ПРИЛОЖЕНИЕ

МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ
«РЯЗАНСКИЙ ГОСУДАРСТВЕННЫЙ РАДИОТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ
ИМЕНИ В.Ф. УТКИНА»

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ОЦЕНОЧНЫЕ МАТЕРИАЛЫ

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1. ПЕРЕЧЕНЬ КОМПЕТЕНЦИЙ С УКАЗАНИЕМ ЭТАПОВ ИХ ФОРМИРОВАНИЯ В ПРОЦЕССЕ ОСВОЕНИЯ ОБРАЗОВАТЕЛЬНОЙ ПРОГРАММЫ

Перечень компетенций (планируемых результатов освоения образовательной программы), выявленных в матрице компетенций, представлен в таблице 1 рабочей программы дисциплины совместно с планируемыми результатами обучения по дисциплине, а также в таблице 1 фонда оценочных средств (раздел 2) с указанием этапов (семестров) их освоения.

Результаты обучения вносят свой вклад в формирование различных компетенций, предусмотренных образовательной программой. В свою очередь, компетенции на разных уровнях категорий «знать», «уметь», «владеть» формируются модулями (разделами) дисциплины, а также различными дисциплинами образовательной программы.

2. ОПИСАНИЕ ПОКАЗАТЕЛЕЙ И КРИТЕРИЕВ ОЦЕНИВАНИЯ КОМПЕТЕНЦИЙ НА РАЗЛИЧНЫХ ЭТАПАХ ИХ ФОРМИРОВАНИЯ, ОПИСАНИЕ ШКАЛ ОЦЕНИВАНИЯ

Фонд оценочных средств (ФОС) предусматривает:

– описание комплекса **показателей** – дескрипторов освоения компетенций в виде результатов обучения, которые студент может продемонстрировать (таблица 1). Для контроля достижения каждого из них предусмотрены оценочные средства в виде вопросов, заданий и т.д.;

– обозначение **критериев** – правил принятия решения по оценке достигнутых результатов обучения и сформированности компетенций.

Критерии оценивания промежуточной аттестации согласно Положению о промежуточной аттестации студентов РГРТУ:

- оценки «отлично» заслуживает обучающийся, продемонстрировавший всестороннее, систематическое и глубокое понимание материалов изученной дисциплины, умение свободно выполнять задания, предусмотренные программой, усвоивший основную и знакомый с дополнительной литературой, рекомендованной рабочей программой дисциплины; проявивший творческие способности в понимании, изложении и использовании материалов изученной дисциплины, безупречно ответивший не только на вопросы билета, но и на дополнительные вопросы в рамках рабочей программы дисциплины; - оценки «хорошо» заслуживает обучающийся, продемонстрировавший полное знание материала изученной дисциплины, успешно выполнивший предусмотренные задания, усвоивший основную литературу, рекомендованную рабочей программой дисциплины; показавший систематический характер знаний по дисциплине, ответивший на все вопросы билета, но допустивший при этом непринципиальные ошибки; - оценки «удовлетворительно» заслуживает обучающийся, продемонстрировавший знание материала изученной дисциплины в объеме, необходимом для дальнейшей учебы и предстоящей работы по профессии, справляющийся с выполнением заданий, знакомый с основной литературой, рекомендованной рабочей программой дисциплины; допустивший погрешность в ответе на вопросы билета, но обладающий необходимыми знаниями для их устранения под руководством преподавателя;
- оценки «неудовлетворительно» заслуживает обучающийся, продемонстрировавший серьезные пробелы в знаниях основного материала изученной дисциплины, допустивший принципиальные ошибки в ответах на вопросы билета и дополнительные вопросы. Как правило, оценка «неудовлетворительно» ставится обучающимся, которые не могут продолжить обучение по образовательной программе без дополнительных занятий по соответствующей дисциплине (формирования и развития компетенций, закрепленных за данной дисциплиной);
- оценки «зачтено» заслуживает обучающийся, продемонстрировавший полное знание материала изученной дисциплины, усвоивший основную литературу, рекомендованную рабочей программой дисциплины; показавшему систематический характер знаний по дисциплине, ответившему на все вопросы билета или допустившему погрешность в ответе вопросы, но обладающему необходимыми знаниями для их устранения под руководством преподавателя;
- оценки «не зачтено» заслуживает обучающийся, продемонстрировавший серьезные пробелы в знаниях основного материала изученной дисциплины, не ответивший на все вопросы билета и дополнительные вопросы. Как правило, оценка «не зачтено» ставится обучающимся, которые не могут продолжить обучение по образовательной программе без дополнительных занятий по соответствующей дисциплине (формирования и развития компетенций, закрепленных за данной дисциплиной).

