

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ АВТОНОМНОЕ
ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ ВЫСШЕГО
ОБРАЗОВАНИЯ
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МЕТОДИЧЕСКИЕ УКАЗАНИЯ

по выполнению практических работ по дисциплине

«Иностранный язык в сфере профессиональной
коммуникации»

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|-------------------------|---|
| Направление подготовки | 18.03.02 Энерго- и ресурсосберегающие процессы в химической технологии, нефтехимии и биотехнологии |
| Квалификация выпускника | Бакалавр |
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Целью обучения студентов иностранному языку в сфере профессиональной коммуникации в высшем учебном заведении является повышение исходного уровня владения иностранным языком, достигнутого на предыдущей ступени образования, а также состоит в формировании у обучаемых способности осуществлять активную межкультурную коммуникацию в рамках своей профессиональной и научной деятельности.

Целью освоения учебной дисциплины «Иностранный язык в сфере профессиональной коммуникации» является формирование компетенций УК-4.

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

Методические указания и задания составлены в соответствии с требованиями ФГОС ВО по иностранному языку для технических вузов и предназначены для студентов по направлению подготовки 18.03.02.

Методические указания содержат задания для практической работы студентов. Задания можно использовать при проведении устного и письменного промежуточного или итогового контроля знаний студентов. Тексты и упражнения предназначены для повторения и обобщения пройденных грамматических тем и лексического материала, а также для контроля различных видов речевой деятельности.

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UNIT 1**Цели:**

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Identify the passive structures and the logical predicates, translate the sentences into Russian as shown in the following example.

Example: More evidence was obtained to support the idea.

"Evidence was obtained" is the passive structure, "more evidence ...to support the idea" is the logical predicate.
 Были получены новые данные в поддержку этой идеи.

The problem was first recognized in the XIX century. Later an idea was suggested to apply it to practical things. Many possibilities for practical applications were analysed. Some of these were tested by experiment. The experimental results were not generally accepted, and the idea was discarded. Then other consequences were deduced and a new model proposed. Recently the model has been modified and is now being used in many practical situations.

Вопросы и задания

2. Use impersonal passive structures as shown in the following example.

Example: We (the author, they, etc.) have found that... It has been found that...

1.I must admit that... 2.He has found that... 3.Everybody accepts that.....I believe that... 5.The author hopes that... 6.Scientists sometimes say that.....7.Most people assume that... 8.Physicists recognize now a days that...

3. Give English equivalents of the following Russian phrases, using impersonal passive structures and adverbs widely, generally where required.

1.Говорят, что... 2.Предполагается, что... 3.Можно надеяться, что...
 4.Следует признать, что... 5.Было найдено, что... 6. Общеизвестно, что...
 7.Считают, что... 8.Широкораспространено мнение, что...

4. Read the article using the dictionary and render it.

Eating Right And Proper Exercise Are Key For Healthy Living

Today way of life diseases are on the rise and this has necessitated the need for healthful residing. Living a wholesome life may help stop some disorders like coronary heart associated health conditions, cancer, diabetes, and hypertension. Healthy residing should be the inclusion of each mental and physical healthful. This is certainly so simply because both equally are correlated and just one are

unable to reach a healthy residing with no considered one of them. There are a selection of matter that will be accomplished to achieve a healthful dwelling.

Ingesting a balanced diet is one way to attain a wholesome living. It is vital to note that diverse age teams have distinctive diet requirement. For instance the diet for infants might be distinctive from that of youngsters and grownups. Every age group must be provided using the proper diet program to ensure correct growth and performing from the system. It is additionally essential that good portions of foods be eaten to avoid ingesting excessively. Excessive consuming can lead to bodyweight obtain that may trigger overall health troubles.

When selecting food items for meals, a single need to incorporate additional entire grains, more vegetable and fruits. Total grains, greens and fruits are wealthy in fiber and that is significant permanently metabolic rate. It is suggested that one particular eats no less than 5 servings of fruits and veggies a day to enhance healthful dwelling. Vegetables and fruits don't have fats or cholesterol by having an exclusion of coconut and avocado. Fruit and veggies need to be eaten when refreshing to ensure most usage in the vitamins. Meals using a number of sugar really should be averted.

One more great way to achieve a healthier dwelling is by drinking ample drinking water day-to-day. Water is very important for all sections in the human body starting up with the pores and skin, kidney and all other overall body organs. Consuming not less than 8 eyeglasses of water everyday may help a person realize healthy residing and minimize probabilities of getting wellbeing complications such as kidney stones, dried skin and swollen feet between several other troubles. H₂O also can help in metabolic process approach and eliminates poisons from your entire body.

Training routinely encourages the wellness of somebody drastically. Exercises boost metabolic rate, burning of surplus energy while in the human body in addition to promote more robust bones. Physical exercises minimize threat of 1 getting heart assault since it participate in a task in cutting down the level of

cholesterol. By exercise routines, the muscle groups of your coronary heart are strengthened; this improves the operation of the heart and great blood circulation.

