МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

РЯЗАНСКИЙ ГОСУДАРСТВЕННЫЙ РАДИОТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ
имени В.Ф.УТКИНА

МЕТОДИЧЕСКИЕ УКАЗАНИЯ ПО ДИСЦИПЛИНЕ «АНГЛИЙСКИЙ ЯЗЫК НАУЧНО-ДЕЛОВЫХ КОММУНИКАЦИЙ И СПЕЦИАЛИЗИРОВАННЫЙ ПЕРЕВОД»

Квалификация - магистр

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ВВЕДЕНИЕ

Дисциплина ФТД.01 «Английский язык научно-деловых коммуникаций и специализированный перевод» реализуется в рамках блока ФТД - факультативов ОПОП магистратуры всех направлений Рязанского государственного радиотехнического университета имени В.Ф. Уткина. Дисциплина изучается в первом, втором и третьем семестрах. Объем дисциплины составляет 6 ЗЕТ (216 часов). Распределение часов дисциплины по видам занятий представлено в таблице 1.

Таблица 1. Распределение часов дисциплины по видам занятий

Вид занятий	Часов
Практические	72
Иная контактная работа	0,85
Консультирование перед экзаменом и	2
Итого ауд.	74,85
Контактная работа	74,85
Самостоятельная работа	88
Часы на контроль	53,15
Итого	216

Цель освоения дисциплины – углубление уровня иноязычной коммуникативной компетенции в части навыков академического письма, необходимого для осуществления научной и профессиональной письменной коммуникации.

Задачи: 1) поддержание навыков и умений иноязычного общения и их использование как базы для развития письменной коммуникативной компетенции в сфере научной и профессиональной деятельности;

2) знакомство с требованиями ведущих зарубежных и отечественных издательств к оформлению научных трудов на английском языке;

3) развитие профессионально значимых компетенций письменного иноязычного общения в части создания научного текста, переписки с коллегами в научном сообществе, вопросах этики научного общения (плагиат и др.);

4) развитие умений и опыта осуществления самостоятельной работы по повышению уровня владения письменной формой английского языка.

Факультативный курс базируется на следующих дисциплинах: «Иностранный язык» и «Иностранный язык в профессиональной сфере».

Успешное овладение программой дисциплины «Английский язык научно-деловых коммуникаций и специализированный перевод» способствует развитию компетенций, необходимых для осуществления научной и профессиональной деятельности.

В результате изучения дисциплины студент должен

знать:

- особенности современного информационного поля делового общения;
- условия эффективного речевого воздействия, вербальные и невербальные средства коммуникации;
- этические нормы и принципы делового взаимодействия;

уметь:

- применять способы передачи и приема информации, анализировать коммуникационные процессы в организации;
- организовать переговорный процесс, в том числе с использованием современных средств коммуникации;

владеть:

- современными технологиями эффективного влияния на индивидуальное, групповое поведение в организации, приемами, стимулирующими общение и создание доверительных отношений между деловыми партнерами.

1. Примеры методических материалов, определяющих процедуры оценивания знаний, умений, навыков и (или) опыта деятельности.

Таблица 2.

Наименование оценочного средства	Краткая характеристика оценочного средства	Представление оценочного средства в фонде
Рубежный контроль	Средство проверки освоения уровней «знать», «уметь» компетенций ФГОС 3++	Комплекты билетов рубежных контролей
Практическое занятие	Средство проверки освоения уровней «знать», «уметь» компетенций ФГОС 3++	Задания на практические занятия
Экзамен	Средство проверки освоения уровня «знать» компетенций ФГОС 3++	Перечень вопросов к экзамену и макет экзаменационного билета

1.1. Комплект билетов к рубежному контролю № 1

1. Finish each of the following sentences in such a way that it means exactly the same as the sentence printed before it.

1) Someone's just given me an invitation to a party.
I...
2) Mark isn't as clever as Ann is.
Ann...
3) She just can't add up figures.
She's hopeless...
4) I didn't hear what he said because I was reading a fascinating book.
If I...
5) The train left and then I got to the station.
By the time...
6) I didn't really want to go to the cinema.
I didn't really feel...
7) You should have your eyes tested.
It's about time...
8) I'm looking for something to wear to a party.
What...
9) 'I must write to my parents soon,' she said.
She told me that...
10) Someone might be repainting the house for us next year.
We ...
11) She said she was sorry she hadn't finished her homework.
She apologised...
12) He left college four years ago.
It...

13) 'Can you lend me five pounds, John?' said Mary.
Mary asked...
14) The hotel was fully booked.
There...
15) Your only chance of getting a seat is to queue.
Unless...
16) It isn't necessary for you to go to all that trouble.
You...
17) 'I don't think you should carry all that money in your hip pocket, Alan,' Margaret said.
Margaret advised...
18) I haven't smoked for two years now.
I gave...
19) What is your father's profession?
What does...
20) I like swimming.
I'm...
21) It isn't easy to study with the radio on.
Studying...
22) It was too cold for them to have the windows open.
It was so cold...
23) You paid more than was necessary for that dress.
You needn't...
24. Does he really need to make such a noise?
Is it really...
25) He played better than anyone else in the competition.
No one else...
26) She was so angry that she couldn't speak.
She was too...
27) They paid more for their meal than they needed.
They needn't...
28) Laughing at other people's misfortunes is unkind.
It is...
29) He was going to buy a house, but he didn't have enough money.
If he'd...
30) We didn't know you were coming, so we didn't wait for you.
We'd have...

2. Read the text, translate it into good Russian and do the tasks below it.

The Concept of Role Theory

Any individual in any situation occupies a role in relation to other people. The particular individual with whom one is concerned in the analysis of any situation is usually given the name of focal person. He has the focal role and can be regarded as sitting in the middle of a group of people, with whom he interacts in some way in that situation. This group of people is called his role set. The role set should include all those with whom the individual has more than trivial interactions.

Role definition. The definition of any individual's role in any situation will be a combination of the role expectations that the members of the role set have of the focal role. These expectations are often occupationally denned, sometimes even legally so. The role definitions of lawyers and doctors are fairly clearly defined both in legal and in cultural terms. The role definitions of, say, a film star or bank manager, are also fairly clearly defined in cultural terms, too clearly perhaps. Individuals often find it hard to escape from the role that cultural traditions have defined for them. Not only with doctors or lawyers is the required role behavior so constrained that if you are in that role for long it eventually becomes part of you, part of your personality. Hence, there is some likelihood that all accountants will be alike or that all blondes are similar - they are forced that way by the expectations of their role. It is often important that you make it clear what your particular

role is at a given time. The means of doing this are called, rather obviously, role signs. The simplest of role signs is a uniform. The number of stripes on your arm or pips on your shoulder is a very precise role definition which allows you to do certain very prescribed things in certain situations. Imagine yourself questioning a stranger on a dark street at midnight without wearing the role signs of a policeman! In social circumstances, dress has often been used as a role sign to indicate the nature and degree of formality of any gathering and occasionally the social status of people present. The current trend towards blurring these role signs in dress is probably democratic, but it also makes some people very insecure. Without role signs, who is to know who has what role?

