter to ... the plate with her breakfast into the microwave oven.
- put
- unplug
- disconnect
- remove
- 7. Could you ... the air conditioner? It's quite chilly in here.
- take out
- connect
- turn down
- remove
- 8. Granny loaded the washing machine but forgot to ...
- press the start button.
- remove it.
- stop completely.
- unplug.
- 9. Jack, put the side plates and saucers into the ... And remember to scrape scraps.
- vacuum cleaner.
- juicer.
- air conditioner.
- dishwasher.
- 10. He's decided to cut down on eating fried and spicy food, so now he wants to buy a ...
- food steamer.
- kettle.
- deep fryer.
- tumble drier.

### ПРАКТИЧЕСКАЯ РАБОТА №3

Задание: Изучите правила употребления местоимений, прилагательных, наречий в учебном пособии И.П. Агабекян «Английский язык для СПО». Обратите внимание на примеры. Выполните грамматические упражнения.

*Задание 1. Заполните пробелы личными местоимениями в объектном падеже:*



1. My friend Tom lives in London. This is a parcel from (него) \_\_\_\_ . 2. I'm sorry, I can't tell (тебе) \_\_\_\_ what happened. 3. The children are hungry. Give (им) \_\_\_\_ an apple. 4. We are thirsty. Can you give (нам) \_\_\_\_ some juice? 5. Jack is in the garden. Bring (ему) \_\_\_\_ his book. 6. Ann and Paul can't do their homework. Can you help (им) \_\_\_\_ ? 7. I can't help (вам) \_\_\_\_ tomorrow. I must visit my aunt. 8. These clothes are for poor children. Can you bring (их) \_\_\_\_ to the Red Cross? 9. This cake is for Carol and me. Please give (его) \_\_\_\_ to \_\_\_\_ (нам). 10. The roses are for mother. Please give \_\_\_\_ to (ей) \_\_\_\_ . 11. Where is father? Can you tell (мне) \_\_\_\_ where he is? 12. Where is the mouse? I can't see (ее) \_\_\_\_ . 13. Where is the post office? Can you tell (мне) \_\_\_\_ where it is? 14. What's your telephone number? I don't know (его) \_\_\_\_ . 15. Our brother is very nice. He always helps (нам) \_\_\_\_ with the homework.

*Задание 2. Заполните пробелы возвратными местоимениями с -self (-selves) или местоименной конструкцией each other:*

1. Tom cut \_\_\_\_ while he was shaving this morning. 2. We really enjoyed \_\_\_\_ very much. 3. I repaired my bike \_\_\_\_ . 4. Why don't you clean the windows \_\_\_\_ ?  
5. Jack and I met \_\_\_\_ at the party five years ago. 6. At Christmas friends often give \_\_\_\_ presents. 7. They looked at \_\_\_\_ . 8. The film \_\_\_\_ wasn't very good but I liked the music. 9. The old woman sat at the park bench talking to \_\_\_\_ . 10. Let's paint the house \_\_\_\_ . 11. Did you write it \_\_\_\_ ? 12. She locked the door \_\_\_\_ . 13. The children cleaned their room \_\_\_\_ . 14. Ann baked the cake \_\_\_\_ . 15. The cat caught the mouse \_\_\_\_ .

*Задание 3. Заполните пробелы соответствующими притяжательными местоимениями:*

1. John Anderson forgot (свою) \_\_\_\_ book. 2. Mary and Susan talk like (их) \_\_\_\_ mother. 3. Alex and I were late for (наш) \_\_\_\_ class. 4. Princess Caroline is wearing (свое) \_\_\_\_ new Gucci gown. 5. Where are (мои) \_\_\_\_ keys? I can't find them. 6. Where do you keep (свои) \_\_\_\_ money, in the bank? 7. Everyone should bring (свои) \_\_\_\_ signed receipt.

*Задание 4. Заполните пробелы возвратными местоимениями:*

1. He built a boat all by \_\_\_\_ . 2. I hurt \_\_\_\_ quite badly falling down the stairs. 3. The children did everything \_\_\_\_ without any help. 4. Maria and Alison, you really should look after \_\_\_\_ better. 5. Forget it! I'll do it \_\_\_\_ . 6. I burnt \_\_\_\_ on the oven yesterday. 7. She blames \_\_\_\_ for what happened. 8. Bob taught \_\_\_\_ to type last summer. 9. I talk to \_\_\_\_ all the time. It doesn't mean I'm crazy. 10. We all enjoyed \_\_\_\_ very much on the picnic. 11. I was so stupid I could have kicked \_\_\_\_ . 12. The protesters locked \_\_\_\_ into the church and refused to come out.

*Задание 5. Найдите и исправьте ошибки, если таковые имеются..*

1. I'm busier than my little sister.
2. London is more old than New York.
3. It's the most sharp pencil I have.
4. Do you know the shortest way to the station?
5. This exercise is more difficult than that one.
6. Be activer at your lessons, please.
7. She is the most pretty girl I've ever known.

8. The boy is as tall as his father.
9. He makes more mistakes than you do.
10. Baseball is the most popular summer sport in America.
11. Yesterday he started to feel more bad.
12. Soon it began to get darker and it was time to go back home.
13. He said that money was the most important to him.
14. I've got a headache. Be quieter, please.
15. Mary's answer is better than yours.
16. Can you come more early next time?
17. You should be more careful.

#### ПРАКТИЧЕСКАЯ РАБОТА № 4

Задание: Изучите правила употребления грам. тем: «Глагол to be. Конструкции be going to, there be. Фразовые глаголы» в учебном пособии И.П. Агабекяна «Английский язык для СПО», Безкоровайной Г.Т. «Planet of English». Выполните грамматические упражнения.