Physical exercises may help 1 attain self-esteem since they empower a single lose weight and obtain desirable body dimension. The mind also rewards a lot from work outs since it allows the brain to acquire large focus. Depression is often diminished by accomplishing training for the reason that whenever we do workouts, some hormones are manufactured to produce us feel good. This hormone known as endorphins.

Last but not the very least, one must rest as piece of the healthful living plan. Devoid of good enough relaxation a person might be in danger to obtain health challenges. A relaxation of seven to eight hrs on a daily basis is required for the very good balanced. This allows the body to restore electricity for use over the upcoming day. Adequate relaxation also boosts the immune system in the system for this reason can battle diseases effortlessly. It promotes one's concentration, considering and memorizing things.

UNIT 2

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;

- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Identify the predicate and give Russian equivalent as shown in the following example.

Example: Later on scientists accepted the hypothesis rejected previously for want of experimental evidence. "Accepted" is the predicate; scientists accepted – ученые приняли; the hypothesis rejected –отвергнутая гипотеза.

1. The method applied increased the accuracy of the results. 2. After a heated discussion the laboratory applied the method improved by Dr. N. 3.The scientist theoretically predicted complicated interaction between the components involved in the process. 4. At that time the problem presented increased danger of radioactive contamination and encountered opposition at most laboratories concerned. 5. The hypothesis concerned synthesized materials and did not apply to natural products. 6. Heat resistant materials developed in the last decade produced a revolution in a number of industries. Automatized information processing radically modified the method devised. 7. The crystal produced revealed cracked faces.

Вопросы и задания

2. Give Russian equivalents of the sentence.

A. 1. The conference attended by scientists from different countries discussed new trends and methods in this field of research. 2. One of the rights enjoyed by University scientists is that of combining research with teaching. 3. The discovery followed by further experimental work stimulated research in this area.

B. 1. The heads of the laboratories were asked questions formulated and agreed upon by a group of sociologists. 2. The scientist's eloquence substituted for logical argumentation in defending an "extreme" viewpoint failed to win the audience over. 3. The mixture allowed to stay overnight gradually decomposed. 4. The subjects dealt with under this topic aroused a heated discussion.

3. Give English equivalents of the sentences, using passive structures and the verbs: to affect, to allow, to attend, to develop, to deal with, to face, to follow, to make use of, to refer to.

1. За докладом последовала бурная дискуссия. 2. На скорость реакции влияет множество других факторов. 3. Этот вопрос будет подробно рассмотрен в главе III. 4. На этой стадии мы столкнулись с новыми трудностями. 5. Ему не дали возможности закончить эту работу. 6. В последнее время эта теория часто упоминается во многих статьях. 7. Семинар, на котором присутствовало всего 5 человек, прошел вяло и неинтересно. 8. Для того чтобы преодолеть эти недостатки, использовали новую методику, специально разработанную для данного эксперимента.

4. Translate from Russian into English.

1. Проблема была впервые поставлена (осознана) в XVIII веке. 2. Предполагается, что полученные расчетные данные были проверены экспериментально. 3. Теория была принята большинством ученых после того, как были получены новые доказательства в ее поддержку. 4. (В статье) представлены новые данные относительно механизма этого процесса. 5. Это расхождение можно объяснить разными методиками измерения. 6. (В работе)

использован новый метод расчета этого параметра и предложена новая модель процесса. 7. Особое внимание уделено сравнению экспериментально полученных результатов с результатами, предсказанными теоретически.

5. Read the article using the dictionary and render it.

Here Are Some Top Healthy Living Tips

Balanced dwelling ideas are critical for all persons as a way to assure a vigorous nation. People today need to have a superb knowledge of these tips as a way to ensure that turn out to be sturdy. Certainly one of the following tips is drinking some h₂o each individual day during the early morning. Plenty of oxygen is made use of through the morning during the rejuvenation of body cells. These cells have to be supplied with h₂o and oxygen each and every early morning. Drinking water each and every day during the morning lowers the feeling of tiredness. Although many individuals don't like the style of water, squeezing some fresh lime into your glass of drinking water may also help to present it an even better flavor. In this particular link, water is crucial for the vigorous expansion of your overall body.

Intake of refreshing fruits is yet another healthful living hint. Unique fruits supply your body with unique nutrients. This means that it can be superior to just take differing types of fruits each individual time so that you can get each of the demanded vitamins and minerals. What's more, fruits could also be handy for individuals even though you can find no lunch. In these cases, a few fruits can assist to be certain robust well being. Furthermore, fruits supply your body with the sugars which can be needed for robust health and fitness. During this connection, fruit usage is vital for robust wellness.

One more suggestion that helps in living a wholesome lifestyle is minimizing the use of junk foodstuff. Food items this sort of as burgers and French fries may well have an impact on the good well being from the body simply because they grow system fat. A nice salad can help to boost strong body wellness.

Furthermore, any other wholesome food items that matches person meal selection may help to enhance human body strength. It can be good to reduce junk foods since they feed the body with pointless calories which can have effects on human wellness by rising human body extra fat. In this connection, it truly is valuable to restrict the consumption of junk food as a way to assure powerful wellness.