Place is another role sign. Managers often behave very differently outside the office and in it, even to the same person. They use a change of location to indicate a change in role from, say, boss to friend. Indeed, if you wish to change your roles you must find some outward sign that you are doing so or you won't be permitted to change - the subordinate will continue to hear you as his boss no matter how hard you try to be his friend. In very significant cases of role change, e.g. from a soldier in the ranks to officer, from bachelor to married man, the change of role has to have a very obvious sign, hence rituals. It is interesting to observe, for instance, some decline in the emphasis given to marriage rituals. This could be taken as an indication that there is no longer such a big change in role from single to married person, and therefore no need for a public change in sign.

In organizations, office signs and furniture are often used as role signs. These and other perquisites of status are often frowned upon, but they may serve a purpose as a kind of uniform in a democratic society; roles without signs often lead to confused or differing expectations of the role of the focal person.

Role ambiguity. Role ambiguity results when there is some uncertainty in the minds, either of the focal person or of the members of his role set, as to precisely what his role is at any given time. One of the crucial expectations that shape the role definition is that of the individual, the focal person himself. If his occupation of the role is unclear, or if it differs from that of the others in the role set, there will be a degree of role ambiguity. Is this bad? Not necessarily, for the ability to shape one's own role is one of the freedoms that many people desire, but the ambiguity may lead to role stress which will be discussed later on. The virtue of job descriptions is that they lessen this role ambiguity.

Unfortunately, job descriptions are seldom complete role definitions, except at the lower end of the scale. At middle and higher management levels, they are often a list of formal jobs and duties that say little about the more subtle and informal expectations of the role. The result is, therefore, to give the individual an uncomfortable feeling that there are things left unsaid, i.e. to heighten the sense of role ambiguity.

Looking at role ambiguity from the other side, from the point of view of the members of the role set, lack of clarity in the role of the focal person can cause insecurity, lack of confidence, irritation and even anger among members of his role set. One list of the roles of a manager identified the following: executive, planner, policy maker, expert, controller of rewards and punishments, counselor, friend, teacher. If it is not clear, through role signs of one sort or another, which role is currently the operational one, the other party may not react in the appropriate way — we may, in fact, hear quite another message if the focal person speaks to us, for example, as a teacher and we hear her as an executive.

Comprehension Check

1. What is the source of the text?
   a) a guide for new managers in a company;
   b) a textbook analysis of behaviour in organisations;
   c) a critical study of the importance of role signs in modern society;
   d) a newspaper article about role changes.
2. What is an individual's role in any situation?
   a) a uniform of some focal group;
   b) some likelihood;
   c) a combination of the role expectations that the members of the role set have of the focal role.

3. In social circumstances, dress has not been used as …
   a) a role sign to indicate the degree of any gathering formality;
   b) a role sign to indicate the nature of formality;
   c) the social status of people present;
   d) means to heighten the sense of role ambiguity.
4. Should the decline in emphasis on marriage rituals be reversed due to the text?
   a) yes;
   b) no;
   c) not given.
5. What is the main reason for role ambiguity?
   a) the fact that there are things left unsaid;
   b) lack of clarity in the role of the focal person;
   c) roles with excessive signs.

1.2. Комплект билетов к рубежному контролю № 2

Билет № 1

1. Noun-verb agreement. Choose the correct option.

1.Of these papers, less than a half deals / deal with this issue. 2. A number of authors has / have claimed that x = y. 3. The number of publications per year is / are reported in Table 3. 4. The majority of articles only covers / cover marginal issues. 5. This group of tables contains / contain all the relevant results. 6. Ten kilos is / are enough to ensure a good performance. 7. Several thousand dollars is / are required. 8. The police is / are present in heavy numbers. 9. Fifty per cent is / are certainly a good rate. 10. A variety of articles has / have investigated this business sector. 11. None of the instruments work / works. 12. There is / are a bathroom and a bedroom.

2. Read the text, translate it into good Russian and find answers to the questions below it.

A Review of Contemporary Science

Contemporary science is typically subdivided into the natural sciences, which study the material universe; the social sciences, which study people and societies; and the formal sciences, which study logic and mathematics. The formal sciences are often excluded as they do not depend on empirical observations. Disciplines which use science, like engineering and medicine, may also be considered to be applied sciences.

From classical antiquity through the 19th century, science as a type of knowledge was more closely linked to philosophy than it is now, and in the Western world the term natural philosophy once encompassed fields of study that are today associated with science, such as astronomy, medicine, and physics. However, during the Islamic Golden Age foundations for the scientific method were laid by Ibn al-Haytham in his Book of Optics. While the classification of the material world by the ancient Indians and Greeks into air, earth, fire and water was more philosophical, medieval Middle Easterns used practical and experimental observation to classify materials.

In the 17th and 18th centuries, scientists increasingly sought to formulate knowledge in terms of physical laws. Over the course of the 19th century, the word science became increasingly associated with the scientific method itself as a disciplined way to study the natural world. It was during this time that scientific disciplines such as biology, chemistry, and physics reached their modern shapes. That same time period also included the origin of the terms scientist and scientific community, the founding of scientific institutions, and the increasing significance of their interactions with society and other aspects of culture.

The societal impacts of scientific and technological advances – whether desirable or undesirable – have been one of the primary foci of contemporary policy research. Economic and sociopolitical implications of science and technology development associated with global climate change and sustainable energy generation, big data and information and communication infrastructure and network, food security and bioengineering, and nano-scale research and applications, to name a few, have been frequently discussed by scholars, practitioners, the media, and ordinary citizens, and the related government policies have naturally been reflective of such discussion.

Advances in scientific understanding and the development of new technologies are considered fundamental to maintain competitive market advantages and continued economic growth and, in this context, are considered beneficial to society. Broadly speaking, government policies in this realm are concerned about promoting the development, production, and diffusion of innovative science and technology to achieve such ends. The majority of innovation research seeks to model innovation processes, explore the mechanisms of innovation, and identify the conditions that facilitate it. Within the last three years, researchers have increasingly applied a multiscalar lens to understand the diffusion of policies and knowledge assumed necessary to foster innovation. Sub-topics within this area of research also focus on society's evaluation and adoption of new technologies and their overall impacts.

Comprehension Check

1. Why are the formal sciences often excluded from the system of science?
2. Why was science more closely linked to philosophy than it is now?
3. How did science develop in the 17th and 18th centuries?
4. What are the primary foci of contemporary policy research? Do you agree with the author?
5. What are government policies concerned about nowadays?
6. Do you agree with the explanation of contemporary science given in the text?
7. Comment on the expression 'Science is a global human endeavor'.

1.3. Примеры заданий к экзамену

Task 1.Translate the part of the scientific article from Russian into English and vice versa when necessary.

Article 1.

Аннотация — В настоящее время большинство организаций используют для расширения своих возможностей распределенные центры обработки данных (ЦОД), обслуживаемые региональными провайдерами связи. Реализация сете-вой инфраструктуры или ее части с помощью ЦОД позволяет избавиться от избыточных затрат на дорогостоящее оборудование и обслуживание сети. Целью работы является разработка алгоритма быстрой перемаршрутизации трафика между центрами обработки данных, обеспечивающего отказоустойчивость процессов адаптивной маршрутизации в условиях динамических отказов узлов и линий связи. В работе приведена математическая модель и пошагово представлен алгоритм. Для подтверждения правильности предложенного алгоритма разработано программное обеспечение моделирования процессов маршрутизации трафика между ЦОД.

Ключевые слова — центры обработки данных; адаптивная маршрутизация; быстрая перемаршрутизация; каналы связи; сетевой трафик; отказоустойчивость; провайдеры связи.

