Contents

ПРЕДИСЛОВИЕ АВТОРА

В учебном пособии представлены аутентичные тексты профессионального характера, а также разнообразные упражнения на активизацию изученного материала и задания по работе с текстом, направленные на обучение извлечению из текста основной информации, перефразированию предложений из текста и созданию собственных текстов на основе прочитанного. Тексты расположены в порядке возрастания сложности с точки зрения лексики и грамматики и помогут закрепить и упорядочить уже имеющиеся знания, а также развить навыки работы с текстами профессионального характера (табл. 1).

Таблица 1

Module	Text	Grammar material
Building professions	1. The profession of a programmer	The Noun, The Pronoun
	2. The profession of a programmer in the building area	The Numeral
Cities and countries	3. The technological progress	The Adjective, The Adverb
	4. In the beginning	The Preposition
	5. The history of Microsoft	The Parts of Speech: compilation
	6. The latest Russian programmers' achievements	The Verb
	7. Programmers' achievements	The system of tenses: Present Tenses
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	12. "I love you" and other viruses	The Passive voice: Present Tenses
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	14. Top 10 Best Designed Websites in the World	The Passive voice: compilation
The origin of knowledge	15. A Website	Simple Sentences: Positive
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	19. The history of PC	Complex Sentences
	20. The future of computers	Reported Speech
	21. The end of the civilization	Syntax: compilation
Science and scientists of the past	22. Blaise Pascal	The Modal Verbs
	23. Gottfried Wilhelm von Leibniz	The Modal Verbs and their equivalents
	24. Charles Babbage	Nonpersonal verb forms: Participle I
	25. Ada Lovelace	Nonpersonal verb forms: Participle II
	26. Konrad Zuse	Nonpersonal verb forms: Gerund
	27. Alan Turing	Nonpersonal verb forms: Infinitive
The modern science and technics	28. The modern computer and its hard ware	Nonpersonal verb forms: Infinitive. Complex Object
	29. Computer modeling of build (Videotaping, AutoCAD)	Nonpersonal verb forms: compilation
	30. The perspectives of the development of computer support in the building area	Generalization of the studied material

Словарь перед каждым текстом способствует его пониманию студентами с разным уровнем языковой подготовки. Упражнения достаточно разнообразны: содержатся языковые упражнения, направленные на закрепление полученных знаний и формирование речевых умений, а также условно-речевые упражнения, преимущественно творческого характера, цель которых – сформировать положительную мотивацию к изучению данной темы и предмета в целом, а также обеспечить формирование навыков устной и письменной коммуникации по специальности на иностранном языке.

Упражнения делятся на лексические, грамматические и текстовые, каждая группа упражнений выделена отдельно, упражнения следуют друг за другом в указанном порядке. Лексические упражнения: анализ интернациональной лексики, поиск синонимов, антонимов к заданным словам; поиск лишнего слова в цепочке; кроссворды (отгадывание слов по их объяснению) направлены на активизацию необходимой лексики и способствуют развитию не только памяти, но и мышления студентов, так как они предполагают активное подключение предыдущего опыта и мыслительную работу. Грамматические упражнения: раскрытие скобок, подстановочные таблицы, выбор правильного варианта из нескольких предложенных, перевод предложений с русского языка на английский – способствуют активному развитию грамматических умений. Текстовые упражнения представляют собой ответы на вопросы по тексту, заполнение таблиц, определение ложных/истинных предложений, выстраивание информации в хронологической цепочке, составление своего текста на основе прочитанного. Следует отметить, что все упражнения созданы с опорой на прочитанный текст, поэтому при наличии каких-либо затруднений студенты могут вернуться к тексту и найти необходимую информацию. Такой подход к составлению упражнений также делает возможной самостоятельную работу студентов в случае их вынужденного пропуска аудиторного занятия.

Задания, разработанные автором, должны способствовать развитию у студентов системы умений, являющихся основой их профессионально-иноязычной коммуникативной компетенции.

Автор выражает надежду на то, что представленное учебное пособие будет интересным как для преподавателей, планирующих свою педагогическую деятельность со студентами, изучающими информационные технологии, так и для студентов начальных курсов, для которых встреча со специальными дисциплинами по направлению подготовки ещё предстоит на последующих курсах.

Автор желает продуктивной работы всем участникам педагогического процесса, связанного с изучением иностранного языка, и будет признателен за высказанные замечания, пожелания и предложения, которые можно высылать на электронный адрес: soluyanova.olga@mail.ru.