Training is an additional idea for healthful living. It's much more proper to exercise within the morning as a way to lose the unwanted vitality. Other workouts this kind of as walking and jogging up and down the stairs at unique periods will help to increase human body health and fitness. This is because, workout routines make the muscle mass to move and allow the blood to flow to all the areas on the body. Moreover, consuming natural tea can aid to extend entire body well being. This means that consuming natural tea allows to guarantee solid overall body health and fitness.

Another suggestion that aids persons to enhance body power is the use of contemporary juices. New juices are much better than the packaged ones since the refreshing juices have an abundance of fresh new vitamins. The intake of contemporary juice will increase entire body electricity, healthy and enhancement. It really is fantastic to receive a while to squeeze juice from fruits this sort of as ginger and apples in order to assure that the juice consumed in anyway situations is fresh new. Deep breathing can assistance to reinforce powerful health and fitness. This allows during the exchange of carbon dioxide and oxygen in an effort to improve human body energy. On this link, the following tips are vital to all people as they boost balanced living.

UNIT 3

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).

2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Give Russian equivalents of the relevant part of the sentence (v ing forms) as shown in the following example.

Example: Noticing relationships in this observations, the scientist attempts to classify and explain them.

Noticing... the scientists attempts... Заметив... ученый пытается....

Noticing relationship in his observations is very important for every scientist.

Noticing... is important... Замечать... важно...

1. Establishing relationship between the phenomena of the Universe is a major task of theory. 2. Realizing the necessity for a different approach the physicists reluctantly abandoned the project. 3. Confining his attention to one problem the scientist will surely achieve its solution much sooner. 4. Putting the discovery to use sometimes requires more effort than making it. 5. Pointing out their mistakes to some people is often quite difficult.

Вопросы и задания

2. Give Russian equivalents of the relevant part of the sentence.

1. If you never thought of asking a question you are not interested in having the answer. 2. If you want to succeed in interesting the audience you should not try surprising them with an isolated fact. 3. By having defined one's research objective one has already made the first, and the most important, step towards the final success. 4. Modern chemistry is primarily concerned with building structural bonds between the elements of matter. 5. Many useless experiments were prevented from being made by an adequate theory. 6. A true scientist is interested in being told about his mistakes. 7. Research is searching without knowing what you are going to find. 8. Any single card should contain notes from only one source. This will aid in arranging and organizing the materials for your research paper. 9. We do not know how to solve the problem of interesting schoolchildren in science. 10. His research resulted in establishing a new mechanism of the process. 11. The accuracy of the instrument while being inferior to that of others is satisfactory for many industrial applications.

3. Read the article using the dictionary and render it.

Bumblebee project may help reverse UK decline

A bumblebee species that had become extinct in Britain will get a second chance on Monday when a new generation of queens is released in the south-east of England.

In rare piece of good news for the blighted insects, which have suffered a 32 per cent decline across all UK species, experts spent two weeks collecting short-haired bumblebees from farmland in southern Sweden, where numbers are rising. Today they will be reintroduced to an RSPB reserve at Dungeness in Kent.

The project began last year with a pilot re-introduction following four years of work with farmers to create the ideal wildflower habitat across Romney Marsh and Dungeness.

Conservationists hope all of the UK's bumblebees may soon benefit from similar projects. Of the 25 native species, seven are declining and two are extinct.

The last reported sighting of the short-haired bumblebee was in 1988. Britain has also lost 97 per cent of its wild flower meadows over the past 70 years due to increasing urbanisation and agricultural intensification.

UNIT 4

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

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Теоретическая часть

1. A. Identify the structures and give Russian equivalents of the relevant part of the sentence(v ing forms).

1. It is correct to say that basic research is directed toward understanding the foundations of nature without taking into account their practical applicability. 2. Finding an adequate solution to this most urgent technological problem will surely require making more effort. 3. Today we cannot help witnessing a tendency in science to direct the collective efforts of a research team at the achievement of a common goal. 4. Let's proceed by dividing research into three stages and examining each stage to find what functions of the research process may be automated without endangering creativity. 5. Such a configuration, in addition to being amenable to analytical treatment, has significant practical importance. 6. Being interested in the subject which you are studying is the best motivation for learning it. 7. Fundamental research is that which you undertake without caring whether the results will be of practical value or not. 8. The scientist and public must equally share the responsibility for finding a desirable solution to many modern technological and social problems. 9. In determining the mechanism of genetic information transmission biochemists have observed that "the language of life" is really a simple and elegant code. 10. Taking into account individual components resulted in a radical change of the entire system. 11. One of the ways to solve the problem of feeding the ever-growing world population is by turning

fishing from a hunting to a farming operation. 12. Several review committees were formed, including a special environmental group. 13. Increasing the amount of available technical information scientists also contribute to transformation of some well-rooted beliefs.