Part II. Related works

Развитие в последнее время технологии программно-конфигурируемых сетей [1,2] позволяет формулировать различные задачи оптимальной маршрутизации и балансировки сетевого трафика [3-6].

In [7] is showed a system, which enables the comparison of different algorithms for VM placement and network routing at the scale of an entire data center. The authors describe how the placement and routing affect overall application performance by varying the types and mix of workloads, network topologies, and compute resources.

Cloud service providers are building out geo-distributed networks of data centers. Geo-diversity lowers latency to users and increases reliability in the presence of an outage taking out an entire site. In [8] are proposed joint optimization of network and data center resources, and new systems and mechanisms for geo-distributing state.

Распространенным методом обеспечения отказоустойчивости сети является создание резервных узлов и каналов связи [9]. Однако при обслуживании сети несколькими провайдерами связи существует возможность использовать их сетевые возможности без дополнительных расходов на покупку дополнительного оборудования.

В [10] are proposed Resilient Overlay Network's (RON's) routing mechanism that was able to detect, recover, and route traffic around all of nodes, showing that its methods for fault detection and recovery work well at discovering alternate paths in the Internet.

В [11] предложен алгоритм парных переходов при динамических изменениях в структуре корпоративной сети, что также позволило снизить трудоемкость построения оптимальных маршрутов передачи данных до величины O(kmN).

Разработка новых, более эффективных алгоритмов быстрой перемаршрутизации трафика позволяет повысить эффективность функционирования сетей между ЦОД за счет уменьшения трудоемкости построения таблиц маршрутизации и отсутствия необходимости выполнения их полного пересчета.

Article 2.

1. Аннотация. В докладе представлены результаты работ по моделированию и разработке сеточного узла тиратронного типа с улучшенными параметрами разряда газоразрядного прерывателя тока для генератора высоковольтных импульсов с индуктивным накопителем энергии. При помощи моделирования показано, что изменение геометрии отверстий сеточного узла не приводит к ухудшению показателя электропрочности. Описаны преимущества газоразрядного прерывателя тока с данным сеточным узлом при работе в составе высоковольтного генератора. Приведена 3D-модель изготовленного сеточного узла. Приведено сравненительное описание разработанного сеточного узла с существующими аналогами.

ВВЕДЕНИЕ

Мощная наносекундная импульсная техника на сегодняшний день имеет две основные тенденции своего развития. Одна из них заключается в проведении различных исследовательских программ в таких областях, как ускорительная техника, лазерная техника, мощная СВЧ-электроника, управляемый термоядерный синтез и т.д. Здесь основные усилия сосредоточены на получении рекордно высоких параметров по выходной мощности, и это приводит к разработке и созданию импульсных источников энергии с максимально высокими величинами напряжения и тока.

Генераторы высоковольтных наносекундных импульсов различают по применяемым в них накопителям энергии: емкостной (ЕНЭ) или индуктивный (ИНЭ). По сравнению с генераторами с ЕНЭ, преимущества генераторов с ИНЭ заключаются в том, что питание может осуществляться от низковольтных источников, они имеют меньшие массогабаритные показатели. Для генераторов такого типа необходимы надежные прерыватели, способные многократно обрывать ток большой величины [1].

Газоразрядные прерыватели тока низкого давления тиратронного типа позволяют осуществлять коммутацию тока, при этом не требуют дополнительных коммутирующих устройств [2]. Генераторы на их основе способны формировать импульсы напряжением несколько сотен киловольт при токах единицы килоампер. Недостатками использования данных прерывателей в режиме обрыва тока является наличие временной нестабильности в момент обрыва тока, изменение параметров выходного импульса, вследствие нагрева прибора, ограниченная пропускная способность по току, значительное время выключения.

С целью улучшения работы данных прерывателей и устранения вышеуказанных недостатков был разработан новый сеточный узел.

2. Abstract. The article offers a new method to detect brightness edges. It requires no image pre-smoothing and forms a contour image with minimum number of short lines.

Introduction. Multispectral computer vision systems (MCVS) used in aviation field often face the problem of superimposing a real image received from one of MCVS sensors with a virtual image synthesized by a digital terrain map [1-3]. A virtual image synthesized by a digital terrain map is constructed in the form of contours for objects being constantly present on Earth surface (water bodies, roads, large infrastructure objects, etc.) A real image is usually formed as a halftone image, or sometimes as a colored one. To solve the task of heterogeneous image superimposition - both virtual and real ones, e.g. television image, – they are necessary to be made practically

identical. As a virtual image is represented by object contours then it seems natural to transform a real image in grayscale into a binary image in the form of object contours.

In order to detect object contours in an image larger number of algorithms based on various approaches to "edge" detection has been developed. The most widely used approach is the one that features gradient type edge detectors. But irrespective the methods to determine the edges, detection algorithms with good indicators of edge detection in test images are not always applicable to process real images. It is primarily referred to underlying surface images received from board of aircraft during the flight. An ideal detector for such images must detect contours of images being constantly present on Earth surface and suppress, if possible, short lines, the presence of which is not confirmed by a digital terrain map. A given work offers a new method of gradient type intended to be used in an onboard aircraft computer. One more requirement for an edge detector intended to be used in onboard MCVS is high processing speed.

Edge detectors of gradient type are typically constructed in two stages. The first stage is image smoothing; the second one is brightness edge detection. The second stage can contain more than one step, e.g. Sobel, Prewitt, Roberts cross operators give a gradient image in the form of thick lines so line thinning is required to solve a higher level task [4].

The article offers a method to construct edge detector giving the estimation of partial derivatives in terms of noise leading to thin edge lines in the end.

A huge step forward in the development of gradient methods to detect brightness boundaries and to form object contours from these lines in the image was made in 1986 by John Canny in his work [5]. He formulated three criteria (Canny criteria) defining good edge detectors:

– good signal to noise ratio;
– good localization;
– unique edge response.

From a substantive point of view the first requirement means that detector must detect true edges and neglect false ones. The second criterion supposes the edge points detected be located as close as possible to true area edge location.

In contrast to Sobel and Prewitt methods, Canny method gives thin one-pixel lines in the end. A weak point of Canny method is its "focus" on the closeness of contours being in fact open. Monograph [4] names this method feature as "spaghetti effect".

The transition from brightness background values in a real image to larger (or smaller) values in the areas being interesting from the viewpoint of image analysis takes place in the form of gradual brightness change but not in the form of a jump. This uncertainty makes the task of brightness edge detection too difficult. Even if background part of an image contains only white pixels and simply connected area of interest contains only black ones, the uncertainty while detecting the edge of necessary area still remains. It can be represented by an inner edge containing only black pixels or an outer edge containing only white pixels.

Task 2. Look at the Russian version of the abstract and its translation made by Google translator. Correct the abstracts translated and find all the mistakes resulted from machine translation.

Abstract 1. Многокритериальный подход к выбору процедуры кодирования телеметрических радиосигналов сложных технических объектов.