*Задание 1. Заполните пропуски нужной формой глагола to be и переведите.*

1. He... born in 1985. 2. We... students now. 3. We... good friends at the college. 4. It... an interesting book. 5. Who... absent today? 6. He... a student. 7. What... he? 8. ... he a doctor? 9. These... my pencils. 10. Where... this book? It... on the table. 11. What... their names? 12. Mary... a girl. 13. Who... he? 14. What... you? 15. This man... in the room. 16. How... she? 17. How... you? I... fine. 18. How... your friend? 19. ... he your son? 20. Tomorrow we... at home. 21. ... you a sportsman?

*Задание 2. Напишите следующие предложения в прошедшем и будущем временах:*

1. There is much snow in winter. 2. There are 5 theatres in our city. 3. There is no lift in our house. 4. There are many new books in our library. 5. There is little milk in the bottle. 6. There are 3 rooms in our flat. 7. There is a map on the wall. 8.

*Задание 3. Поставьте в предложение подходящий фразовый глагол, используя глагол из первого столбца и необходимый предлог – из второго. Некоторые глаголы и предлоги используются не один раз. Поставьте глаголы в нужную форму.*

1

2

take

put

fill

up

off

try	forward
turn	on
look	for
give	in
grow	after
get	out
go	

Н-р: She ... at 6 a.m. because her work starts early. (Она **встает** в 6 утра, потому что ее работа начинается рано.) – She **gets up** at 6 a.m. because her work starts early.

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.)

## ПРАКТИЧЕСКАЯ РАБОТА № 5

Задание: Прочитайте и переведите текст: «Промышленная электроника». Выучите новую лексику. Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

### Industrial electronics

Hundreds of electronic equipments are now used for scientific, industrial and everyday purposes. They help to do jobs better or more rationally than before and take over jobs that couldn't be done otherwise.

So, industrial electronics undoubtedly plays a very important role today. You can easily find many electronic equipments at home: a tape recorder, a TV set, an MP3 player, a computer and many others.

The application and use of electronic equipments demands a good knowledge of their fundamentals.

In meters and lamps electricity flows in the wire. But inside any transistor or microchip (and previously, in radio tubes) electric current passes through the space (or semiconductor) separating certain parts in this detail. Such action is called electronic. It's not difficult to imagine it because the same happens in lightning. There you actually see how electricity jumps through space.

The first electronic equipments used radio lamps. They were: a radio set, a TV set, computing machines (predecessors of modern calculators), computers (which occupied big rooms), tape recorders.

The next stage came when transistors were invented. The devices became more powerful and much smaller. The number of devices increased greatly, some multifunctional devices appeared (radio + tape recorder). Computers and calculators became smaller: cassette recorders and videocassette recorders appeared.

The next period was the period of microchips. They helped to reduce big parts of devices, computers and other devices.

The latest period of industrial electronics development is the period of total digitization of all electronic devices, making them compatible with the computer. Photos are no longer made on film but on memory cards, cassettes and video cassettes are out of use. Television is also becoming digital.

Industrial electronics is a great part of our leisure time, it makes people's lives easier, and reduces their working time.

*Задание 1. Выучите слова:*

### *Vocabulary*

application - применение; приложение

calculator- калькулятор

cassette -кассета

certain - определенный

compatible -совместимый

computing - вычислительный

current -ток

demand - требовать  
detail - деталь  
digitization - переход на цифровой формат  
electric - электрический  
electricity - электричество  
electronics - электроника  
everyday - каждодневный  
film - 1. пленка 2. фильм  
flow -  $v$  течь  $n$  поток  
fundamental -  $n$  основа  $adj$  основополагающий  
imagine - представить  
increase - увеличиваться  
inside - внутри  
jump - прыгать  
lamp - лампа  
leisure - отдых, развлечение  
lightning - молния  
occupy - занимать  
otherwise - иначе  
pass - проходить  
powerful - мощный  
predecessor - предшественник  
previously - прежде  
purpose - цель  
radio - радио  
rational - рациональный  
reduce - уменьшать  
scientific - научный  
semiconductor - полупроводник  
space - пространство  
tape - лента, tape recorder - магнитофон  
television - телевидение  
total - полный  
transistor - транзистор  
tube - трубка  
undoubtedly - несомненно  
video-cassette recorder - видеомагнитофон  
wire - провод

*Задание 2. Ответьте на вопросы к тексту:*

1. For what purposes are electronic equipments used now? What do they help us to do?
2. Industrial electronics plays an important role today, doesn't it?
3. What electronic equipments are usually found at home? What can you find at home?
4. What is the difference between electric and electronic devices?
5. Where do you actually see how electricity jumps through space?
6. What were the first electronic equipments based on?
7. Did the first computers look like modern ones?
8. Did the next stage come when transistors or cassettes were invented?
9. Why did computers become smaller when microchips were introduced?
10. How is the latest period of industrial electronics development called?

11. What devices became compatible with computer?
12. What does electronics mean in our life?
13. Do you think that electronics does only good to people?
14. What will be the next period of industrial electronics development, in your opinion?

*Задание 3. Закончите предложения.*

1. Electronic equipments are used for ...
2. You can find many electronic equipments at home: a TY set ...
3. Inside any transistor electric current passes ...
4. In lightning you actually see ...
5. The first electronic equipments used .. .
6. The devices with transistors become .. .
7. Microchips helped to reduce ...
8. The latest period of industrial electronics development is ...
9. Photos are no longer made on 5-millimetre film, but ...
10. Industrial electronics makes people's life ...