Text 1

Vocabulary

Area область
Generalist универсал
To follow следовать
To design проектировать
To test проверять, тестировать
To solve решать (задачу)
Modern современный
Tool инструмент
To change менять
To enrich обогащать
To write (wrote, written) писать
To publish издавать, опубликовывать
Calculations вычисления
Unfortunately к сожалению
To run (ran, run) работать, выполнять
Success успех; successful успешный; successfully успешно; to succeed преуспеть
Science наука; scientist учёный
Team команда
To consist (of) состоять (из)
International международный
To celebrate праздновать
Annual ежегодный; annually ежегодно
To know (knew, known) знать
Leap year високосный год

The profession of a programmer

A programmer, or a computer programmer, is a person who writes programs to work on a computer. Computer programs are detailed instructions that computers must follow to do their functions. A programmer can be a specialist in one area of computer programming or a generalist who writes codes for many kinds of programs. Programmers also make, design, and test logical structures for solving problems by a computer. Many technical innovations in programming modern

computing technologies and new languages and programming tools have changed the role of a programmer and enriched much of the programming work today.

British mathematician Ada Lovelace (who was the famous British poet Lord Byron's daughter) was the first to write a program for a computing machine. The machine was Charles Babbage's Analytical Engine, and Ada wrote and published an algorithm to make the calculations of Bernoulli numbers in October 1842. Unfortunately, her work never ran because Babbage's machine was never finished in her time.

The first person to successfully run a program on a computer was a computer scientist Konrad Zuse, who succeeded in it in 1941.

The American ENIAC (*Electronic Numerical Integrator and Computer)* programming team, consisting of Kay McNulty, Betty Jennings, Betty Snyder, Marlyn Wescoff, Fran Bilas and Ruth Lichterman were the first regularly working programmers.

International Programmers' Day is celebrated annually on the 7th of January.

In Russia starting from the year of 2009 a professional annual holiday known as Programmers' Day is celebrated on the 13th of September (the 12th of September in leap years).

[1; 7]

Lexical tasks

Ex. 1. Guess the meaning of the following international words:

program, programmer, detail, instruction, function, specialist, code, design, structure, problem, innovation, technology, mathematician, poet, machine, algorithm;

logical, technical, international;

to design, to publish, to start.

Ex. 2. Give synonyms to the following words:

modern, to design, to test, to finish, success.

Ex. 3. Give antonyms to the following words:

unfortunately, to change, to enrich, international, to start.

Ex. 4. Explain the meaning of the following words. Make up your sentences with them:

generalist, annual, leap year, tool, innovation, team, to succeed, instructions.

Grammar tasks (the Noun, the Pronoun)

Ex. 1. Make the following nouns plural. Make up your sentences with them:

success, tool, tooth, businessman, time, person, technology, holiday, child, information, photo, half.

Ex. 2. Change the nouns according to the example: The toy which belongs to my brother my brother's toy

1. The machine which was made by Charles Babbage.
2. The daughter of famous George Gordon and Anna Isabella.
3. The work of a programmer is connected with writing computer programs.
4. The name of the talented girl became very popular among programmers.
5. The day which is celebrated by programmers on the 7th of January.
6. The algorithm written by Ada Lovelace.
7. There were several calculating machines which were very similar to the modern computer created almost in the same time by the German Konrad Zuse and the American Clifford Berry.
8. A lot of innovations made by talented programmers are widely used all over the world.

Ex. 3. Complete the sentences using an appropriate pronoun:

1. The ENIAC programming team is well-known in America, but only few people in Russia know about ...
2. Though Ada Lovelace wrote the program for the machine which was never built, the honour of being the first programmer belongs to ...
3. We should ask any programmer for help, we can't solve this problem ...
4. Don't touch anything on my table, please, all things on it are ...

5. Charles Babbage and Conrad Zuse were pioneers in creating calculating machines, computing started to develop thanks to ...

6. The hardware of this computer is not all right, we need to check ...

7. All teachers like when students do their tasks without anybody's help, but ...

8. My friend is the best programmer in our company, and I am proud of ...

Ex. 4. Translate the following sentences:

1. Работа программиста сложная, но интересная, она подходит для нас.

2. Мы выбрали её из многих других профессий и надеемся стать хорошими специалистами.

3. Хотя некоторые люди думают, что в сфере компьютеров уже больше нечего открывать, мы знаем, что наши открытия ещё впереди.

4. Записи и чертежи Чарльза Баббиджа вдохновили учёных из Британского музея науки на создание машины, придуманной им.

5. Мировое научное сообщество признаёт достижения Ады Лавлейс и считает её первым программистом.