Показатели достижения планируемых результатов обучения и критерии их оценивания на разных уровнях формирования компетенций приведены в таблице 1.

Таблица 1. Показатели достижения индикаторов компетенции

Формируемые компетенции (*код и наименование компетенции*)	**Индикаторы достижения компетенций (*код и наименование индикатора*)**	**Результаты обучения *(знания, умения)***	**Этап**	**Наименование оценочного средства**
УК-4. Способен применять современные коммуникативные технологии, в том числе на иностранном(ых) языке(ах), для академического и профессионального взаимодействия	УК-4.1. Применяет коммуникативные технологии в академических и профессиональных целях. УК-4.2. Представляет результаты своей академической и профессиональной деятельности на публичных академических и профессиональных мероприятиях, в том числе, международного уровня.	З-1. Знает правила и закономерности личной и деловой устной и письменной коммуникации З-2. Знает современные коммуникативные технологии на русском и иностранном языках У-1. Умеет применять на практике коммуникативные технологии, методы и способы делового общения для академического и профессионального взаимодействия В-1. Владеет методикой межличностного делового общения на русском и иностранном языках, с применением профессиональных языковых форм, средств и современных коммуникативных технологий	1-2	Рубежные контроли Сообщения по темам модуля Работа на семинарах
УК-5. Способен анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия	УК-5.1. Анализирует и учитывает культурное разнообразие в процессе межкультурного взаимодействия. УК-5.2. Осуществляет эффективное взаимодействие с представителями других культур, в том числе, на изучаемом иностранном языке.	З-1. Знает закономерности и особенности социально-исторического развития различных культур З-2. Знает особенности межкультурного разнообразия общества З-3. Знает правила и технологии эффективного межкультурного взаимодействия У-1. Умеет понимать и толерантно воспринимать межкультурное разнообразие общества У-2. Умеет анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия В-1. Владеет методами и навыками эффективного межкультурного	1-2	Рубежные контроли Сообщения по темам модуля Работа на семинарах

		взаимодействия		

3. ТИПОВЫЕ КОНТРОЛЬНЫЕ ЗАДАНИЯ ИЛИ ИНЫЕ МАТЕРИАЛЫ, НЕОБХОДИМЫЕ ДЛЯ ОЦЕНКИ ЗНАНИЙ, УМЕНИЙ, НАВЫКОВ И (ИЛИ) ОПЫТА ДЕЯТЕЛЬНОСТИ, ХАРАКТЕРИЗУЮЩИЕ ЭТАПЫ ФОРМИРОВАНИЯ КОМПЕТЕНЦИЙ В ПРОЦЕССЕ ОСВОЕНИЯ ОБРАЗОВАТЕЛЬНОЙ ПРОГРАММЫ

ФОС по дисциплине содержит следующие оценочные средства, позволяющие оценить знания, умения и уровень приобретенных компетенций при текущем контроле и промежуточной аттестации, разбитые по модулям дисциплины:

- комплекты заданий рубежных контролей;
- примеры типовых вопросов и заданий для оценки работы на семинарах;
- перечни типовых тем сообщения по теме модуля;
- перечни тем к зачетам и примеры заданий к зачетам (для ликвидации академической задолженности и устранения академической разницы)

Средства для оценки различных уровней формирования компетенций по категориям «знать», «уметь», «владеть» обеспечивают реализацию основных принципов контроля, таких, как объективность и независимость, практико-ориентированность, междисциплинарность.