*Задание 4. Закончите предложения.*

1. Electronic equipments are used for ...
2. You can find many electronic equipments at home: a TY set ...
3. Inside any transistor electric current passes ...
4. In lightning you actually see ...
5. The first electronic equipments used .. .
6. The devices with transistors become .. .
7. Microchips helped to reduce ...
8. The latest period of industrial electronics development is ...
9. Photos are no longer made on 5-millimetre film, but ...
10. Industrial electronics makes people's life ...

## ПРАКТИЧЕСКОЕ ЗАНЯТИЕ № 6

Задание: Изучите правила употребления множественного числа существительных, артиклей, притяжательного падежа существительных в учебном пособии И.П. Агабекян «Английский язык». Обратите внимание на примеры. Выполните грамматические упражнения.

*Задание 1. Напишите следующие существительные во множественном числе:*

box, sheep, place, library, photo, mouse, lady, glasses, bush, dress, country, bus, party, wife, day, knife, knowledge, month, pen, hero, goose, company, life, deer, tomato, city, man, play, news, child, fruit, shelf, leaf, foot, fish, woman, money, information.

*Задание 2. Поставьте существительные в следующих предложениях во множественное число.*

1. A new house is in our street. 2. This story is very interesting. 3. A woman, a man, a boy and a girl are the room. 4. In the farm-yard we see an ox, a sheep, a cow and a goose. 5. Put this knife on that table. 6. Is this worker an Englishman or a German? — He is a Frenchman. 7. What is your name? 8. He keeps his toy in a box. 9. This man works at our office.

*Задание 3. Употребите, где требуется, артикли a, an, the:*

1. ... Volga is... longest river in... Europe. 2. What is... nearest way to... Drama Theatre? 3. ... butter and... cheese are made of... milk. 4. Usually I get up at... 7 o'clock in... morning. 5. ...Rostov is situated on... Don. 6. Will you have... cup of... tea? 7. This... pencil is broken. Give me that... pencil, please. 8. I have ... ten programmes on my TV. 9. My friend has... car .... car is broken now. 11. I got... letter from my friend yesterday. ... letter was very long. 12. She has two... daughters and one... son. Her... son is... student. 13. My... brother's... friend has no... dog. 14. This is... house. ... house is white. 15. They have... party. ... party is... birthday party. 16. I read ... good

*Задание 4. Употребите притяжательный падеж существительных.*

*Образец: The poems of Lermontov. (Lermontov's poems.)*

1. The toy of their children. 2. The questions of my son. 3. The wife of my brother. 4. The table of our teacher. 5. The life of animals. 6. The voice of this girl. 7. The new book of the pupils. 8. The letter of Peter. 9. The car of my parents. 10. The room of my friend. 11. The handbags of these women. 12. The flat of my sister is large. 13. The children of my brother are at home. 14. The room of the boys is large.

## ПРАКТИЧЕСКАЯ РАБОТА № 7

Задание: Прочитайте и переведите текст: «Роль технического прогресса». Выучите новую лексику. Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

### The role of technical progress

The scientific and technical revolution has changed our life very much. The computers, the mobile phones and other digital devices have entered our everyday life.

The atomic, space and energy age was followed by the age of computers. The tasks which had seemed eternal before have been solved one by one by computers. During the last decade many fundamental changes occurred because of electronic devices. It is even difficult to imagine the social and economic consequences of the microelectronic revolution.



The large use of computers has influenced our life in such a way that it was difficult to imagine 15 or 20 years ago. On the one hand, computers have simplified our life greatly. If you typed a text on the typewriter and made a mistake you had to type the whole page again. Making several copies of the same document used to be a difficult job too. But now it's quite different. Correcting mistakes is easy. Computer also helps us to buy goods, find information, book tickets, make presentations and annual reports, and make difficult calculations. Time is saved for leisure.

Leisure time is also influenced by computer and other periphery devices. You no longer go to the music shops - many things are available on the internet. You needn't write letters to your relatives or friends – you can send an e-mail. And your photo albums are on computer too.

Computer games are probably also a part of your free time. They became more and more realistic and complicated, and for many people it becomes impossible to tear themselves away. This means that electronic devices, such as computer and TV set are used mostly for entertainment and consume most of the time that could be spent on work, going for a walk and sleeping. Man becomes a slave of the devices which were designed to make him stronger.

Is there a way out? In fact, there is, but many people don't know it and are still slaves. The best decision is not to give these equipments place in your heart. They should do their work. And when you have a rest, prefer real communication to virtual one and living an active life to watching films about crime. Then electronics will be not our lord or enemy but our friend!

### *Exercise 1. Выучите слова* *Vocabulary*

age- век  
annual -ежегодный  
atomic -атомный  
availbe -доступный  
consequence -следствие  
copy -копия  
correct -исправлять  
crime -преступление  
decade - десятилетие  
document -документ  
e-mail (=electronic mail)-  
электронная почта  
enemy - враг  
enter -вводить, входить  
good -добро  
impossbe -невозможный  
influence -влияние и влиять  
lord -господин  
occur -возникать  
periphery -периферия  
photo album -фотоальбом  
progress -прогресс  
realistic -реалистичный  
relative -родственник  
report -отчет  
simplify -облегчать  
slave -раб  
social -социальный



tear (oneself) away -оторвать(ся)  
ticket -билет  
type -печатать  
typewriter –печатная машинка  
virtual -виртуальный

*Задание 2. Вставьте пропущенные слова.*

1. \_\_\_ helps you to send letters quickly.
2. If there is an interesting program on TV, it's difficult for a person to
3. During the last two \_\_\_ scientific progress and digitization took place.
4. For some people a computer is an equivalent of a \_\_\_: a device for printing and editing documents.
5. Do you have many \_\_\_? - Yes, I have parents, grandparents, two sisters and three brothers.
6. I don't buy \_\_\_ any more, all my photos are on my computer.
7. Computer is a multifunctional device. So the \_\_\_ is that it can be used both for work and for leisure.
8. \_\_\_ age was followed by a microelectronic one.