Рассматриваются вопросы повышения качества результатов обработки телеметрической информации в интересах объективной оценки состояния сложных технических объектов (СТО) в процессе проведения испытаний. Целью работы является разработка многокритериальной процедуры выбора кодера (декодера) телеметрических радиосигналов СТО, обеспечивающего устойчивость к воздействию мешающих факторов в канале передачи. Проведено сравнение эффективности известных кодеров по критериям отношения энергии радиосигнала, приходящейся на один бит сообщения к среднему значению мощности шума при частоте необнаруживаемых ошибок после декодирования менее , задержки (в битах) между моментом появления бита источника в кодере канала и моментом воспроизведения данного бита в декодере без учета задержки для передачи,

количества вычислительных операций на бит при декодировании, объема памяти (в Кбитах), необходимой для декодирования кода определенного вида. С применением многокритериального подхода показано, что для обеспечения компромисса между повышением помехоустойчивости телеметрических радиосигналов и снижением требований к аппаратным затратам на декодирование целесообразно использование кодов СС(3,1/2), СС(5,1/2), LDPC(128,64) и LDPC(256,128), обеспечивающих уменьшение значения показателя на 3,8-9,9 дБ относительно канала без кодирования.

Ключевые слова: радиосигнал, телеметрическая информация, помехоустойчивое кодирование, многокритериальный подход, сложный технический объект.

Multicriterial approach to procedure selection coding of telemetric radio signals complex technical objects.

The issues of improving the quality of the results of telemetric information processing are considered in the interests of an objective assessment of the state of complex technical objects (STO) in the process of testing. The aim of the work is to develop a multi-criteria procedure for choosing an encoder (decoder) of telemetric radio signals of the service station, which ensures resistance to the influence of interfering factors in the transmission channel. Comparison of the efficiency of known encoders according to the criteria of the ratio of the radio signal energy per one message bit to the average value of the noise power with undetectable error rate after decoding less than 10-9, the delay (in bits) between the moment the source bit appears in the channel encoder and the moment of reproduction of the given bit in the decoder without taking into account the transmission delay, the number of computational operations per bit during decoding, the amount of memory (in Kbits) required to decode a code of a certain type. Using a multicriteria approach, it was shown that to provide a compromise between increasing the noise immunity of telemetric radio signals and reducing the requirements for hardware costs for decoding, it is advisable to use the CC (3.1 / 2), CC (5.1 / 2), LDPC codes (128, 64) and LDPC (256,128), providing a decrease in the value of the indicator on 3.8-9.9 dB relative to the uncoded channel.

Keywords: radio signal, telemetry information, anti-jamming coding, multi-criteria approach, complex technical object.

Abstract 2. Диодный автогенератор плоской конструкции.

Дан краткий обзор публикаций по однорезонаторным микроволновым автогенераторам прямопролетного типа (диод, монотрон, двухзазорный резонатор в режимах генерации). Целью работы является исследование численным моделированием процессов взаимодействия и электронного коэффициента полезного действия (КПД) диодного автогенератора (диотрона) плоской конструкции в различных режимах, включая режим с отсечкой катодного тока. На основе модели электронного потока из крупных частиц и решения уравнений движения частиц методом Рунге-Кутты третьего порядка разработаны методики расчета электронного КПД энергетическим методом и расчета формы импульсов конвекционного тока с использованием закона сохранения заряда. Показано, что в результате скоростной модуляции под действием переменного напряжения формируются сгустки электронов, которые при определенных углах пролета попадают в отрицательные полупериоды переменного напряжения, образуются зоны генерации. Без отсечки катодного тока в случае равенства зарядов частиц (электроны вводятся в высокочастотный зазор с внешнего катода или катод диода работает в режиме насыщения) значения КПД в центре зон составили 12 % для первой зоны, 8,3 % для второй и 6,1 % для третьей при углах пролета, соответственно, 4,8 рад, 9 рад и 13,3 рад. В случае зависимости заряда частиц от фазы переменного напряжения максимальные КПД уменьшаются и составляют 2,4 % для первой зоны, 5,3 % для второй и 4,3 % для третьей. Уменьшение, в основном, связано с тем, что центр исходного сгустка, сформированного на катоде, и центр сгустка, формируемого за счет последующего группирования, сдвинуты по фазе на 0,5. Режим с отсечкой катодного тока не дал ожидаемого увеличения КПД как в клистроде, работающем в этом режиме.

Ключевые слова: СВЧ автогенератор, КПД, диод, диотрон, зазор, зона генерации, конвекционный ток, режим насыщения, режим пространственного заряда, режим с отсечкой

катодного тока.

A diode generator of a planar construction

A brief review of publications on single-cavity microwave generators of the straight-through type (diode, monotron, two-gap resonator in the generation modes) is given. The aim of this work is to study the interaction processes and the electron efficiency of a diode generator (diotron) of a planar construction in various modes including cathode current cut-off mode by the numerical simulation. Based on the model of the electron beam consisting of large particles and the solution of the equations of motion of particles by the Runge-Kutta third order method, ways for calculating the efficiency by the energy method and calculating the shape of the convection current pulses using the charge conservation law are developed. It's shown that as a result of speed modulation under the influence of alternating voltage, bunches of electrons are formed, which at certain transit angles fall into negative half-waves of alternating voltage, and generation zones are formed. Without cut-off of the cathode current in the case of a particle charge equality (electrons enter the high-frequency gap from the external cathode or the cathode of the diode operates in saturation mode) the efficiency values in the center of the zones were 12 % for the first zone, 8,3 % for the second and 6,1 % for the third at transit angles, respectively, 4,8 rad, 9 rad and 13,3 rad. In case of the particle charge dependence on the AC voltage phase, the maximum efficiency decreases to 2,4 % for the first zone, 5,3 % for the second and 4,3 % for the third. The decrease is mainly due to the fact that the center of the initial bunch formed at the cathode and the center of the bunch formed by subsequent grouping are shifted in phase by 0,5. The cathode current cut-off mode did not give the expected efficiency increase as in the klystrod operating in this mode.

Key words: microwave generator, efficiency, diode, diotron, gap, generation zone, convection current, saturation mode, spatial charge mode, cathode current cut-off mode.

Abstract 3. Исследование ионизационного манометрического преобразователя для сверхвысокого вакуума

Исследован опытный образец ионизационного манометрического преобразователя для сверхвысокого вакуума, содержащий прямонакальный катод, два цилиндрических ускоряющих электрода, расположенный между ними соосно цилиндрический коллектор ионов и дисковый анод, перпендикулярный оси преобразователя, вдоль которой направлено магнитное поле. На ускоряющие электроды подаются импульсы напряжения с амплитудой 300 В, длительностью 10 мкс и паузой 1 мкс, а на анод – постоянное напряжение 5 В при среднем значении анодного тока 1 мкА. Получены расчетные данные, характеризующие степень увеличения манометрической чувствительности преобразователя, которое обеспечивают происходящие в нем различные физические процессы: вращение электронов вокруг линий индукции магнитного поля, упругое рассеяние электронов на молекулах газа, возбуждение и ионизация молекул электронным ударом, вторичная эмиссия электронов с поверхности анода. Установлено, что вторичная эмиссия может приводить к многократным колебаниям электронов между катодом и анодом (более 1500 периодов за время импульса напряжения на ускоряющих электродах) и являться основным фактором, определяющим высокую (1350 Торр-1) манометрическую чувствительность преобразователя, зарегистрированную в проведенных ранее экспериментах [2]. Цель работы заключалась в оценке роли различных физических процессов в повышении манометрической чувствительности ионизационного преобразователя с низким анодным напряжением, исключающим рентгеновское излучение с анода.

Ключевые слова: сверхвысокий вакуум, ионизационный манометрический преобразователь, манометрическая чувствительность, продольное магнитное поле, движение электронов, вторичная эмиссия электронов, мягкое рентгеновское излучение, компьютерное моделирование.