В таблице приведены результаты обучения и соответствующие им типы вопросов рубежных контролей, работы на семинарах, сообщений:

Уровень ЗНАТЬ

Дескрипторы	**Пример задания из оценочного средства**
Знает правила и закономерности личной и деловой устной и письменной коммуникации	**Choose the correct option.** 1. **Having passing / For passing / To pass** this exam you need to study / for studying. 2. **To not fail / To don't fail / In order not to fail** I suggest that you study as much as possible. 3. **To carry / Carrying out** this request entails to do / doing a lot of research. 4. **To live / Living** in Europe is often easier than to live / living in Africa. 5. **To live / Living** well in Japan you need a high salary. 6. **Not to have / To don't have / Not having** access to email would be a problem for most people. 7. I visited the mosque before **to come / coming** to the conference. 8. This section is devoted **to analyze / analyzing** the production process. 9. This is dedicated **to provide / providing** a good service for everyone. 10. This article contributes **to understand / understanding** how the process works.
Знает современные коммуникативные технологии на русском и иностранном языках	**Give a talk on the topic "What makes a good writing" and discuss the following statements with your partners.** 1. Appropriate paragraphing and good use of a range of linking devices are essential features of all writing tasks. 2. What information is contained in each paragraph of the model answer below? 3. Underline examples of words or phrases that link ideas or sentences. Formal letter In part 2 of the writing paper, you might have the opportunity to write a letter or an email. You may be required to use a formal or less formal style, depending on your reason for writing, and on the target reader. You will not need to include addresses, but you should know how to begin your letter/email appropriately (e.g. To the Editor, Dear Sir/Madam, Dear Simon Smith, To whom it may concern, To all staff members, Hi Rose) and finish it (e.g. Yours sincerely, Regards, Thank you for your attention, See you soon). **Express your opinion.** *For most advanced writing tasks, you will need to persuade the target reader that something is a good idea or the right course of action to take. How might the following elements of the model answer have a positive effect on the manager?* - the way the writer describes the community Centre and the event - the point at which the writer asks for money - the verbs and tenses used by the writer in the third and fourth paragraph
Знает закономерности и особенности социально-исторического развития	**Read the text and find answers to the questions below it. Give your opinions on social-cultural development of global science.** **Contemporary Science and its Development** 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

различных культур	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. Subtopics 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'.
Знает особенности межкультурного разнообразия общества	**Read the text and translate one paragraph from the following text in the written form paying attention to its grammar, lexical, and stylistic peculiarities.** **Iranians Turn to Telegram App Amid Protests** Nearly a decade ago, a then-fledgling internet tool played a starring role in a protest movement that swept Iran, with organizers and witnesses communicating with each other, and the rest of the world, via Twitter. Today, a loose-knit group of Iranian protesters has added a new tool: Telegram, a smartphone messaging app that people have used to share information about demonstrations and videos of gatherings. "Telegram has been the most important tool for many Iranians to access uncensored news and information," said Fereidoon Bashar co-director of ASL19, a Canada-based research and tech lab that helps people in Iran access information. Sharing news and information has become important during the protests, which have evolved without centralized leadership, Mr. Bashar said. Iranians' use of social media to facilitate protests, and the government's efforts to block them, represent the latest moves in a cat-and-mouse game that has played out in several countries in recent years. The Iranian government has moved to rein in protesters' ability to organize and communicate. It is restricting access to Telegram and Instagram, the photo-sharing site owned by Facebook Inc., state media has reported. The semi-official Iranian Labor News Agency reported over the weekend that authorities had ordered blockages of mobile and landline internet access in