6. Уже в XVII веке были первые попытки создания электронных машин; это, например, счётные машины Лейбница и Паскаля.

7. Считается, что коллегой Конрада Цусе, помогавшим ему с созданием Зед-1 был Гельмут Шрейер.

Text tasks

Ex. 1. Answer the following questions using the information from the text and your own experience:

1. Who is a programmer?

2. Who was the first programmer in the history of computing? Prove your opinion.

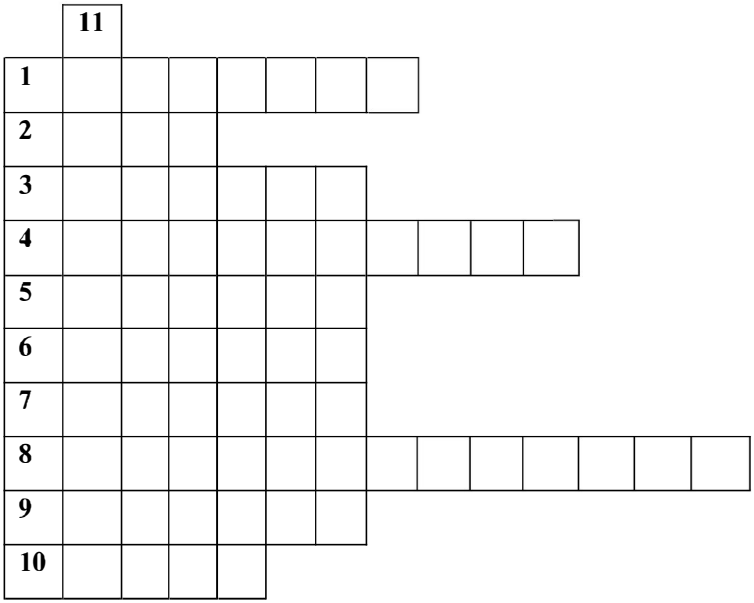
3. When is International Programmers' Day celebrated?

4. Why is Programmers' Day in Russia celebrated on the other date?

5. Why have you chosen the profession of a programmer?

Ex. 2. Guess the crossword and write a short composition about your future profession:

1. To make a printed book with your works.
2. To work, to organize.
3. Thing.
4. Universal worker.
5. Final point of any work.
6. Something that happens every year.
7. New, up-to-date.
8. Person who does maths as work.
9. To make somebody wealthier.
10. To get information from a book.
11. Your future profession.



Text 2

Vocabulary

Improvement усовершенствование
To facilitate облегчать
Human человек
Labour труд
To perform выполнять, осуществлять
To be connected with быть связанным с
To gather собирать
Data (лат.) мн. ч. данные (ед. ч. datum)
To create создавать
Different различный, разный
Device приспособление, устройство, прибор
According to в соответствии с
Purpose цель
To mean (meant, meant) значить, означать
To demand требовать
To carry out выполнять, осуществлять
Measure мера; to measure измерять; measurement измерение
Supervision руководство, контроль
To describe описывать
Research исследование; to research исследовать
To prepare приготовлять; preparation приготовление
To present представлять
Review обзор
Report доклад
To consider считать, полагать, рассматривать
To include включать (в себя)
Experience опыт
To use использовать
To suppose предполагать
Possible возможный; possibility возможность
Level уровень
To explain объяснять
Particular особенный; particularity особенность
Equipment оборудование

To install устанавливать
Staff штат, кадры
To deal with иметь дело с
Adjustment корректировка
Condition условие
Repair починка; to repair чинить

The profession of a programmer in the building area

A programmer in the building area works on the problem of improvement of construction process on all its stages with the help of special computer programs facilitating humans' labour. The specialist performs several main functions: technological, scientific, research, pedagogical, operational.

The technological function is connected with the design activity: gathering and the analysis of data for designing, creating different kinds of programs (systems, devices, details, databases, etc.) according to the technical purposes in any construction situation.

Performing scientific function means mathematical modeling of demanded programs, carrying out experiments, measurements and supervision; describing all researches; and preparing data for presenting reviews, reports and scientific publications.

Research function considers scientific study of all modern technical information, including native and foreign experience connected with computing in the building area and using this experience in the real construction process.

Pedagogical function supposes the possibility of a specialist to give his knowledge to the workers of lower professional level, to explain all the particularities of electronic equipment and programs installed into it, to train the staff to use all of the devices for solving a number of constructional problems.

Operational function deals with installation of programs and program systems, checking and adjustment of technical conditions of the computing equipment, the organization of routine inspections and operating repair, the preparation of the technical documentation on repair.