Study the ionization gage for ultrahigh vacuum

A prototype of an ionization gauge for ultrahigh vacuum with an axial magnetic field and a rectilinear cathode, two accelerating electrodes, a collector located between them and an anode located perpendicular to the gage axis was studied. The accelerating electrodes are fed voltage

pulses with an amplitude of 300 V, a duration of 10 us and a pause of 1 us, and the anode – a constant voltage of 5 V at an average value of the anode current of 1 uA. Calculated data are obtained that characterize the degree of increase in the manometric sensitivity of the gauge, which is provided by various physical processes occurring in it: rotation of electrons around the lines of magnetic field induction, elastic scattering of electrons on gas molecules, excitation and ionization of molecules by electronic shock, secondary emission of electrons from the anode surface. It was found that secondary emission can lead to multiple electron oscillations between the cathode and the anode (more than 1600 periods during the voltage pulse on the accelerating electrodes) and is the main factor determining the high (1350 Torr-1) manometric sensitivity of the gauge, registered in previous experiments [2].The aim of the work was to assess the role of various physical processes in increasing the manometric sensitivity of an ionization gauge with a low anode voltage that excludes x-ray radiation from the anode.

Key words: ultrahigh vacuum;ionization gauge; manometric sensitivity of an ionization gauge, an axial magnetic field; motion of electrons; secondary electron emission; soft x-ray radiation; computer simulation.

1.4. Макет оформления экзаменационного билета

ФГБОУ ВО РГРТУ им. В.Ф. Уткина
Exam card № 1

1. Read the part of the article and translate it into Russian and English when necessary.

2. Read the original abstracts in Russian language and their machine translations in English. Correct all the mistakes found.

Билет рассмотрен и утвержден на заседании кафедры иностранных языков. Протокол №____ от «___» _____ 20 __ г.

1.5. Перечень заданий для практических занятий

Модуль 1. Стиль письменной академической речи.

Task 1. Read the text, notice the vocabulary and answer the questions.

1. Are there likely to be more people in a seminar or a tutorial?
2. Who is the academic who guides a postgraduate student through their dissertation?
3. What word is used for the holiday period between university terms or semesters?
4. What is the difference between a personal tutor and a student counsellor?
5. What is the difference between a postgrad rep and a student counsellor?

People, structures and activities

Dr. Ward, Adviser to International Students, is giving an introductory session for new international postgraduate students in the Department of English Language at Wanstow.

Dr. Ward: Let me tell you about the staff. The Head of Department is Professor Bradley. He will be giving some of the postgraduate seminars as well as giving some of the first-semester lectures. Then there are two Senior Lecturers. They'll be handling lectures and tutorials. Then there are six lecturers - they're all listed in your information pack. You'll also meet our Research Assistant, Angela Gorski, and there are four research students doing PhDs. Each of you will be given a personal tutor, who will be one of us. If you want to talk to any of us, our office hours are on the noticeboard and on the web page. Any questions?

Student: Is the personal tutor the same as our dissertation supervisor?

Dr. Ward: No. You'll be given a supervisor when you choose your dissertation topic. He or she'll supervise you during the spring semester and the summer vacation. Your personal tutor looks after your general academic welfare. You can also talk to a student counsellor if you have any personal problems, and there's also a postgrad rep.

Task 2. Look at the extract from UK university's web pages and find there the equivalents to the given words and phrases.

1. a qualification between a bachelor's degree and a master's degree
2. unit which represents a successfully completed part of a course
3. most important parts of a course of study, that all students must do
4. which are chosen
5. one of the units which together make a complete course taught especially at a college or university
6. choose
7. put one's name on an official list of course members
9. judgements of the quality of students' work
10. a piece of written work
11. a collection of documents that represent a person's work
12. having the necessary qualities or fulfilling the necessary conditions
13. a special mark given to students who produce work of an excellent standard

Diploma/MA in English Language and Culture

* Qualification: Diploma or MA. Duration: One year full-time or two years part-time.

The course is a 180-credit course, consisting of 120 credits of core and elective modules plus a 60-credit dissertation module. Core modules are obligatory. Candidates not wishing to proceed to the MA may opt for the Diploma (120 credits without dissertation).

* Course description: The course covers all the major aspects of present-day English language and culture. Topics include grammar, vocabulary, language in society, literature in English (for a full list, see the list of modules). Elective modules only run if a minimum of ten students enrol. The modules consist of a mixture of lectures, seminars, workshops and tutorials.

* Assessment: A 3,000-word assignment must be submitted for each core module. Elective modules are assessed through essays, projects and portfolios. The word limit for the dissertation is 12,000 to 15,000 words.

Candidates must achieve a pass grade in all four core modules (20 credits each), plus 40 credits in elective modules (minimum of 30 credits in the English department plus 10 optional credits from modules offered by other departments), and, for MA, must pass the dissertation module (60 credits). Candidates who achieve a grade average of 70% or more over all modules may be eligible for a distinction.

Модуль 2. Требования международных рецензируемых журналов к публикациям на английском языке.

Task 1. Read and translate the information about review procedure. Be ready to give the main contents of what you have read to other students.

1. Review organization and procedure

1.1. Reviewing the manuscripts of the articles submitted for publication in thematic sections of scientific and technical journal “Vestnik of RSREU” is organized by the editorial board. Responsibility for the quality of reviews and the promptness of article manuscripts reviewing rests with the executive secretary and the editor-in-chief of the journal “Vestnik of RSREU”.

1.2. To review the manuscripts of the articles the members of editorial council and editorial team of the journal as well as highly qualified scientists and specialists of Ryazan state radioengineering university and other organizations and enterprises with deep professional knowledge and working experience in a certain scientific direction, usually Doctors of sciences,

professors, can be involved as reviews. A reviewer cannot be the author or co-author of peer-reviewed work.

1.3. Reviewing the manuscripts of the articles is mandatory for the teachers of Ryazan state radioengineering university and is taken into consideration in their individual plans. The reviewers who are not the university employees are paid in accordance with current rules.

1.4. The editorial board of scientific and technical journal "Vestnik of RSREU" sends the reviews of the materials received to the authors in electronic form.

1.5. The reviews for article manuscripts should be kept in the editorial office of the journal within three years from the date of publication of the articles and be submitted at the request of expert councils of Higher Attestation Commission of the Russian Federation.

2. Requirements to Review Content

2.1. The review should contain a qualified analysis of the article manuscript, its objective reasoned assessment and well-grounded recommendations.

2.2. In the review, special attention should be given to the following issues:

- General analysis of scientific level, terminology, article structure, topic relevance.
- Assessment of the article being prepared for publication in relation to its language and style, compliance with established requirements to the design of article materials.
- Scientific language of the article, correspondence of methods, recommendations and the results of the research to modern achievements in science and technology.
- Admissibility of the volume of the whole article and its individual elements (text, tables, illustrative material, references). Practicability of the tables, illustrative material placed in the article and their correspondence to the theme presented.

Task 2. Read the information and structure the article according to the requirements.

1. Article should be submitted in the following format:

- UDC index (see UDC reference) in left upper corner;
- title of the article (in capital letters, bold font centered);
- initials and surname of the author (in bold on the left without indentation), academic rank, position, name of an organization, e-mail;
- abstract (volume from 10 to 15 lines or from 100 to 250 words) reflecting the main content of the article that indicates the aim of the work, main problems, the results of the research and conclusions;
- key words (8-10 words) carrying the main meaning of the article;
- the main body of the article considering the requirements to its design mentioned further;
- reference list made in accordance with GOST P 7.0.5 – 2008 "Bibliographical reference";
- information about the article in English.