B. Give English equivalents of the sentences, using the verbs given below.

1. Руководитель работы всегда настаивал на проверке полученных результатов. 2. Такая проверка имела целью исключить случайные ошибки и помогла получить надежные данные. 3. Присутствие примеси в образцах помешало получить воспроизводимые результаты. 4. Каждое новое открытие приводит к возникновению новых областей исследования. 5. Коренные изменения в такой традиционно экспериментальной науке, как химия, явились результатом применения в ней квантовой теории. 6. Через несколько лет ученому удалось получить экспериментальные результаты, подтверждающие эту теорию. 7. Ученые многих стран занимаются изучением этого явления и должны в равной мере нести ответственность за применение его возможных результатов на практике.

to aid in; to aim at; to be concerned with; to share the responsibility for; to insist on; to prevent from; to result from; to result in; to succeed in.

Вопросы и задания

2. Read the text and be ready for a comprehension check up.

THE EXPERIMENT MUST MAKE A DIFFERENCE

When we do an experiment, we do it because we don't know what the result will be. If we knew in advance we wouldn't bother. There must be two, or several, or a large number of possibilities. We may expect one of several outcomes, or we may not know at all what to expect.

In order for the experiment, whatever its purpose, to be considered a test of some theory, the outcome must make a difference. If the experiment has one result, we must be led to a greater degree of confidence in our theory, if it has another

result we must be led to a greater degree of doubt. If the degree of our belief was unaffected by the result the experiment cannot be said to have been a test, although it may have been valuable or interesting for other reasons.

3. Answer the questions on the text:

1. Find the hypothetical statement concerned with the result of an experiment 2. What are the statements made about the outcome of an experiment? What is necessary for the experiment to be considered a test of some theory? 4. What are possible results of an experiment?

UNIT 5

Цели:

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2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Compare the sentences and give Russian equivalents of the relevant part of the sentence(v ing forms).

1. a) Success in science often results from confining attention to one problem for many years; b) Success in science often results from the scientist's confining his attention to one problem for many years; c) Success in science often results from the scientist confining his attention to one problem for many years. 2. a) A brain-storming session consists in proposing as many ideas as possible; b) A brain-storming session consists in everybody's proposing as many ideas as possible; c) A brain-storming session consists in everybody proposing as many ideas as possible. 3. a) Criticizing ideas while inventing them is no good; b) Scientists' criticizing their ideas while inventing them is no good; c) Scientists criticizing their ideas while inventing them is no good.

Вопросы и задания

2. A. Identify the structures (single infinitive) and give Russian equivalents of the relevant part of the sentence.

1. To make a choice between these two alternatives is not an easy task. 2. To be on the safe side, take special care of the accuracy of the calculation. 3. To foresee what the future will be like requires analysis of the past experience. 4. To tell the truth, the results have no direct bearing on the problem under investigation. 5. To argue about it is not fruitful at the moment. 6. To establish cause-effect relationship between smoking and some diseases, extensive research is being carried on at several research centers. 7. To sum up, synthetic problems are studied for the possibilities which they hold for practical applications. 8. To put it another

way, the experimental procedure must suit the purpose of the experiment. 9. To be able to forecast the future, we must begin by a thorough analysis of the past course of events.

B. Give English equivalents of the sentences.

1. Для того чтобы соответствовать цели эксперимента, метод должен быть прост. 2. Установить причинно-следственные отношения часто означает решить проблему. 3. Предвидеть будущее невозможно без анализа прошлого. 4. Говоря по правде, все ожидали совершенно других результатов. 5. Сделать выбор часто бывает самым трудным. 6. Чтобы не рисковать, проверьте аппаратуру перед экспериментом еще раз.

3. Read the second fragment of the text (the first fragment is in Unit 4) and be ready for a comprehension checkup.

REFUTABILITY

For a theory to be part of science we must be able to imagine the possibility that some kind of evidence, if it were available, would lead us to make us doubt the theory. It has been said that for a theory to be scientific, it must be refutable.

Nobody needs to be told that theories should be confirmable, in the sense that new experiments must be able to increase our confidence in them - we all take it for granted. We do need to be reminded from time to time: that we might be wrong, and should be open to evidence that might show it. Confirmability and refutability are two sides of a single coin. New facts should be able to change our degree of belief one way or another. Only if this is so is our belief scientific.

There are often reasonable alternative explanations why a good theory will fail in some particular circumstances, and even when there aren't, if we think the theory is better than any alternative available we will stick with it and try to find special explanations of why it didn't work in these circumstances.

4. Answer the questions on the text:

1. What is the opposite of "refutable"? 2. What does it mean "to be confirmable?" 3. What is the opposite of "doubt"? 4. What is necessary to be

reminded? 5. What is the tendency with a theory? 6. What is the tendency in our attitude to theory?

UNIT 6

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Identify the structures and give Russian equivalents of the relevant part of the sentence.