As a result, the profession of a programmer in the building area is very interesting and useful especially in the modern stage of the development of science and technics.

[1; 3]

Lexical tasks

Ex. 1. Guess the meaning of the following international words:

engineer, construction, process, analysis, system, situation, model, experiment, publication, information, organization, inspection, documentation, result;

special, technological, pedagogical, operational, active, mathematical, professional, electronic, modern;

to train.

Ex. 2. Give synonyms to the following words:

to perform, human, device, report, to demand, labour, data.

Ex. 3. Give antonyms to the following words:

to create, improvement, different, particular, possible, useful, to gather.

Ex. 4. Explain the meaning of the following words. Make up your sentences with them:

staff, supervision, experience, to explain, to repair, to facilitate, purpose.

Grammar tasks (the Numeral)

Ex. 1. Write down all the necessary words and letters and read the key-word:

1. The first letter from the word «цель».
2. The second letter from the word «создавать».
3. The fourth letter from the word «труд».
4. The first letter from the word «собирать».
5. The first and the fifth letters from the word «доклад».
6. The first and the last letters from the word «область».
7. The third letter from the word «требовать».
8. The sixth letter from the word «оборудование».
9. The second and the fourth letters from the word «уровень».
10. The first and the last letters from the word «чинить».

Make up your own story using these words.

Ex. 2. Make the following numerals ordinal:

1. ... (1) function of a specialist in programming in the building area is technological one.
2. My result was ... (2) in our group.
3. I'm interested what life will be in ... (23) centu .
4. My friend's birthday is on ... (15) of October.
5. I reached ... (3) level in this game.

Ex. 3. Translate the following sentences:

1. Международный День Программиста 7 января, но в России он празднуется 13 сентября.
2. Мы студенты первого курса.
3. Всего у инженера-программиста 5 основных функций; я считаю, что самая важная вторая, научная функция, так как хороший программист это, прежде всего, учёный.
4. Нам повезло жить и в XX, и в XXI веках; очень интересно узнать, какова будет жизнь в следующие века.
5. Мы заканчиваем второй урок; в следующий раз начнём изучать третий.

Text tasks

Ex. 1. Agree or disagree with the following statesments. Correct the wrong ones:

1. The main idea of using computers in the building area is facilitating human's labour.
2. There are three main functions of a programmer in the building area.
3. A specialist working on writing computer programs shouldn't be also a tutor teaching the staff.
4. It is very important for a programmer in the building area to study the world experience connected with computing in the building area.
5. A programmer in the building area shouldn't repair any devices himself, but he should call for a technician.
6. The profession of a programmer in the building area is rather boring, as it is only sitting in front of the monitor without communicating with people.

Ex. 2. Which function of an a programmer in the building area do you consider to be the most important? Prove your opinion.

Text 3

Vocabulary

Suddenly внезапно
To travel путешествовать
Easy легко
To communicate общаться
Quickly быстро
Job работа
Half половина
To see (saw, seen) видеть
To acquire приобретать, получать
Use польза; to use использовать
Value ценность
Exchange обмен; to change менять
Price цена
Difficult трудный
To understand (understood, understood) понимать
To appear появляться
Probably вероятно
To realize осознавать
Ordinary обычный
To build строить
Enormous огромный
Magazine журнал
Prediction предсказание
To weigh весить
To think (thought, thought) думать

The technological progress

In the nineteenth century, machines changed the world. Suddenly, people could travel more easily and communicate more quickly. Work changed, too, and many people got jobs in factories. It was the start of the Industrial Age.

The second half of the twentieth century saw the start of the Computer Age. The term information revolution describes current economic, social and technological trends beyond the Industrial Revolution.

The main feature of the information revolution is the growing economic, social and technological role of information. Information is a factor of production (along with capital, labor, land (economics)), as well as a product sold in the market, that is, a commodity. So, it acquires use value and exchange value, and therefore a price.

At first, computers were very difficult to use, and only a few people understood them. But soon, computers began to appear in offices and then homes. Today, they are everywhere. Some people still say that they have never used a computer, but they probably use computers every day they just do not realize it. This is because there are computers in so many ordinary things: cars, televisions, CD-players, washing machines.

When the first computers were built in the 1940s and 1950s, they were enormous. In fact, they were as big as a room. In 1949, the magazine *Popular Mechanics* made a prediction: "One day, they said, computers will be really small; in fact, they will weigh less than 1,5 tonnes". Now, computer chips can be as small as this letter "O". Over the past fifty or sixty years, computers have changed much more than people thought possible.