The article must be signed by all authors.

2. Figures must be made in accordance with the requirements of ESKD in black-and-white in *.bmp, *.jpg, *.tif formats and applied as separate files on the disk. Overall size of figures must not exceed 90 x 120 mm2. Figure width is desirable not to exceed the size of column width.

3. Formulas must be made in Microsoft Equation 3.0.

4. The body of the article should be made using only automatic hyphenation mode.

5. Reference list is made in accordance with GOST 7.1.2003 "Bibliographic description of the document" (automated list generation is not allowed). References to unpublished works are not allowed.

5. Cross-references are not allowed in the article.

The information about the article in English (in accordance with the requirements of foreign analytical databases) should compulsory contain:

- UDC index;
- title of the article;
- initials and surname of the author (in bold on the left without indentation), academic title, position, name of an organization, e-mail;
- abstract of the article with the volume not less than 100 words reflecting the main content of the article that indicates the aim of the work, main problems, the results of the research and brief

conclusions, written in good English;
- key words (8-10 words);
- reference list in Roman alphabet.

Модуль 3. Структура академической статьи в формате IMRAD. Введение к научной статье на английском языке.

Task 1. Read the text and be ready to speak about the main thematic sections of a scientific journal.

Thematic sections of scientific journal are listed as follows:

1. Journal section “Radioengineering, radiolocation and communication systems” is intended to publish the articles containing scientific results in the direction of specialities approved by higher attestation committee of Russian Federation such as “Radioengineering including television systems and devices”, “Antennas, microwave devices and their technologies”, “Systems, networks and telecommunications devices”, “Radiolocation and radio navigation”.
2. Journal section “Computer science, information systems and technologies” is oriented to publish scientific articles in the direction of such specialities as “Elements and devices of computer and control systems”, “Mathematical and software support of computers, complexes and computer networks”, “Computing machines, complexes and computer networks”, “Mathematical modeling, numerical methods and program complexes”, “Information systems and processes”.
3. Journal section “System analysis, control and processing of information” is intended to publish scientific works in the direction of the following specialities: “System analysis, control and processing of information”, “Management in social and economic systems” in technical sciences, “Theoretical foundations of informatics”.
4. Journal section “Instrument-making and information-measuring systems” reflects scientific results of the authors in the direction of specialities numbered as “Instruments and methods of measurement (by type of measurement)”, “Information-measuring and control systems”, “Devices, systems and products of medical purpose » in technical sciences.

Task 2. Read the text and translate it into Russian without using a dictionary.

When discussing academic writing, one often hears about the "IMRAD format." What is this format?

IMRAD (Introduction, Methods, Research [and] Discussion) is a mnemonic for a common format used for academic ['scientific'] research papers. While used primarily in the hard sciences, like physics and biology, it is also widely used in the social and behavioral sciences. The IMRAD format is also known as the APA format, as the American Psychological Association uses the IMRAD headings in its APA stylesheet. IMRAD is simply a more 'defined' version of the "IBC" [Introduction, Body, Conclusion] format used for all academic writing.

Research in the Humanities normally uses a style which is similar to IMRAD, in the sense that academic research in all fields follows common explication principles. However, the focus in Humanities research is more on readability and the clarification of nuances in the topic, with a less-distinct separation of topic explication and 'exact' data collection procedures than would be appropriate for research in the hard sciences.

Further, in the Humanities generally, as well as in the ETI Section, MLA (Modern Language Association) style is preferred over APA. There may also be 'house styles' employed by institutions (or university departments/programs) for publication consistency.

Introduction (including a title)

The title is centered at the top of the first page. Below the title, but without a heading of its own, is the introductory section. This comprises one or several paragraphs which outline the research question and its significance within the topic being discussed, making it clear what the relevance of the question and topic are for readers of the paper.

Модуль 4. Раздел научной статьи «Методы».

Task 1. Read the text about grammar features of academic texts and make a summary of the information.

Grammar Points

Reporting verbs. In an academic context, the present tense is used to report what someone said or wrote, or what they believe. Reporting opinions and ideas usually follows a simple sentence structure.

Active versus Passive Voice

In the active voice, the grammatical subject is the doer of the action, and the sentence tells, "who's doing what". The passive voice tells what is done to the subject of the sentence. The person or thing doing the action may or may not be mentioned but is always implied. Verbs are also said to be either active (The executive committee approved the new policy) or passive (The new policy was approved by the executive committee) in voice. The active voice enhances the authority of the writer, while the passive voice can obscure it.

When to use Active Voice. In general, writing should be composed in the active voice because of the sense of immediacy and conciseness conveyed when the subject of the sentence carries out the action. In addition, fewer words are usually required for the active voice, it is more efficient, and it takes the reader from point A to point B in a "straight line".

When to use Passive Voice. The passive voice does exist for a reason, however, and its presence is not always to be despised. The passive is particularly useful (even recommended) in two situations:

When it is more important to draw our attention to the person or thing acted upon: The unidentified victim was apparently struck during the early morning hours.

In scientific writing, overuse of passive voice or use of passive voice in long and complicated sentences can cause readers to lose interest or to become confused. Sentences in active voice are generally – though not always – clearer and more direct than those in passive voice.

Nominalization. Nominalization is just a big word for the practice of turning actions into nouns. Instead of writing about the process of something, you write about the "thing" as an established fact.

Task 2. Try to write the following sentences more clearly by changing nominalizations back to verbs and adjectives and by, whenever possible, putting people in the subject position.

1. There has been speculation by educators as to the role of a good family environment in the improvement of educational achievement.
2. Attempts by economists at defining full employment have generally been met with failure.
3. Complaints by editorial writers about voter apathy generally don't offer suggestions about dispelling it.
4. The loss of market share to Japan by domestic auto makers resulted in the disappearance of hundreds of thousands of jobs.
5. There is a need for an analysis of library use to provide a reliable base for the projection of needed resources.

Модуль 5. Раздел научной статьи «Результаты».

Task 1. Skim the text below and say what writing skills should a researcher develop and why.

Writers seeking to improve their academic writing skills should focus their efforts on three key areas:

1. Strong writing: Thinking precedes writing. Good writers spend time distilling information from their sources and reviewing major points before creating their work. Writing detailed outlines helps many authors organize their thoughts. Strong academic writing begins with solid planning.
2. Excellent grammar: Learn the major and minor points of grammar. Spend time practicing writing and seek detailed feedback from teachers, professors or writers you respect. English grammar can be detailed and complex, but strong writers command the major points after many years of study and practice. Using a good writing reference can provide advice on the more troublesome points of grammar. Proper punctuation use and good proofreading skills improve academic writing as well.
3. Consistent stylistic approach: Choose one academic style and stick to it. Each of academic style sheets provide guidance on how to write out numbers, references, citations, and more. All are available at your local bookseller in hard copy or online. The MLA (Modern Language Association) is commonly used in English classes, while APA (American Psychological Association) is for psychology and science.

Academic writing skills encompass strong composition, excellent grammar, and a consistent stylistic approach. It is important for you to develop your skills in oral and written communication for three main reasons: the audience for scientific writing today is made up of both scientists and non-scientists; employers expect graduates to be able to communicate effectively with both professional and non-professional audiences on science-related matters; scientific work is a cooperative venture in which current work depends on the previous work of others in the scientific community, and it is vital that the work which goes into research and writing is honestly and properly acknowledged.