*Exercise 3. Закончите предложения*

1. The atomic, space and energy age was followed by ...
2. It's difficult to imagine the social and economic consequences ...
3. Computers have simplified ...
4. Computer helps us to buy goods, find information ...
5. Leisure time is also influenced ...
6. You no longer go to the music shops ...
7. You needn't write letters to your relatives ...
8. Computer and TV set are used mostly for entertainment ...
9. The best decision is not to give these equipments.
10. When you have a rest, prefer real communication.

*Задание 4. Закончите предложения.*

1. The atomic, space and energy age was followed by ...
2. It's difficult to imagine the social and economic consequences ...
3. Computers have simplified ...
4. Computer helps us to buy goods, find information ...
5. Leisure time is also influenced ...
6. You no longer go to the music shops ...
7. You needn't write letters to your relatives ...
8. Computer and TV set are used mostly for entertainment ...
9. The best decision is not to give these equipments ..
10. When you have a rest, prefer real communication ..

## ПРАКТИЧЕСКАЯ РАБОТА №8

Задание: Прочитайте и переведите текст «Карьера в области электроники». Выучите новую лексику. Выполните лексические упражнения. Повторите правила образования Времен Действительного залога. Выполните грам. упражнения.

*Read and translate the text. Прочтите и переведите текст.*

## Text Career in electronics

Hi, there! Here is Ann Sokolova again. I am afraid this will be my last meeting with you because I need to pack my suitcase. I am leaving for Sochi tonight. I have passed all the exams successfully and I'm free till the 1<sup>st</sup> of September.

As I have already told you, I was always good in mathematics and physics. My parents bought me a computer when I was in the 10<sup>th</sup> form. Since then I knew that I would become a specialist in computer technologies — a computer engineer.

Computer industry is developing so fast, that it comprises almost all spheres of professional life. No business now is possible without computers. This is especially true about automated manufacturing of products and robotics. Computer control of automated production opens new horizons for the cheap and quality production of goods. Information is now generated, transmitted, received, and stored electronically through computer networks on a scale unprecedented in history, and there is every indication that the explosive rate of growth in this field will continue.

Computer engineering is a general field. It deals with both electric and electronic industries.

Electronic engineering deals with the research, design, integration, and application of circuits and devices used in the transmission and processing of information.

Engineers in the field of electric and electronic engineering are concerned with all aspects of electrical communications, from fundamental questions such as «What is information?» to the highly practical, such as the design of telephone systems. In designing communication systems, engineers rely on various branches of advanced mathematics, such as Fourier analysis, linear systems theory, linear algebra, differential equations, and probability theory.

Engineers work on control systems which are used extensively in automated manufacturing and in robotics.

Major developments in the field of communications and control have been the replacement of analogue systems with digital systems; fibre optics are used now instead of copper cables. Digital systems offer far greater immunity to electrical noise. Fibre optics are likewise immune to interference; they also have great carrying capacity, and are extremely light and inexpensive to manufacture.

Computer engineering is now the most rapidly growing field. The electronics of computers is the design and manufacture of memory systems, of central processing units, and of peripheral devices. The most prospective industry now is the Very Large Scale Integration (VLSI) and new computer architectures. The field of computer science is closely related to computer engineering; however, the task of making computers more «intelligent» (artificial intelligence), through creation of sophisticated programs or development of higher level machine languages or other means, is generally regarded as the dream of computer science.

One current trend in computer engineering is microminiaturization. Engineers continue to work to fit greater and greater numbers of circuit elements onto smaller and smaller chips.

Another trend is towards increasing the speed of computer operations through the use of parallel processors and superconducting materials.

So, as you see, there are a lot of employment opportunities in my field. I don't worry about finding a job. The most important thing for me now is to study well and to graduate from the Academy.

### *Exercise 1. Выучите слова*

#### *Vocabulary*

to comprise — включать в себя

automated manufacturing of products — автоматизированное производство товаров  
robotics — робототехника  
horizons — горизонты  
cheap — дешевый  
to generate — генерировать, производить  
to transmit — передавать  
to store — хранить  
scale — масштаб  
unprecedented in history — не имеющий прецедентов в истории  
indication — указание, свидетельство  
explosive — взрывной  
to deal with — иметь дело с, заниматься чем-либо  
integration — интеграция  
application — приложение, использование  
circuits — электрические схемы, цепи  
device — устройство  
transmission — передача  
processing — обработка  
to rely — полагаться  
Fourier analysis — анализ Фурье  
linear systems theory — теория линейных систем  
linear algebra — линейная алгебра  
differential equations — дифференциальные уравнения  
probability theory — теория вероятности  
extensively — широко  
replacement — замещение  
fibre optics — оптоволоконные технологии  
copper — медь  
digital — цифровой  
immunity — защищенность, невосприимчивость  
carrying capacity — пропускная способность  
light — легкий  
rapidly growing — быстрорастущий  
artificial intelligence — искусственный разум  
sophisticated — сложный  
superconducting — сверхпроводимость

*Задание 3. Как вы видите свою будущую профессию? Пожалуйста, ответьте на следующие вопросы:*

1) What kind of work are you interested in?

- a) well paid
- b) interesting
- c) in a large and famous company
- d) quiet
- e) in an industry which has a future
- f) prestigious
- g) not to sit the whole day in the office
- h) to travel a lot

2) What position would you like to have?