	areas near protests or anti-government gatherings. In response, Iranians have ramped up their use of circumvention tools to allow apps like Telegram to function, according to activists and developers of the tools. State Department spokeswoman Heather Nauert said the U.S. is calling on Iran to stop blocking social-media sites and to respect the rights of protesters to speak freely in public and online. "When a nation clamps down on social media…we ask the question, 'What are you afraid of?" she said.
Знает правила и технологии эффективного межкультурного взаимодействия	**Give a talk on one of the following topics. Express and prove your opinions; support them with the examples from your experience. Discuss the topics in the group.** 1. What do sociologists mean by the term society? Do you agree with this definition? Why yes or why not? 2. Describe three technological advances in recent years that have changed the society you live in. 3. How are technologically advanced societies different from societies with simpler technologies? Give an example of how they differ. 4. What are the effects of practicing a patient's brain surgery using Virtual Reality and computer simulation before performing it? 5. Virtual Reality has been slow to catch on with consumers, despite the high-profile launches of headsets from Facebook Inc.'s Oculus unit. What conclusion can be drawn based on this evidence? 6. Why are the formal sciences often excluded from the system of science? 7. Why was science more closely linked to philosophy than it is now? 8. How did science develop in the 17th and 18th centuries? 9. How do some businesses believe Virtual Reality is affecting their training for employees? 10. Comment on the expression 'Science is a global human endeavor'.

Уровень УМЕТЬ

Дескрипторы	**Пример задания из оценочного средства**
Умеет применять на практике коммуникативные технологии, методы и способы делового общения для академического и профессионального взаимодействия	**Group discussion on the topic «Defending Master`s Thesis is a Challenge». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.** 1. Master`s thesis represents a student`s collective understanding of his/her program and major. 2. Completing your research and resulting paper demand your full attention. 3. "Defending" implies aggressive arguing about his or her work. 4. A proper thesis defense gives you and your faculty advisers the chance to discuss your topic and research in greater detail. 5. Defending your master`s thesis will give you confidence to speak up in front of others, a skill that will serve you throughout your career.
Умеет понимать и толерантно воспринимать межкультурное разнообразие общества	**Read the text and do the exercises below it. Pay attention to the intercultural diversity and tolerant attitude to social peculiarities.** **The Rocket - From East to West** A. The concept of the rocket, or rather the mechanism behind the idea of propelling an object into the air, has been around for well over two thousand years. However, it wasn't until the discovery of the reaction principle, which was the key to space travel and so represents one of the great milestones in the history of scientific thought, that rocket technology was able to develop. Not only did it solve a problem that had intrigued man for ages, but, more importantly, it literally opened the door to the exploration of the universe. B. An intellectual breakthrough, brilliant though it may be, does not automatically ensure that the transition is made from theory to practice. Despite the fact that rockets had been used sporadically for several hundred years, they remained a relatively minor artefact of civilization until the twentieth century. Prodigious efforts, accelerated during two world wars, were required before the technology of primitive rocketry could be translated into the reality of sophisticated astronauts. It is strange that the rocket was generally ignored by writers of fiction to transport their heroes to mysterious realms beyond

the Earth, even though it had been commonly used in fireworks displays in China since the thirteenth century. The reason is that nobody associated the reaction principle with the idea of traveling through space to a neighboring world.

C. A simple analogy can help us to understand how a rocket operates. It is much like a machine gun mounted on the rear of a boat. In reaction to the backward discharge of bullets, the gun, and hence the boat, move forwards. A rocket motor's 'bullets' are minute, high-speed particles produced by burning propellants in a suitable chamber. The reaction to the ejection of these small particles causes the rocket to move forwards. There is evidence that the reaction principle was applied practically well before the rocket was invented. In his Noctes Atticae or Greek Nights, Aulus Gellius describes 'the pigeon of Archytas', an invention dating back to about 360 BC. Cylindrical in shape, made of wood, and hanging from string, it was moved to and for by steam blowing out from small exhaust ports at either end. The reaction to the discharging steam provided the bird with motive power.