1. The analysis has been extended (so as) to take into consideration the unavoidable by-effects. 2. Under this assumption the equation is reduced to yield a classical relation. 3. We do not expect to solve all these problems by the turn of the century. 4. At this stage a new theory was advanced, to produce a revolutionary change in our understanding of the process. 5. They claim to have accounted for the effect observed. 6. He admits to have made a similar mistake in his earlier publication. 7. He was sorry to have occupied himself with the problem for so long, and not to have given it up earlier. 8. They admit to have been informed of this possibility before the experiment. 9. Mark Twain allegedly remarked once that a classic is something which nobody wants to read but everybody wants to have read. 10. To write with precision, it is necessary to have thought logically first. 11. The aim was to discuss the impact of scientific activity on technology. 12. If we are to achieve the aim we must confine our attention to one point only. 13. Perhaps the greatest problem at present is to get some understanding of the remarkable phenomenon of memory. 14. The original idea was to take advantage of the high temperature of the process.

Вопросы и задания

2. Give English equivalents of the sentences.

1. Если мы хотим добиться цели, мы должны принять во внимание все источники ошибок. 2. Цель этой книги - дать обзор последних достижений в этой области исследования. 3. Наша задача заключается в том, чтобы обеспечить условия, наиболее благоприятные для работы. 4. Самое важное - это сосредоточить внимание на одном вопросе. 5. Нам предстоит подкрепить эту интерпретацию новыми экспериментальными данными. 6. Задача семинарских обсуждений заключается в том, чтобы предлагать новые эксперименты.

3. Translate into English.

1 Предположение было слишком неожиданным, чтобы его можно было принять без доказательств. 2. Идеи слишком опережают свое время, чтобы их можно было сразу же принять. 3. Аргументы представляются достаточно разумными, чтоб изменить ход обсуждения. 4 Данных было недостаточно,

чтобы внести ясность в эту проблему. 5. Это предложение не так важно, чтобы его рассматривать на сегодняшнем заседании. 6. Этот фактор слишком важен, чтобы не принять его во внимание. 7. Если мы хотим добиться цели, мы должны учесть также фактор времени. 8. Цель книги заключается в том, чтобы представить все доводы в пользу этих исследований. 9. Эта идея достаточно очевидна и сама собой напрашивается. 10. Извлекать уроки из прошлого опыта не так просто, как это может показаться. 11. Он был достаточно сильной личностью, чтобы преодолеть сопротивление своих коллег. 12. Чтобы по достоинству оценить значение этого эксперимента, необходимо сравнить его с остальными работами в этой области. 13. Избежать ошибок, как правило, очень трудно.

4. Read the text without consulting the dictionary, divide the text into three parts and suggest a title for each part. Translate the text into English.

Research: Fundamental and Applied

People are always talking about fundamental research, implying thereby the existence of a nameless opposite. A good definition of fundamental research will certainly be welcomed: let us see whether we can invent one. We have to begin, of course, by defining research. Unfortunately the concept of research contains a negative element. Research is searching without knowing what you are going to find: if you know what you are going to find you have already found it, and your activity is not research. Now, since the outcome of your research is unknown, how can you know whether it will be fundamental. We may say for instance that fundamental research is that which you undertake without caring whether the results will be of practical value or not may not be reasonable to go further and say that fundamental research is that which will be abandoned as soon as it shows a sign of leading to results of practical value. By saying this you may limit your own achievement. It will be better to say that fundamental research is that which may have no immediate practical value. There have been several viewpoints about theory. One is that theory discerns the underlying simplicity of the universe. The non-theorist sees a confused mass of phenomena; when he becomes a theorist they fuse into a simple and dignified structure. But some contemporary theories are so intricate that an increasing number of people prefer dealing with the confusion of the phenomena than with the confusion of theory. A different idea suggests that theory enables one to calculate the result of an experiment in a shorter time than it takes to perform the experiment. I do not think that the definition is very pleasing to the theorists, for some problems are obviously solved more quickly by experimenters than by theorists. Another viewpoint is that theory serves to suggest

new experiments. This is sound, but it makes the theorist the hand man of the experimenter, and he may not like this auxiliary role.

UNIT 7

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
- ответы на контрольные вопросы; аналитическая обработка текста (реферирование, анализ); подготовка сообщений к выступлению на семинаре;
- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Identify the structures (infinitive constructions) and give Russian equivalents of the relevant part of the sentence.

1. One can assume this to be self-evident. 2. One can expect the scope of research to expand steadily. 3. Most people believe the amount of effort in Nowadays we see many new areas of research come into being as a result of unexpected breakthroughs. 4. The present-day situation forces more and more countries to start contributing to this field of research. 5. An efficient laboratory head always knows how to get his people to do their work properly and on time. 6. If one is really interested in science, one does not like any problem, however difficult, to be left unsolved. 7. One of the major problems at present for a university is to have young people interested in long-range problems. 8. Assuming this to have direct bearing on the future of man, the author goes into a detailed analysis of the present status of science and scientists in advanced countries. 9. The author's major concern is to make the reader realize the full implications of genetic engineering. 10. He achieves his aim by having the reader follow his story of this new area of research from its early days up to now.