- a) to manage people — manager
- b) to work for someone else — an employee
- c) to be your own boss — self-employed, businessman
- d) to be responsible for everything — top manager, director
- e) to work for the state — state employee

*Задание 4. Пожалуйста, обсудите со своей группой преимущества и недостатки вашей будущей профессии. Please discuss with your group advantages and disadvantages of your future profession.*

Do you think that engineering profession is prestigious? Is it well-paid?  
How difficult is it to find a good work in this field?

*Задание 5. Найдите и исправьте ошибки.*

1. When I came, he was having breakfast. 2. When she worked there, she often made mistakes. 3. When he was phoning, she had a bath, 4. While I was ironing, he read a newspaper, 5. I cooked supper when I heard this news. 6. He was working in this company in 1997. 7. I could not answer your call, I worked in the garden then. 8. They wished to stay because they enjoyed themselves. 9. Were you quarreling all evening? 10. The train was approaching the city when it was raining heavily, 11. The secretary still typed when the boss came in and was putting some documents on the table. 12. When he came up to the square, he saw a lot of people: they sang, danced and shouted. They were celebrating New Year, 13. Just as I was coming into the room, the students discussed the first report. 14. All the time I was writing, he was annoying me with silly questions. 15. The children played while the mother put the room in order.

## ПРАКТИЧЕСКАЯ РАБОТА № 9

Задание: Прочитайте и переведите текст «Арифметические действия, Числительные», «Закон Ома. Решение задач». Выполните упражнения на арифметические действия.

*Read and translate the text. Прочтите и переведите*

Text 1

### GEORGE SYMON OHM

GEORGE SYMON OHM (1784–1854) is a famous German physicist. In 1805 he entered the Erlangen University. Though he did not graduate from this University, he managed to write and defend a thesis in 1811. Later, he was a teacher at the gymnasiums of Gottstadt and Wamburg. Beginning from 1833 he became professor at the Polytechnical School in Nürnberg, and since 1849 – at the München University.

He is most famous for establishment of the general law of the electric circuit, stating the relation between resistance, electromotive force, and strength of the current in the electric circuit.

The law was discovered experimentally and first formulated in 1826. Further investigations made use of this law. The unit of resistance was named after Ohm at the International Congress of Electricians in 1881.

Text 2

Ohm's Law

One of Ohm's major contributions was the establishment of a definite relationship between voltage, resistance and current in a closed circuit. A circuit consists of a voltage source and a complete path for current. Ohm stated this relationship as follows:

Current is directly proportional to voltage and inversely proportional to resistance.

As a formula, it appears like this:

Voltage (in volts)

Current (in amperes)=

Resistance (in ohms)

This formula is commonly known as Ohm's Law.  
About 1817 Ohm discovered that a simple correlation exists between resistance, current and voltage. That is: the current that flows in the circuit is directly proportional to the voltage and inversely proportional to the resistance. A current is measured in amperes, a voltage, or potential difference is measured in volts. A resistance is measured in ohms.

Задание 1. Завершите головоломку. Запишите эти цифры словами.

1 10 11 12 2 20 3 13 90 4 40 5 50 16 7 8

F				S			T			N
		F		Y						
	W							O		
Y										
					T		E		T	Y
E		Y								
			F							

					L					
T			R				N			

Задание 2. Сопоставьте примеры с ответами

1) 45: 5	2) 9·6	a) eighty-five	b) fifty-four
3) 29-12	4) 73+12	c) nine	d) seventeen

1     \_\_\_     2     \_\_\_     3     \_\_\_     4     \_\_\_

Задание 3. Прочтите примеры и решите:

Example: (a)  $98.4 \cdot 5 = 492$                        $492:12 = 41$

(a)            Multiply 98.4 by 5 and divide the answer by 12.

(b)            Add 33.5 to 26.35 and subtract 45.8 from the  
answer. \_\_\_\_\_

(c)            Divide 40.5 by 5, and multiply the answer by 8.

(d)            Add 235.08 to 51.73, and subtract the answer from 326.2.

(e)            Subtract 54.93 from 85.01. Add 2.27. Subtract the answer from 61.9.

Задание 4. Ответьте на вопрос.

Task: Resistance equals 80 ohm, voltage equals 55 volt.

How much is the current in the circuit?

Задание 5. Переведите на русский язык.

- This is a series circuit.
- It includes a voltage source and two resistors.
- The elements are connected in series.
- The value of current is the same in all the elements of this circuit, while the value of voltage is different.

Задание: Прочитайте и переведите текст: «Электрическая цепь». Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

### Electric Circuits

The concepts of electric charge and potential are very important in the study of electric currents. When an extended conductor has different potentials at its ends, the free electrons of the conductor itself are caused to drift from one end to the other. The potential difference must be maintained by some electric source such as electrostatic generator or a battery or a direct current generator. The wire and the electric source together form an electric circuit, the electrons are drifting around it as long as the conducting path is maintained.

There are various kinds of electric circuits such as: open circuits, closed circuits, series circuits, parallel circuits and short circuits.

To understand the difference between the following circuit connections is not difficult at all. If the circuit is broken or «opened» anywhere, the current is known to stop everywhere. The circuit is broken when an electric device is switched off. The path along which the electrons travel must be complete otherwise no electric power can be supplied from the source to the load. Thus the circuit is “closed” when an electric device is switched on.