D. The invention of rockets is linked inextricably with the invention of 'black powder'. Most historians of technology credit the Chinese with its discovery. They base their belief on studies of Chinese writings or on the notebooks of early Europeans who settled in or made long visits to China to study its history and civilization. It is probable that, sometime in the tenth century, black powder was first compounded from its basic ingredients of saltpetre, charcoal and sulphur. But this does not mean that it was immediately used to propel rockets. By the thirteenth century, powder propelled fire arrows had become rather common. The Chinese relied on this type of technological development to produce incendiary projectiles of many sorts, explosive grenades and possibly cannons to repel their enemies. One such weapon was the 'basket of fire' or, as directly translated from Chinese, the 'arrows like flying leopards'. The 0.7-meter-long arrows, each with a long tube of gunpowder attached near the point of each arrow, could be fired from a long, octagonal-shaped basket at the same time and had a range of 400 paces. Another weapon was the 'arrow as am flying sabre', which could be fired from crossbows. The rocket, placed in a similar position to other rocket-propelled arrows, was designed to increase the range. A small iron weight was attached to the 1.5m bamboo shaft, just below the feathers, to increase the arrow's stability by moving the center of gravity to a position below the rocket. At a similar time, the Arabs had developed the 'egg which moves and burns'. This 'egg' was apparently full of gunpowder and stabilized by a 1.5m tail. It was fired using two rockets attached to either side of this tail.

E. It was not until the eighteenth century that Europe became seriously interested in the possibilities of using the rocket itself as a weapon of war and not just to propel other weapons. Prior to this, rockets were used only in pyrotechnic displays. The incentive for the more aggressive use of rockets came not from within the European continent but from far-away India, whose leaders had built up a corps of rocketeers and used rockets successfully against the British in the late eighteenth century. The Indian rockets used against the British were described by a British Captain serving in India as 'an iron envelope about 200 millimetres long and 40 millimeters in diameter with sharp points at the top and a 3m-long bamboo guiding stick'. In the early nineteenth century, the British began to experiment with incendiary barrage rockets. The British rocket differed from the Indian version in that it was completely encased in a stout, iron cylinder, terminating in a conical head, measuring one meter in diameter and having a stick almost five meters long and constructed in such a way that it could be firmly attached to the body of the rocket. The Americans developed a rocket, complete with its own launcher, to use against the Mexicans in the mid-nineteenth century. A long cylindrical tube was propped up by two sticks and fastened to the top of the launcher, thereby allowing the rockets to be inserted and lit from the other end. However, the results were sometimes not that impressive as the behavior of the rockets in flight was less than predictable. Since then, there have been huge developments in rocket technology, often with devastating results in the forum of war. Nevertheless, the modern-day space programs owe their success to the humble beginnings of those in previous centuries who developed the foundations of the reaction principle. Who knows what it will be like in the future?

Choose the correct option (a, b, c or d). Express your opinion.

1. The greatest outcome of the discovery of the reaction principle was that …….

a) rockets could be propelled into the air.
b) space travel became a reality.
c) a major problem had been solved.
d) bigger rockets were able to be built.

	2. According to the text, the greatest progress in rocket technology was made a) from the tenth to the thirteenth centuries. b) from the seventeenth to the nineteenth centuries. c) from the early nineteenth to the late nineteenth century. d) from the late nineteenth century to the present day. 3. Match the inventions (1-5) and the people who first invented or used them (a-b). 1. rockets for displays 2. black powder 3. rocket-propelled arrows for fighting 4. rockets as war weapons 5. the rocket launcher a) the Chinese b) the Indians c) the British d) the Arabs e) the Americans
Умеет анализировать и учитывать разнообразие культур в процессе межкультурного взаимодействия	**Fill in the gaps with the most appropriate words from the list*: linking, regulate, potential, ensure, partners, inappropriateness, criteria, impact, seek, construction, compensation, technological, contributor, implied, shifting, maintain, registration, elementary, community, tradition.*** **Pay attention to the cultural diversity of vocabulary usage in each case.** 1. Libya has long been a crossroads, ……. three continents. 2. ……. for fall programs begins on August first. 3. Eating plenty of fruits, vegetables, protein and dairy products will ……. your body gets the minerals it needs. 4. He received almost half a million dollars in ……. after an accident in which the brakes on his new car failed. 5. Potential immigrants to this country are evaluated using a point system which examines ……. such as age, health, work skills, and education. 6. The discoveries of Albert Einstein began a ……. revolution that has generated more change in a century than in the previous two thousand years. 7. Studies by Gradman and Hanania have shown that regular out of class reading is the most important direct ……. to success on the TOEFL test. 8. In November of 1995, Hsu Youshen and Gary Harriman were ……. in the first gay wedding to be held in Taiwan. 9. I can't believe Sandra ……. that I was having some kind of affair with my boss just because I often work late with him. 10. The ……. sands of the desert in some parts of Egypt can make for a difficult and dangerous crossing. 11. I would ……. a second opinion if you don't agree with what your doctor said. 12. The number and kind of animals and plants making up a lake ……. changes continuously. 13. Setting off fireworks on Halloween is a popular ……. in this country. 14. In the future, we may have tiny computers inside us to monitor, and even ……. functions such as heart rate or blood pressure. 15. I can't understand why they hired him to work in the computer lab; at best he has only a very ……. knowledge of computers. 16. European diseases had a devastating ……. on the native people of Guatemala. 17. My uncle works in ……. as an electrician. 18. The ……. of his language continually causes great embarrassment at our weekly staff meetings. 19. Ensuring that a child's basic needs are met helps to enable them to reach their full …….. 20. One of the goals of the United Nations is to ……. international peace and security.