Task 2. Rewrite the following text using an impersonal style of writing.

I want to argue that all children in Australia have the right to be educated in their mother tongue. I expect that many children in the past spent months or years in school but did not understand the lessons. I am convinced that many migrant children are failing in our education system because we do not have bilingual education programmes. If we look at the U.N. report on language and education, we can discover that children who become literate in their own language have the greatest chance of educational success. People have been discussing the latest figures on university entrance recently and you can tell that migrant children do less well than "Anglo" children at present. I suspect that this is because they have difficulty with English and I would claim that the government has done too little to help these children. Surely the best way to achieve this in Australia is for the State governments to set up bilingual education programmes for all migrant children. I would suggest that this is the number one important issue for multicultural Australia.

Модуль 6. Раздел научной статьи «Обсуждение результатов».

Task 1. Correct the eight spelling and other vocabulary mistakes in these sentences.

1. It was very difficult to make reliable interferences from the data as we had so little.
2. A correlational study is a good way of seeing if one phenomena is related to another in a system way.
3. The experiment neither proved nor deproved Jessop's theory.
4. We had to explain the unusual scores of five of the subjets in the sample, who all had totals well below the norm. It was possible there were unaccuracies in the data.
5. An exterior observer can often unintentionally erupt the behaviour of the subjects they are observing.

Task 2. Read the text and notice the vocabulary in the problem of making analysis in academic texts. Find the equivalents to the words and phrases in the text from the following ones:

1) way of doing something
2) are of more importance than
3) think carefully about
4) disadvantages
5) parts, features
6) number, amount or aspect of a situation which can change
7) reach an answer by thinking carefully about the known facts
8) idea, opinion or piece of information that has been presented in relation to the topic
9) completely, firmly

Academic texts often include sections which deal with the analysis of data. In analyzing a social or political issue, the writer may need to come to/reach a conclusion about the advantages and disadvantages of a particular course of action. The writer may, for instance, conclude that the benefits outweigh the drawbacks or vice versa. An analysis may be a matter of weighing up both sides of an argument taking into account all the relevant aspects of the issue and discussing all the points raised by the research. When analysing the results of a scientific experiment, the writer is likely to need to take account of a range of variables. In their analysis scientists try to deduce as much as they can from their data, drawing conclusions that are soundly based on their results.

Модуль 7. Метаданные научной статьи.

Task 1. You should follow a procedure to determine the usefulness of each source and save research time. Read the text about choosing appropriate reading material and say what other tips you take when you are looking for specific information needed for your report.

Procedure for Choosing Appropriate Reading Material for Books and Journal Articles

Title: this includes the subtitle; do you immediately feel that it might meet your needs?

Blurb: information about the book written to attract the attention of the reader. This is usually found on the back cover.

Table of contents: this provides a clear overview of what the book is about. Index: the alphabetical list found at the back of a book, telling you on which pages important key words, information or topics are referred to.

Date of publication: an important indication of relevance, i. e. how current or up to date is the information? In some cases, of course, you may wish to refer to information that is not current. In fact, many standard textbooks were first published several years ago; if the information was carefully researched, it may well be as useful now as it was when the book was first published. However, information and ideas will often have been added to, either by the original writer(s) or by new writers in the area of study.

The recommended reading list: this is the list of books (or core texts) that a particular departmental or course lecturer suggests students read for a particular course.

Abstract (used for journal articles, papers, theses, dissertations, etc., rather than textbooks): this provides a quick indication of the usefulness of the text. The abstracts of journal articles are often followed by a list of key words that will help you make a selection.

Модуль 8. Деловая переписка.

Task 1. Fill in the correct prepositions in these sentences. All are expressions which occur frequently in business letters.

1. We are sending samples _____ separate cover.
2. We allow discounts _____ up to 7 % _____ larger quantities.
3. We would ask you to compare our prices _____ those ____ our competitors.
4. There is a slight reduction _____ price but no reduction _____ quality.
5. We look forward _____ meeting you _____ the Trade Fair.
6. We had the pleasure _____ meeting you _____ your stand _____ the Trade Fair.
7. We hope this product can compete _____ both price and quality.
8. I'm afraid Mr. Kelly is away _____ business _____ the moment
9. He is _____ a business trip _____ France.
10. We have considerable experience _____ this field.

Task 2. Here are a number of standard sentences from business letters. Can you fill in each space with ONE word? In most cases there is only one possibility although sometimes two or three different words are possible for a particular space.

1. We_____ you that any ____ you ____ with us will have our prompt and careful _____.
2. In _____ of the ____ that we have now been ____ business with you for a year, we_____ appreciate quarterly _____ of our accounts in the _____.
3. We should be _____ if you would ____ the _____ references when ordering, as your Company is _____ to us.
4. Our _____ for first orders are _____ in advance. Delivery will be not more than three weeks _____ receipt _____ order.
5. Our _____ at the moment are limited, and we are _____ orders in strict rotation _____ as not to _____ our regular _____.

Модуль 9. Составление резюме.

Task 1. Read the information and be ready to render it in Russian.

These proactive cover letters are self-initiated, meaning you're not sending them in response to a specific job listing. While review of web-based information or printed materials may spark interest, nothing has fueled the flames of reactive efforts. In this section, sample phrases are divided between

two types of cover letters:
1. Cold contact letters. When making cold contact in the form of a cover letter, you are not responding to a posting or contacting someone at the advice of others. These cover letters can be effective. The more focused they are, and the more you reveal knowledge of the job and employer, the better. In these cover letters, company-specific information must be changed letter to letter.
2. Broadcast letters. These are distributed to many employers, and they are less focused. Their format may appear similar to other letters, and it is most important to have the company name appear prominently early. While less company-specific information is contained, you must still show readers that you know the organization's name and the nature of the business. Broadcast letters can be good first efforts and momentum builders if you maintain appropriate expectations and follow up effectively. When broadcasting your availability, share with readers potential titles and functional areas of interest. They must be dynamic Here I am, here is what I do best, and let's talk about how I can succeed letters.
Task 2. Answer the following questions simulating the situation of job interview with your group mate.
1. You are in a meeting with your colleagues and managers. Your manager says she is dissatisfied with your work on a project. You believe that your manager does not understand all the facts regarding the project. You also believe your manager should not bring this up at the meeting. You feel that your reputation may be affected by this critique. What would you do in this situation?
2. You are working on a team project. You believe one of your team members is not meeting expectations or putting in enough effort. What do you do?
3. You have a deadline to submit a project. It is now due, but you don't think your project is good enough yet. What do you do?
4. How would you deal with a difficult colleague at work with whom you have been unable to build a successful relationship?
5. You are dealing with an angry customer. How would you decide when to call your supervisor?

2. Методические указания для самостоятельной работы обучающихся.

Изучение дисциплины проходит в течение одного семестра. Основные темы дисциплины осваиваются в ходе аудиторных занятий, однако важная роль отводится и самостоятельной работе студентов.

Самостоятельная работа как вид учебной работы может использоваться на лабораторных работах, а также иметь самостоятельное значение – внеаудиторная самостоятельная работа обучающихся – при подготовке к лабораторным работам, при подготовке к дифференцированному зачету.

Самостоятельная работа включает в себя следующие этапы:

- изучение теоретического материала (работа над конспектом лекции);
- самостоятельное изучение дополнительных информационных ресурсов (доработка конспекта лекции);
- выполнение заданий текущего контроля успеваемости (подготовка к лабораторным работам/ практическим занятиям);
- итоговая аттестация по дисциплине (подготовка к экзамену).