Вопросы и задания

2. Learn to distinguish between indefinite and perfect infinitives. Translate the sentences into Russian.

1. The history of the last 30 years shows him to have done very well. 2. We know him to have established a school of his own. 3. We know him to have objected to this style of research on previous occasions. 4. They considered all water on the surface of this planet to have been liberated by volcanic action.

3. Learn to distinguish between active and passive infinitives. Translate the sentences into Russian.

1. This allowed him to follow the rules. This allowed the rules to be followed. 2. This information enabled the scientist to make a forecast for the next few years. This information enabled forecasts for the next few years to be made. 3. This analysis permitted them to tackle the problem directly. This analysis permitted the problem to be tackled directly.

4. Learn to distinguish between three different structures shown in the following example. Translate the sentences into Russian.

Examples: a) Before he gave up the research he had represented our research group at international symposia. До того как он перестал заниматься этим исследованием, он представлял нашу исследовательскую группу на международных симпозиумах;

b) He had our research group represented at the last symposium. Он устроил так, что наша группа была представлена на последнем симпозиуме;

c) He had his assistant represent our research group at the last symposium. Он устроил так, что его помощник представлял нашу группу на последнем симпозиуме.

1. They have supported the project both with money and manpower. They got the project supported both with money and manpower. They got the committee to support the project both with money and manpower. 2. He has kept the discussion within reasonable limits. He had the chairman keep the discussion within reasonable limits. He had the discussion kept within reasonable limits. 3. They have left the problem out of the scope of their research. They had the problem left out of the scope of their research. They made him leave the problem out of the scope of his research. 4. He has extended the range of his observations. He had the range of observations extended. He got his assistant to extend the range of observation.

5. Translate the following into English.

1. Мне трудно об этом спорить 2. Им важно подкрепить теорию дополнительными экспериментальными данными. 3. Физикам важно поддерживать контакт с биологами. 4. Ребенку необходимо учиться на собственном опыте. 5. Нам часто трудно угадать, каким будет будущее. 6. Естественно, что на такой анализ затрачивается около года. 7. Необходима, чтобы реакция была ускорена. 8. Чтобы две молекулы вступили в реакцию, они должны столкнуться. 9. Это, по всей вероятности, окажет влияние на дальнейшие события. 10. Результаты оказались в хорошем соответствии с теорией. 11. Решение этой проблемы, как известно, зависит от многих факторов. 12. Ожидается, что работа будет закончена в этом месяце. 13. Известно, что он работает над этой проблемой. 14. Он, как известно, закончил работу над этой проблемой. 15. Считается, что он представляет мнение большинства ученых. 16. Говорят, что он внес определенный вклад в решение этой проблемы. 17. Им не так-то просто было следовать этому правилу. 18. Кажется, он полностью потерял интерес к этой проблеме. 19. Нам необходимо поддерживать контакт с этой лабораторией. 20. Им было

важно создать благоприятные условия для продолжения опытов. 21. Мне трудно угадать, каким будет результат.

6. Read the text and be ready for a comprehension check up.

SCIENTIFIC ATTITUDE

What is the nature of the scientific attitude, the altitude of the man or woman who studies and applies physics, biology, chemistry or any other science? What are their special methods of thinking and acting? What qualities do we usually expect them to possess?

To begin with, we expect a successful scientist to be full of curiosity - he wants to find out how and why the universe works. He usually directs his attention towards problems which have no satisfactory explanation, and his curiosity makes him look for the underlying relationships even if the data to be analysed are not apparently interrelated. He is a good observer, accurate, patient and objective. Furthermore, he is not only critical of the work of others, but also of his own, since he knows man to be the least reliable of scientific instruments.

And to conclude, he is to be highly imaginative since he often looks for data which are not only complex, but also incomplete.

7. Answer the questions on the text:

1. What qualities do we expect to find in a successful scientist? 2. Why do we say that a successful scientist is full of curiosity? 3. Why is it difficult to see the underlying relationships? 4. Why is he critical of his own work? 5. Why is it necessary for him to be highly imaginative? 6. Give a Russian equivalent of the title and of the data analysed and the data to be analysed.

UNIT 8

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).

2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освоения данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
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- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

Теоретическая часть

1. Grammar in proverbs. Translate these sentences into Russian and suggest Russian savings of similar meaning.

A.I. Friends may meet, but mountains never. 2. A fool may ask more questions than a wise man can answer. 3. Who seeks blows shall perish by blows. 4. He who would search for pearls must dive below. 5. What can't be cured must be endured. 6. What's done cannot be undone. 7. If we can't as we throw stones. 8. The beggar may sing before the thief. 9. None so deaf as those who wouldn't listen. 10. Bad seed must produce bad corn. 11. Accidents will happen. 12. It would make even a cat laugh. 13. The cat would eat fish but would not wet her feet. 14. They must hunger in winter that will not work in summer. 15. One must howl with the wolves. 16. He who keeps company with the wolf will learn to howl. 17. Everyone is a moon and has a dark side which he should not show to anybody. 18.

Unpleasant things shouldn't be put off. 19. You can't keep trouble from coming but you needn't give it a chair to sit on. 20. Life can be understood backwards, but it must be lived forewards.