Уровень ВЛАДЕТЬ

Дескрипторы	**Пример задания из оценочного средства**
Владеет методикой межличностного делового общения на русском и иностранном языках, с применением профессиональных языковых форм, средств и	**Group discussion on the topic «Principles of Knowledge Management». Discuss the follo prove your opinions; support them with the examples from your experience.** 1. Knowledge management is based on the idea that knowledge is an asset that should be mana 2. Knowledge management principles are an enduring set of guidelines for managing knowl program or team. Knowledge management is based on the idea that knowledge is an asset that 3. Knowledge that isn't improved quickly loses its value. Knowledge management is a process 4. Search is a critical tool for knowledge discovery. Executive management may choose to ma 5. A primary goal of knowledge management is to facilitate the sharing of knowledge. Encour

современных коммуникативных технологий	learn sessions). 6. Knowledge that sits on a shelf has no value. The value of knowledge depends on cor assessment, improvement and use of knowledge is largely a social process.
Владеет методами и навыками эффективного межкультурного взаимодействия	**Group discussion on the topic «Defending Master`s Thesis in English is a Challenge». Di Express and prove your opinions; support them with the examples from your experience** 1. Master`s thesis represents a student`s collective understanding of his/her program and majo 2. Completing your research and resulting paper demand your full attention. 3. "Defending" implies aggressive arguing about his or her work. 4. A proper thesis defense gives you and your faculty advisers the chance to discuss your topic 5. Defending your master`s thesis will give you confidence to speak up in front of others, a ski

4. МЕТОДИЧЕСКИЕ МАТЕРИАЛЫ, ОПРЕДЕЛЯЮЩИЕ ПРОЦЕДУРЫ ОЦЕНИВАНИЯ ЗНАНИЙ, УМЕНИЙ, НАВЫКОВ И (ИЛИ) ОПЫТА ДЕЯТЕЛЬНОСТИ, ХАРАКТЕРИЗУЮЩИХ ЭТАПЫ ФОРМИРОВАНИЯ КОМПЕТЕНЦИЙ

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

Наименование оценочного средства	Краткая характеристика оценочного средства	Представление оценочного средства в фонде
Рубежный контроль	Средство проверки освоения уровней «знать», «уметь» компетенций	Комплекты заданий рубежных контролей
Работа на семинарах	Средство проверки освоения уровней «знать», «уметь», «владеть» компетенций	Примеры типовых вопросов и заданий для оценки работы на семинарах
Сообщение по теме модуля	Средство проверки освоения уровней «знать», «уметь» компетенций	Перечни тем сообщения
Зачет (для ликвидации академической задолженности и устранения академической разницы)	Средство проверки освоения уровней «знать», «уметь», «владеть» компетенций	Перечень тем примеры заданий

Комплект заданий рубежного контроля № 1

Variant 1.