When electrical devices are connected so that the current flows from one device to another, they are said «to be connected in series». Under such conditions the current flow is the same in all parts of the circuit as there is only a single path along which it may flow. The electrical bell circuit is considered to be a typical example of a series circuit. The “parallel” circuit provides two or more paths for the passage of current. The circuit is divided in such a way that part of the current flows through one path and part through another. The lamps in the houses are generally connected in parallel.

The “short” circuit is produced when the current can return to the source of supply without control. The short circuits often result from cable fault or wire fault. Under certain conditions the short circuit may cause fire because the current flows where it was not supposed to flow. If the current flow is too great a fuse is used as a safety device to stop the current flow.

*Задание 1. Скажите, являются ли эти предложения верными или нет:*

1. When an extended conductor has the same potential at its ends, free electrons are drifting from one end to another.
2. The wire and the electric source together form an electric circuit.
3. A path of any material will allow current to exist.
4. Silver, copper and gold oppose very strongly.
5. The slighter the opposition is, the better the insulator is.
6. There is only one type of electric circuit.
7. We close the circuit when we switch on our electric device.

*Задание 2. Переведите на английский язык*

1) электрические цепи, 2) электрический заряд, 3) проводник, 4) сопротивление, 5) движение электронов, 6) изолятор, 7) короткое замыкание, 8) энергия.

*Задание 3. Закончите предложения*

1. The potential difference must be maintained by ...
2. Materials that offer slight opposition are called ...
3. The best insulators are ...
4. There are various kinds of electric circuits such as ...
5. We “open” the circuit when ...
6. We “close” the circuit when ...
7. The “short” circuit is produced when ...
8. A fuse is ...

*Задание 4. Ответьте на вопросы:*

1. What concepts are very important in study of electric current?
2. What forms an electric circuit?
3. What materials are the best conductors and insulators?
4. What kinds of electric circuits do you know?
5. How can we open and close the circuit?
6. When are electrical devices connected in series?
7. What is an example of a series circuit?
8. What can you say about «parallel» circuits?
9. What does the short circuit often result from?

## ПРАКТИЧЕСКАЯ РАБОТА № 11

Задание: Прочитайте и переведите текст: «Трансформатор».

Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

### Transformers

One of the great advantages in the use of the alternating current is the ease with which the voltage may be changed by means of a relatively simple device known as a transformer. Although there are many different types of transformers and a great variety of different applications, the principles of action are the same in each case.

The transformer is a device for changing the electric current from one voltage to another. It is used for increasing or decreasing voltage. So the function of a transformer is to change voltage and current of an alternating system to meet requirements of the equipment used. It is known to be simple in elementary principle, and in construction that is it involves no moving parts. Transformers change voltage through electromagnetic induction.

The principle parts of a transformer are: an iron core and, usually, two coils of insulated windings. One of them is called primary, another is called the secondary. The primary coil is connected to the source of power. The secondary coil is connected to the load. Thus, the primary is the coil to which power is supplied. The secondary is the coil from which power is taken. In



scientific terms to produce an alternating magnetic flux in the iron core an alternating current must be passed through the primary coil. This flux is considered to induce electromotive force in both primary and secondary coils. The secondary coil is open – circuited. Current flows in the secondary coil when the latter is connected to the external circuit or load. The flow of current in the secondary coil tends to reduce the flux in the core. Transformers are placed inside a steel tank usually with oil to improve the insulation and also to cool the device.

*Задание 1. Переведите на английский язык.*

1) переменный ток; 2) прибор; 3) принцип работы (действия); 4) электромагнитная индукция; 5) катушка; 6) первичная (вторичная) обмотка; 7) источник питания; 8) магнитный поток; 9) стальной контейнер; 10) остужать.

*Задание 2. Переведите на русский язык слова и выражения:*

1) advantage; 2) voltage; 3) relatively simple; 4) application; 5) increase; 6) to decrease; 7) to meet requirements; 8) moving parts; 9) iron core; 10) insulated windings; 11) load; 12) electromotive force; 13) to induce.

*Задание 3. Составьте вопросы:*

1. Voltage may be changed by a transformer. (General Question).
2. Transformers change voltage through electromagnetic induction. (How ...)
3. Transformer is used for increasing or decreasing voltage.
4. The primary winding is connected to the source of power. (...or...)
5. Transformers are placed inside a steel tank. (Question-tag)

*Задание 4. Ответьте на вопросы:*

1. What kind of device is a transformer?
2. What are the functions of a transformer?
3. What are the principle parts of a transformer?
4. What is the primary coil connected to?

5. What is the secondary coil connected to?
6. What are the principles of action of a transformer?
7. Where are transformers usually placed?

## ПРАКТИЧЕСКАЯ РАБОТА №12

Задание: Прочитайте и переведите текст «Развитие электроники». Выучите новую лексику. Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

### Development of electronics

Electronics is the science dealing with devices operated by control of the movement of electric charges in a vacuum, in gases, or semiconductors: or with the processing of information or the control of energy by such devices. This definition covers the whole complex family of vacuum and gaseous electron tubes and their applications. It also includes metallic contact or semiconductor rectifiers and the transistors which utilize the control of electrons or positive charges (holes) to process information or to convert energy.

Electronics was born in the 19-th century. Like hydrolysis or chemistry it has come into its own only recently. Electronics first established itself, however, in wireless telegraphy. Industrial applications of electronics include control gauging, counting, heating, speed regulation, etc. But in a larger field, electronics leads to automatic control of large-scale industrial operations.

Today, electronics has started a new era. Electronics devices are doing simple, but human-like thinking. Some industries are controlled by electronic robots. Automation is the industrial keynote of the day. Planes and rockets are electronically controlled. Some radiotelescopes work like radar to receive radio waves from outer space. Shortly speaking, electronics is not so much a new subject as a new way of looking at electricity.