[1; 2, c. 4]

Lexical tasks

Ex. 1. Guess the meaning of the following international words:

term, trend, role, factor, market, office, television, fact, mechanics, ton, chip;

industrial, economic, social, ordinary, popular;

to communicate.

Ex. 2. Give synonyms to the following words:

to understand, job, to communicate, to acquire, to build, probably.

Ex. 3. Give antonyms to the following words:

easy, ordinary, enormous, quickly, half, to appear.

Ex. 4. Explain the meaning of the following words. Make up your sentences with them:

to change, to travel, to use, to understand, price, start, exchange, office, prediction, to weigh.

Grammar tasks (the Adjective, the Adverb)

Ex. 1. Put the verb "to be" in the right form.

1. There ... no computers before the middle of the 20th century.
2. I ... a good specialist in programming after I finish my study.
3. The first personal computer ... made by IBM.
4. The computers we use now ... convenient and fast.
5. Many people believe that new technologies ... created soon.

Ex. 2. Put the following adjectives into the necessary degree of comparison:

famous		
	happier	
		the most important
cheap		
	more powerful	
		the nicest
many/much		
	easier	
		the best
bad		

Ex. 3. Use the words in the brackets in the appropriate form:

1. With the speedy development of machines people could live (easy) and (quickly).
2. (Many) people than ever before began to work in factories.
3. The first computers were as (big) as a room, now computer chips are (small) than this letter "O".
4. At first, there were (few) computers than people who wanted to work on them.
5. The (difficult) problem has always been to predict anything about computers.
6. His idea was the (bad) I have ever heard.

Ex. 4. Choose *many, much, little, a little, few, a few* and insert them instead of the gaps.

1. We can find ... information on the Internet.
2. I have ... memory on my flesh card, I need another one.
3. I know ... about the history of computers. I want to know more.
4. She bought ... books on programming.
5. We have got ... computers in our computer class, we need more.

Ex. 5. Translate the following sentences:

1. Я думаю, что люди XX века были более счастливыми, чем мы, у них было так много инноваций.

2. Большинству пожилых людей действительно легче жить без различных технических устройств, и они используют только очень маленькое количество самых необходимых из них.

3. Компьютер самое лучшее и самое важное из большого количества изобретений человечества.

4. В этой лаборатории меньше места, чем в соседней; та и больше, и удобнее.

5. Я лучший студент нашей группы, у меня меньше всех пропусков и больше всех отличных оценок.

Text tasks

Ex. 1. Say whether the following statements are true or false and correct the false ones:

1. Though the first attempts to create electronic machines were done in the seventeenth century, machines came widely in use only two centuries later.

2. In the Industrial Age not many people were needed in factories, as machines performed all the work.

3. The beginning of Computer Age was in the beginning of the twentieth century, when first computers started to appear.

4. Nowadays computers are everywhere, in all our everyday equipment, though rather often we can't see them.

5. First computers of the middle twentieth century were very small, because scientists couldn't create big machines at those times.

6. The prediction of the magazine *Popular Mechanics* was completely correct.

7. Computers has stopped their development, programmers have already invented everything that was possible and necessary.

Ex. 2. Find in the text and give your own ideas to fill in the table:

The Industrial Age	The Computer Age

Ex. 3. Think of any innovation which can improve and facilitate our life. Describe it.

Text 4

Vocabulary

To need нуждаться
To count считать
To buy (bought, bought) покупать
To sell (sold, sold) продавать
To die умирать
To get married жениться (выходить замуж)
To invent изобретать
Place место (зд.: разряд)
Value ценность (зд.: значение)
To decide решать
Size размер
Digit знак, цифра, разряд
Position расположение
Without без
Wood лес, дерево, древесина
Step Reckoner досл.: пошаговый счётчик, калькулятор Лейбница
Chip чип, микросхема

In the beginning

For thousands of years, humans have needed to count. Families needed to know how many animals, how much food and how much land they had. This information was important when people wanted to buy and sell things, and also when people died or got married. There were many different ways to count and write down the numbers. The Sumerians had three different ways: they used one for land, one for fruit and vegetables and one for animals. They could count, but they had no easy way to do calculations.

Around 1900 to 1800 BC, the Babylonians invented a new way to count which used place values. This meant that two things decided the size of a number: the digits and their position. Today, we still use place values to count. We can write any number using only ten digits (0 9): for example, the number 134 means 1×100, 3×10, and 4×1. Computers also use place values when they do calculations. They only use two