1. Choose the correct option.

1. It was **the decision of Adam / Adam's decision** to take out the loan, so he has to take responsibility for repaying it. 2. I saw two great TV programs last week. The first was **an action film / a film about action**, 3. and the second **a documentary about young entrepreneurs / a young entrepreneur's documentary**. 4 John is **someone I worked with in Malaysia's brother / the brother of someone I worked with in Malaysia**. 5. I don't like tomatoes, so I left them at **the side of the plate / the plate's side**. 6. My current **researches are / research is** concerned with blind signal processing, that is, 7. manipulating or extracting **information / informations** from any kind of signal without knowing the system, or the physical process. 8. The nuclear power station is in an earthquake zone, and it's worrying that there have been **a few / a little** minor tremors here in the last couple of months. 9. **We were all / We all were** astonished by her exam results. 10. Nowadays, **nearly every / nearly each** new car is fitted with airbags.

2. Fill in the gaps with the most appropriate words from the list: income, percent, contextualize, exportation, various, distribution, significantly, requirements, labourer, authorize.

1. You have to ……. the remark in the overall discussion to fully understand what was meant. 2. I'm not allowed to ……. any purchases. You'll have to talk to my boss. 3. The ……. of raw logs to Asia and the U.S. continues to be one of this province's most important industries. 4. Highly unequal income ……. remains a serious problem in Brazil. 5. Denmark has the highest rate of ……. tax in the world, at 68%. 6. Inflation has risen by less than 1 ……. this year. 7. Obviously, one of the first ……. to be a firefighter is that you be in excellent physical shape. 8. Her English improved ……. after she got a Canadian boyfriend. 9. He works as a ……. on a roadbuilding crew for the city. 10. This restaurant has a wonderful buffet with dishes from ……. countries.

3. Read the text and do the tasks below it.

Making Time for Science

Chronobiology might sound a little futuristic – like something from a science fiction novel, perhaps – but it's actually a field of study that concerns one of the oldest processes life on this planet has ever known: short-term rhythms of time and their effect on flora and fauna. This can take many forms. Marine life, for example, is influenced by tidal patterns. Animals tend to be active or inactive depending on the position of the sun or moon. Numerous creatures, humans included, are largely diurnal – that is, they like to come out during the hours of sunlight. Nocturnal animals, such as bats and possums, prefer to forage by night. A third group are known as crepuscular: they thrive in the lowlight of dawn and dusk and remain inactive at other hours.

When it comes to humans, chronobiologists are interested in what is known as the circadian rhythm. This is the complete cycle our bodies are naturally geared to undergo within the passage of a twenty-four-hour day. Aside from sleeping at night and waking during the day, each cycle involves many other factors such as changes in blood pressure and body temperature. Not everyone has an identical circadian rhythm. 'Night people', for example, often describe how they find it very hard to operate during the morning, but become alert and focused by evening. This is a benign variation within circadian rhythms known as a chronotype.

Scientists have limited abilities to create durable modifications of chronobiological demands. Recent therapeutic developments for humans such as artificial light machines and melatonin administration can reset our circadian rhythms, for example, but our bodies can tell the difference and health suffers when we breach these natural rhythms for extended periods of time. Plants appear no more malleable in this respect; studies demonstrate that vegetables grown in season and ripened on the tree are far higher in essential nutrients than those grown in greenhouses and ripened by laser. Knowledge of chronobiological patterns can have many pragmatic implications for our day-to-day lives. While contemporary living can sometimes appear to subjugate biology – after all, who needs circadian rhythms when we have caffeine pills, energy drinks, shift work and cities that never sleep? – keeping in synch with our body clock is important.

The average urban resident, for example, rouses at the eye-blearing time of 6.04 a.m., which researchers believe to be far too early. One study found that even rising at 7.00 a.m. has deleterious effects on health unless exercise is performed for 30 minutes afterward. The optimum moment has been whittled down to 7.22 a.m.; muscle aches, headaches and moodiness were reported to be lowest by participants in the study who awoke then. Once you're up and ready to go, what then? If you're trying to shed some extra pounds, dieticians are adamant: never skip breakfast. This disorients your circadian rhythm and puts your body in starvation mode. The recommended course of action is to follow an intense workout with a carbohydrate-rich breakfast; the other way around and weight loss results are not as pronounced.