*Задание 1. Выучите слова.*

### Vocabulary

charge – заряд  
semiconductor – полупроводник  
tube – труба, трубка  
rectifier – ректификатор, выпрямитель тока  
utilize – использовать

hole – отверстие, шпур  
convert – переводить, превращать  
has come into its own – заняла подобающее место  
keynote – основа

*Задание 2. Ответьте на вопросы.*

1. What is electronics?
2. When was electronics born?
3. Where did electronics first establish itself?
4. What does electronics lead to in a larger field?
5. What thinking is electronics doing?
6. In what branches of science and technology is electronics used?

*Задание 3. Переведите на английский язык.*

- 1.Электроника включает в себе производство и обработку пучков электронов.
- 2.Электрические сигналы производятся приборами, которые превращают первоначальный источник информации в слабые электрические токи.
- 3.Существуют два вида электрического сигнала: аналоговый и цифровой.
- 4.В современной электронике электрические сигналы могут обрабатываться двумя основными способами – посредством происхождения их через полупроводниковые приборы или посредством превращения их в пучок электронов.
- 5.Полупроводники обладают промежуточным сопротивлением потому, что у них есть некоторое количество свободных электронов, которые могут превращаться от атома к атому – в отличие от проводников, у которых есть много свободных электронов, и в отличие от изоляторов, у которых их нет.

*Задание 4. Составьте план и перескажите текст.*

*Задание 5. Переделайте следующие предложения в Passive Voice.*

1. They looked for the girl everywhere.
2. They did not listen to the boy.
3. She looks after the patients well.
4. They asked for our address.
5. My father looked through these papers this morning.
6. He will give my brother English lessons.
7. A friend of his has shown me an interesting magazine.
8. His friend told him everything.
9. The students greeted the famous lecturer warmly.
10. They have recently built a huge plant in the town of N.
11. We must finish the work by tomorrow.
12. When I fell ill, my mother sent for the doctor.
13. They showed Helen the nearest way to the theatre.
14. He gave his patient some good advice.
15. Mary has told me the news.
16. The people looked at the little boy with interest.
17. They examined the paper attentively.
18. Mother is teaching her daughter to cook now.

### ПРАКТИЧЕСКАЯ РАБОТА №13

*Задание:* Прочитайте и переведите текст: «Элементы питания». Выучите новую лексику. Выполните лексические упражнения.

*Read and translate the text. Прочтите и переведите текст.*

#### Batteries

Batteries as continuous sources of electrical energy are the result of a long series of experiments which started with the discoveries of Alessandro Volta more than one hundred years

ago. Today battery cells are manufactured in two common forms, dry cells being used in flash lights, portable radios, etc., wet cells being used in automobiles, airplanes, boats, etc.

We know each cell of every battery to have two terminals: one negative, the other positive. The difference of potential between the terminals of every dry cell, regardless of size, is approximately 1.5 volts, whereas the difference of potential between the terminals of a lead storage cell is approximately 2 volts. The larger the cell, the greater the amount of energy stored within in. The available energy in dry cells becoming exhausted, they are thrown away and new ones are secured, but when storage batteries become exhausted, they are recharged.

The difference of potential between the terminals of any dry or wet cell depends in principle upon the particular chemicals used in its construction, whereas the total charge capacity depends upon the quantity of chemicals present.

The negative terminal of a dry cell is the zinc metal container in which all chemical ingredients are sealed, whereas the positive terminal is a round carbon rod, the end of which protrudes through the surface at one end. The positive electrode of a storage cell is known to be set of lead grills filled with porous lead dioxide and fastened together with a single terminal. The negative electrode consists of a set of parallel grills filled with spongy lead. When these two sets of plates are put together with glass or wood separators and the entire ensemble immersed in dilute sulphuric acid, chemical activity between the lead and acid gives rise to electric charges.

### *Задание 1. Выучите слова*

#### *Vocabulary*

dry cell – сухой элемент

flash light – импульсное освещение

wet cell – элемент с жидким электролитом

terminal – клемма, полюс

whereas – тогда как

lead storage cell – свинцовый элемент

storage battery – аккумуляторная батарея

protrude – выступать

grill – решетка

spongy lead – губчатый свинец

plate – пластина

sulphuric acid – серная кислота

dilute – разбавленный, разведенный

### *Задание 2. Ответьте на вопросы:*

1. What are the two common forms battery cells are manufactured?
2. What could these battery cells be used for?
3. How the difference of potential between the terminals of any dry or wet cell is explained?
4. What is the main distinction of dry and wet cells?

### *Задание 3. Найдите в тексте эквиваленты английским слов и словосочетаний:*

Alessandro Volta

discovery

difference

regardless

approximately

exhausted

particular  
chemicals  
charge capacity  
zinc carbon  
negative electrode  
protrude  
ensemble

*Задание 4. Вставьте пропущенные слова.*

*To provide, to refer, strong, to invent, to be, to run, to transfer, to charge, to use, liquid, to coat.*

1. The first battery ... in 1800 by Alessandro Volta.
2. Near the end of the 19th century, the invention of dry cell batteries, which replaced ... electrolyte with a paste, made portable electrical devices practical.
3. In the modern sense of the term, a battery is a device that ... a current by means of an electrochemical reaction, wherein electrons ... from one chemical to another.
4. However, the original usage of the term not to an electrochemical cell but to a set of linked Leyden jars, which, in the 18th century were used by scientists as a means of storing charge.
5. Leyden jars ... the first capacitors, and basically consisted of a glass jar whose inner and outer surfaces with metal foil, and had an ... electrode through its center.
6. They could ... with a static generator, and ... by touching a conductor to its electrode.
7. Scientists could obtain ... discharges by linking the electrodes of multiple jars together.
8. It was Benjamin Franklin who, in 1748, first ... the word "battery" to describe a similar assembly of glass plates with lead sheets pasted on either surface.