3. Рекомендации по планированию и организации времени, необходимого для изучения дисциплины. описание последовательности действий студента («сценарий изучения дисциплины»)

Рекомендуется следующим образом организовать время, необходимое для изучения дисциплины.

Подготовка к практическим занятиям состоит в теоретической подготовке (методических указаний к данной практической работе и дополнительной литературы) и выполнении индивидуального задания.

Подготовка к сдаче экзамена.

Экзамен – форма промежуточной проверки знаний, умений, навыков, степени освоения дисциплины. Главная задача зачета состоит в том, чтобы у студента по окончанию изучения данной дисциплины сформировались определенное представление об общем содержании дисциплины, определенные теоретические знания и практические навыки, определенный кругозор. Оцениваются: степень знакомства с основной и дополнительно литературой, а также с современными публикациями; умение применить теорию к практике, решать определенные практические задачи данной предметной области и т. д.; логика, структура и стиль ответа, умение защищать выдвигаемые положения.

Подготовка к экзамену – это тщательное изучение и систематизация учебного материала, осмысление и запоминание теоретических положений, формулировок, формул, установление и осмысление внутрипредметных связей между различными темами дисциплины, закрепление теоретических знаний путем решения определенных задач.

Планируйте подготовку к экзамену, учитывая сразу несколько факторов: неоднородность в сложности учебного материала и степени его проработки в ходе обучения, свои индивидуальные способности. Рекомендуется делать перерывы в занятиях через каждые 50-60 минут на 10 минут. После 3-4 часов занятий следует сделать часовой перерыв.

Подготовку к экзамену следует начинать с общего планирования своей деятельности. Второй этап предусматривает системное изучение материала по данному предмету с обязательной записью всех выкладок, выводов, формул. На третьем этапе – этапе закрепления – полезно чередовать углубленное повторение особенно сложных вопросов с беглым повторением всего материала.

4. Рекомендации по работе с литературой

Литературу по дисциплине рекомендуется читать как в бумажном, так и в электронном виде (если отсутствует бумажный аналог). Полезно использовать несколько учебников и пособий по дисциплине. Рекомендуется после изучения очередного параграфа ответить на несколько вопросов по данной теме. Кроме того, полезно мысленно задать себе следующие вопросы (и попробовать ответить на них): «о чем этот параграф?», «какие новые понятия введены, каков их смысл?», «зачем мне это нужно по специальности?».

Рекомендуется самостоятельно изучать материал, который еще не применялся на практическом занятии, тогда занятия будут гораздо понятнее. В течение недели рекомендуется выбрать время (1 час) для работы с литературой.

5. Основная учебная литература

1. Вардашкина, Е.В. Insight into Academic Writing : учебное пособие / Е.В. Вардашки-на, П.В. Ермакова. — Москва: МИСИС, 2013. — 119 с. — ISBN 978-5-87623-728-6. — Текст: электронный // Лань: электронно-библиотечная система. — URL: https://e.lanbook.com/book/117608.

2. Закирьянова, И.А. Практика научного общения на английском языке. Practice of Scientific Communication in English : учебное пособие / И.А. Закирьянова. — Москва : Центр-каталог, 2019. — 64 с. — ISBN 978-5-903268-23-8. — Текст: электронный // Лань : электрон-но-библиотечная система. — URL: https://e.lanbook.com/book/125435.

3. Никульшина Н.Л. Учись писать научные статьи на английском языке [Электронный ресурс]: учебное пособие/ Никульшина Н.Л., Гливенкова О.А., Мордовина Т.В.— Электрон. текстовые данные.— Тамбов: Тамбовский государственный технический университет, ЭБС АСВ, 2012.— 172 с.— Режим доступа: http://www.iprbookshop.ru/64609.html.— ЭБС «IPRbooks»..

Дополнительная литература

1. Алехина, М.С. Английский язык: Основы теории и практики перевода научно-технической литературы: учебное пособие / М.С. Алехина, А.В. Щербакова. — Москва: МИСИС, 2009. — 97 с. — Текст : электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/117616.

2. Белова Н.А. Практикум по переводу с английского языка на русский [Электронный

ресурс]: учебное пособие/ Белова Н.А.— Электрон. текстовые данные.— Оренбург: Оренбургский государственный университет, ЭБС АСВ, 2015.— 108 с.— Режим доступа: http://www.iprbookshop.ru/61394.html.— ЭБС «IPRbooks»
3. Гунина Н.А. Технический перевод [Электронный ресурс]: учебное пособие/ Гунина Н.А., Мордовина Т.В., Шеленкова И.В.— Электрон. текстовые данные.— Тамбов: Тамбов-ский государственный технический университет, ЭБС АСВ, 2013.— 81 с.— Режим доступа: http://www.iprbookshop.ru/64591.html.— ЭБС «IPRbooks».
4. Кузнецова, И.К. Practice of writing business letters : учебное пособие / И.К. Кузнецо-ва. — Москва : ЕАОИ, 2010. — 64 с. — ISBN 978-5-374-00461-8. — Текст : электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/126245.
5. Медведева, Н.П. Грамматика научного текста : учебное пособие / Н.П. Медведева, Н.В. Елфимова. — Новосибирск : НГТУ, 2017. — 84 с. — ISBN 978-5-7782-3282-2. — Текст: электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/118565.
6. Мамонтова, Н.Ю. Развитие умений деловой коммуникации на английском языке: рабочая тетрадь для магистров : учебное пособие / Н.Ю. Мамонтова. — Кемерово: КузГТУ имени Т.Ф. Горбачева, 2017. — 76 с. — ISBN 978-5-906969-41-5. — Текст : электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/105474.
7. Рябцева, Н.К. Научная речь на английском языке: Руководство по научному изложению. Словарь оборотов и сочетаемости общенаучной лексики : словарь / Н.К. Рябцева. — 7-е изд., стер. — Москва : ФЛИНТА, 2019. — 599 с. — ISBN 978-5-89349-167-8. — Текст : электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/119421.
8. Bulatova, I.M. Focus on scientific paper. A guide for writing and analyzing : учебное пособие / I.M. Bulatova. — Казань : КНИТУ, 2017. — 100 с. — ISBN 978-5-7882-2130-4. — Текст : электронный // Лань : электронно-библиотечная система. — URL: https://e.lanbook.com/book/102154.

ПЕРЕЧЕНЬ РЕСУРСОВ ИНФОРМАЦИОННО-КОММУНИКАЦИОННОЙ СЕТИ ИНТЕРНЕТ, ИСПОЛЬЗУЕМОЙ ДЛЯ ИЗУЧЕНИЯ ДИСЦИПЛИНЫ

1. Электронно-библиотечная система «Лань», режим доступа - с любого компьютера РГРТУ без пароля. - URL: https://e-lanbook.com/.

2. Электронно-библиотечная система «IPRbooks», режим доступа - с любого компьютера РГРТУ без пароля, из сети интернет по паролю. - URL: https://iprbookshop.ru/.

3. Электронная библиотека ЮРАЙТ, режим доступа из сети интернет без пароля. - URL: https: //bib1io-on1ine.ru/info/free-books/.

4. Электронная библиотека научных публикаций «eLIBRARY.RU» [Электронный ресурс] — Режим доступа: http://elibrary.ru/, свободный.

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