Вопросы и задания

2. Read the following sayings and proverbs and suggest a modal verb you would use if you were to translate them into English.

1. Гении приходят и уходят, а дураки остаются. 2. Пора на дороге жизни установить указательный знак: "Правый поворот запрещен". 3. Человеку свойственно идеализировать прошлое. 4. На войне чего не бывает. 5. Всему есть предел. 6. Слухи распускаются в любое время года. 7. Под лежащий камень вода не течет. 8. Любовь облагораживает человека. 9. Только неглубокий человек познает самого себя. 10. Из песни слова не выкинешь. 11. Однообразие порождает скуку. 12. Кому быть на виселице, тот не утонет. 13. Рожденный ползать - летать не может. 14. Правда может бледнеть, никогда не может умереть. 15. Нам положено трудиться, но нам не дано завершить труды наши.

3. Read the text. Substitute the proper English modal verbs for the Russian words in brackets.

Those who wish to become students at the university (обязаны) take their entrance examinations. Recruitment of students to the university follows certain procedures which no one (разрешено) ignore. If a perspective student is ill and (не в состоянии) appear before the examination board he (надлежит) present a medical certificate to this effect, in which case the examination (приходится) be postponed. Another rule is that no student (не должен) be late for his examination. Also, students (не должны) argue with the examination board, although this is not a regular rule, but rather wise advice. However, whether they strictly observe the rules or not, there are always people who (могут) fail in their examinations and those who (обычно) succeed. This (всегда была и будет) be the situation at all times.

4. Read the text to yourself and be ready for a comprehension check up.

"WOULD YOU LIKE YOUR SON OR DAUGHTER TO BECOME

A

SCIENTIST? IF SO, IN WHAT FIELD?"

The questions were asked by the Literary Gazette and a British scientist was reported to answer as follows.

"I would not like my son or daughter to become a scientist of the kind typical in the world today. The development of science has already led to many undesirable consequences and is likely to lead to many more unless great effort is made to control the application of scientific discoveries. If, however, science could be developed in a new way to become a meaningful social activity, I would be glad to see my son or daughter doing science.

So far as the field is concerned, I think there will be a growing tendency for scientists to occupy themselves with problems which affect fairly directly the lives of people. There seems to exist a great need to develop science which deals specially with the problems of how the applications of science affect man. To cite but a few examples, there are such problems as urban development, education and, of course, the prevention of war. If the new knowledge about the world is used for the benefit of man, rather than for death and destruction, the human race can continue to benefit from science for centuries to come".

5. Answer the questions on the text:

1. What can you say about the form of the text and the title? 2. Is the answer to the 1st question "yes" or "no"? 3. What are the author's reasons for this answer? 4. Under what condition would the answer be different? 5. Does the author indicate any specific science in his answer to the 2nd question? 6. What problems are considered by the author to be worth studying? Why? 7. What is necessary for science to remain beneficial for people?

UNIT 9

Цели:

1. Овладеть практическими навыками построения простых повествовательных предложений, повелительных наклонений, притяжательных и указательных местоимений (находить их в тексте, уметь переводить на русский язык).
2. Развить навыки чтения, поиска информации в качестве ответов на вопросы об инженерных профессиях на английском языке.
3. Овладеть навыком краткого пересказа прочитанного материала.

Знания и умения, приобретаемые студентами в результате освое-

ния данной темы, формируемые компетенции:

- работа со словарями и справочниками; использование аудио- и видеозаписей; Интернета;
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- выполнение упражнений по образцу; решение вариантных упражнений.

Формируемые компетенции: УК-4.

Актуальность темы: в основных коммуникативных ситуациях неофициального и официального общения важно умение использовать наиболее употребительные лексико-грамматические средства при разговоре о профессии.

1. Translate these sentences into Russian, mind modal verbs and their message:

May / Might

1. A small error in experimental values may be increased considerably by calculations. 2. A small error in experimental values might be increased considerably by calculations. 3. You may check the values. 4. You might as well check the values. 5. "He might check the values." "But did he?" 6. I want to check up these values, if I may? 7. I want to check up these values, if I might. 8. This small error in the experimental values may be a result of calculations. 9. This small error in the experimental values might be a result of calculations. 10. This small error in the experimental values may have resulted from calculations. 11. This small error in the experimental errors might have resulted form calculations.

Can / Could

1. It is common knowledge that growth substances can greatly influence the

growth of microorganisms. 2. Saliva contains many growth substances and although their amount is small they could greatly influence the growth of microorganisms. 3. The old sculptors of our Gothic cathedrals could give form to the most fantastic fancy, and crowd with grotesque monsters a curious world of dreams. 4. You can manage without it somehow, can't you? 5. You could manage without it somehow, couldn't you? 6. He could manage without it, but did he? 7. This can be the obstacle we are to overcome. 8. This could be the obstacle we are to overcome. 9. This can have been the obstacle they were to overcome. 10. This could have been the obstacle they were to overcome.