#### ПРАКТИЧЕСКАЯ РАБОТА №14

*Задание 1. Прочтите текст и выполните следующие за ним упражнения:*

##### Automation

1. Automation is the system of manufacture performing certain tasks, previously done by people, by machines only. The sequences of operations are controlled automatically.

The most familiar example of a highly automated system is an assembly plant for automobiles or other complex products.

2. The term automation is also used to describe non-manufacturing systems in which automatic devices can operate independently of human control. Such devices as automatic pilots, automatic telephone equipment and automated control systems are used to perform various operations much faster and better than could be done by people.

3. Automated manufacturing had several steps in its development. Mechanization was the first step necessary in the development of automation. The simplification of work made it possible to design and build machines that resembled the motions of the worker. These specialized machines were motorized and they had better production efficiency.

4. Industrial robots, originally designed only to perform simple tasks in environments dangerous to human workers, are now widely used to transfer, manipulate, and position both light and heavy workpieces performing all the functions of a transfer machine.

5. In the 1920s the automobile industry for the first time used an integrated system of production. This method of production was adopted by most car manufacturers and became known as Detroit automation.

6. The feedback principle is used in all automatic-control mechanisms when machines have ability to correct themselves. The feedback principle has been used for centuries. An outstanding early example is the flyball governor, invented in 1788 by James Watt to control the speed of the steam engine. The common household thermostat is another example of a feedback device.

7. Using feedback devices, machines can start, stop, speed up, slow down, count, inspect, test, compare, and measure. These operations are commonly applied to a wide variety of production operations.

8. Computers have greatly facilitated the use of feedback in manufacturing processes. Computers gave rise to the development of numerically controlled machines. The motions of these machines are controlled by punched paper or magnetic tapes. In numerically controlled machining centres machine tools can perform several different machining operations.

9. More recently, the introduction of microprocessors and computers have made possible the development of computer-aided design and computer-aided manufacture (CAD and CAM) technologies. When using these systems a designer draws a part and indicates its dimensions with the help of a mouse, light pen, or other input device. After the drawing has been completed the computer automatically gives the instructions that direct a machining centre to machine the part.

10. Another development using automation are the flexible manufacturing systems (FMS). A computer in FMS can be used to monitor and control the operation of the whole factory.

11. Automation has also had an influence on the areas of the economy other than manufacturing. Small computers are used in systems called word processors, which are rapidly becoming a standard part of the modern office. They are used to edit texts, to type letters and so on.

*Задание 2. Переведите на русский язык в письменной форме абзацы 3, 4, 6, 7, 9 и 11.*

*Задание 3. Найдите в правой колонке русские эквиваленты английских слов и словосочетаний:*

1 automation	а измерение, размеры
2 previously	б эффективность
3 sequence	с устройство, прибор
4 assembly plant	д походить
5 non-manufacturing	е паровоз
6 device	ф последовательность
7 resemble	г сборочный завод
8 efficiency	h ранее
9 flyball governor	и бытовой термостат
10 steam engine	j непроизводственный
11 household thermostat	k способствовать
12 facilitate	l центробежный регулятор
13 punched	м помощь
14 aid	n перфорированный
15 dimension	о автоматизация

*Задание 4. Ответьте на вопросы:*

1. How is the term automation defined in the text?
2. What is the most «familiar example» of automation given in the text?
3. What was the first step in the development of automaton?
4. What were the first robots originally designed for?
5. What was the first industry to adopt the new integrated system of production?
6. What is feedback principle?
7. What do the abbreviations CAM and CAD stand for?
8. What is FMS?
9. What industries use automation technologies?

*Задание 5. Найдите в тексте следующие слова и словосочетания:*

1. автоматические устройства
2. автоматизированное производство
3. выполнять простые задачи
4. как легкие, так и тяжелые детали
5. интегрированная система производства
6. принцип обратной связи
7. механизм может разгоняться и тормозить
8. компьютер автоматически посылает команды
9. высокоавтоматизированная система
10. непроизводственная система

*Задание 6. Найдите эквиваленты на английском языке в тексте:*

1. сфера применения
2. фиксированная последовательность операций
3. автоматические сборочные машины
4. определенные химические процессы
5. programmable automation
6. computer terminal
7. numerical-control machine-tool

## **Список рекомендуемой литературы**

### Учебники и учебные пособия:

#### Основные

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- 3.Агабекян *И.П.* «Английский язык» - г. Ростов-на-Дону: «Феникс», 2018г.

### Дополнительные источники:

- 1.Безкоровайная Г.Т.Planet of English : учебник английского языка для учреждений СПО,М. : ОИЦ «Академия»,2019
- 2.Бонк Н.А. Английский язык для международного сотрудничества.- М., 2018.
- 3.Восковская А.С., Карпова Т.А. Английский язык: учебник английского языка для учреждений СПО. – М., 2018.

### Электронные ресурсы:

- 1.ЭБС «Znanium.com»
- 2.ЭБС «ЮРАЙТ»
- 3.<http://www.oxfordlearnersdictionaries.com/>



4.<http://www.oxforddictionaries.com/ru>

5.<http://www.studv.ru> Портал для изучающих английский язык;

6.<http://www.study-languages-online> - изучаем английский;

7.<http://www.banktestov.ru> - ресурсы для изучения английского языка;

8.<http://www.english-lessons-online.ru>- портал для студентов

9.<http://engtexts.ru>