Will / Would

1. A true scientist will enjoy his work more than anything else and would often be prepared to sacrifice his weekends and vacations in order to proceed with the research. 2. When working at his thesis he would spend his weekends in the library. 3. I will agree on no account. 4. High civilization has a survival value and will therefore be favored by cultural evolution. 5. A gradual loss of free will would imply that "wills" are Orwellian: "All are free but some are more free than others." 6. You will have noticed that the truth could easily be quite different. 7. I am sure he would not have been able to resist the temptation.

Must

1. You must have completed this course of exercises before you can appreciate its value. Only after you have completed it can you proceed to the next stage. 2. For any society to accomplish such tasks the conditions must have been especially favourable. 3. Family gossip made so many hours go lightly, so many hours that must otherwise have been heavy to those who lived there. 4. There must have been something serious behind the foolery or why would she have tried to hide it. 5. One must have had some cultural background to understand it.

Ought to

1. He looked in his heart for emotions. There ought to have been some but he found none. 2. He ought to have been very romantic but I can only think of that yellow kitchen soap he had smelled with. 3. He ought perhaps to have put a spoke in the wheel of such studies. 4. He ought, under the circumstances, to have gone to the dogs. Why had he not gone to the dogs?

Should

1. It is hard to believe that the ancient people should have known that it is possible to win energy from heavy metals and how to do it. 2. Chemists should always have been willing, nay eager, to utilize to the full any experimental method or tool which would give them greater and more precise insight into the operations which they were conducting. 3. The maximum was less sharp than it should have been. 4. I should have been satisfied with my idea: everyone else would have been. 5. I am sure that on my evidence I should have been right.

2. Read the article using the dictionary. Render the article.

One-third of Britons are too poor to ‘join in with society’

Just under a third of people in Britain are excluded from mainstream society because they cannot afford to join in cultural activities such as going to the cinema, taking a holiday or buying consumer goods.

Research for the Joseph Rowntree Foundation shows that the poorest 30 per cent are also prevented from “participating in society” because they have fewer social relationships and less trust in other people.

“Participating is about belonging. Many of society’s expectations require individuals and families to spend money,” the report, *Poverty, Participation and Choice*, says. “Like it or not, Britain is a consumer society in which people are assessed according to the income that they have, how they spend it and what they do with their time.”

Participation is defined by the report's authors as "social relationships, membership of organizations, trust in other people and purchase of services".

The research by academics at Oxford and Sheffield Universities extends the work done by the renowned sociologist Peter Townsend who famously said that "poverty is relative" – i.e., it prevents people from being full members of society.

The report found that participation in society falls as income falls, as might be expected. But participation bottoms out for the 30 per cent of households with the lowest incomes, for whom additional income then makes no difference. In other words, there is a cut-off point for being a full member of society.

Below this "participation floor" incomes may vary wildly. But extra money is spent on replacing worn-out goods or upgrading services, rather than buying extra things.

"Those [within the 30 per cent] with higher incomes do not have measurably increased living standards, greater social participation or higher levels of trust," the report says. "The 30 per cent of people with the lowest incomes are forced to choose between the basic necessities of modern life; they must decide which needs to neglect."

Для подготовки резюме можно рекомендовать использовать в начале текста следующие фразы:

- *The title of the text (article) is ... ;*
- *The text (article) is written by..;*
- *The text (article) is taken from the book . ;*
- *The text (article) gives us an outline ..;*
- *The text (article) goals The text (article) faces the problem.. ;*
- *The main problems discussed are..;*
- *The author emphasizes the idea of..;*
- *The text (extract from the article) deals with (the problem of) .. ;*
- *The article touches upon the issue of. ;*
- *The extract from the book is concerned with. ;*
- *This text is about. ;*
- *The extract centers round the problem of. ;*
- *The problem of the text is of great importance ..., etc.*

В середине предлагаемого резюме будут уместны фразы:

- *The author believes that...;*
- *He points out that...;*
- *The text (article) discusses...;*
- *The text (article) examines (analyzes, stresses, indicates, includes, suggests, defines, conveys, illustrates)...;*
- *It was observed in the text (article)...;*
- *It was further noted...;*
- *In this regard...;*
- *It is clear from the text that...;*
- *It farther says that...;*
- *One of the main problems to be singled out is ...;*
- *Great importance is also attached to;*
- *We shouldn't forget that...;*
- *It should be noted that;*
- *It must be mentioned that...;*
- *In my opinion;*
- *To my mind...;*
- *According to the text...;*
- *Judging from the author's point of view...;*
- *Among other problems the text raises the problem of..., etc.*

Закончить резюме можно с помощью следующих слов или фраз:

- *Finally (in the end) the author admits (emphasizes) that...;*
- *To sum it up;*
- *In summary;*
- *Summing the text up (summing it up);*
- *The author comes to the conclusion that;*
- *I think (suppose, believe)...;*
- *In general..;*
- *On the whole;*
- *In particular..;*
- *It is common knowledge...;*
- *Having analyzed the information it is possible to say;*
- *In conclusion;*
- *All things considered we can come to the conclusion, etc.*

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