Morning is also great for breaking out the vitamins. Supplement absorption by the body is not temporal-dependent, but naturopath Pam Stone notes that the extra boost at breakfast helps us get energized for the day ahead. For improved absorption, Stone suggests pairing supplements with a food in which they are soluble and steering clear of caffeinated beverages. Finally, Stone warns to take care with storage; high potency is best for absorption, and warmth and humidity are known to deplete the potency of a supplement. After-dinner espressos are becoming more of a tradition – we have the Italians to thank for that – but to prepare for a good night's sleep we are better off putting the brakes on caffeine consumption as early as 3 p.m. With a seven-hour half-life, a cup of coffee containing 90 mg of caffeine taken at this hour could still leave 45 mg of caffeine in your nervous system at ten o'clock that evening. It is essential that, by the time you are ready to sleep, your body is rid of all traces.

Evenings are important for winding down before sleep; however, dietician Geraldine Georgeou warns that an after-five carbohydrate-fast is more cultural myth than chronobiological demand. This will deprive your body of vital energy needs. Overloading your gut could lead to indigestion, though. Our digestive tracts do not shut down for the night entirely, but their work slows to a crawl as our bodies prepare for sleep. Consuming a modest snack should be entirely sufficient.

Comprehension Check

1. What did researchers identify as the ideal time to wake up in the morning?
   a) 6.04
   b) 7.00
   c) 7.22
   d) 7.30
2. In order to lose weight, we should
   a) avoid eating breakfast
   b) eat a low carbohydrate breakfast
   c) exercise before breakfast
   d) exercise after breakfast
3. Which is NOT mentioned as a way to improve supplement absorption?
   a) avoiding drinks containing caffeine while taking supplements

b) taking supplements at breakfast
c) taking supplements with foods that can dissolve them
d) storing supplements in a cool, dry environment

4. In the evening, we should
a) stay away from carbohydrates
b) stop exercising
c) eat as much as possible
d) eat a light meal

5. Which of the following phrases best describes the main aim of the text?
a) to suggest healthier ways of eating, sleeping and exercising
b) to describe how modern life has made chronobiology largely irrelevant
c) to introduce chronobiology and describe some practical applications
d) to plan a daily schedule that can alter our natural chronobiological rhythms

Variant 2.

1. Choose the correct option.

1. He apologized without **the hesitation of a moment / a moment's hesitation**. 2. My house is by **a children playground / a children's playground**, so it can be quite noisy. 3. **The construction of the new library / The new library's construction** took so long that building costs were ten times higher than first expected. 4. I am an enthusiastic and motivated twenty-four-**year-old / -years-old** electronics engineer with a special interest in XYZ. 5. I have spent **the last / last** six months doing **an / the** internship at XTX Semiconductors Inc. in Richmond. 6. The hurricane will go north of the city, so **a little / a few** major damage is expected. 7. These old bookshelves **will all be / all will be** replaced by cupboards. 8. It takes me **fewer / less** than 30 minutes to walk to work. 9. I believe our research would provide **a / an / the** unique contribution to this important subject. 10. We think that these findings provide **any / some** new information for **researchers / the researchers**.

2. Fill in the gaps with the most appropriate words from the list: specifics, established, data, area, interpretation, principle, major, role, concept, reformulate.

1. In some cultures, there is no …… of personal public space, so bumping into people by accident in the street is considered normal and does not indicate rudeness. 2. The Internet was born in 1969 when researchers linked two computers using a 15-foot cable, testing a new way for exchanging ……over networks. 3. In the seventeenth century, Bacon, Descartes, Galileo, Kepler, Liebniz and Newton …… the foundations of modern science, mathematics, and rational thought. 4. According to Gandhi, politics without …… is a sin. 5. Most networks link computers within a limited ……, such as within a department, office or building. 6. The …… of the Bible has changed throughout the years. 7. We need to draw up some general guidelines for the project before we start getting down to …… . 8. The team of scientists had to completely …… its hypothesis after analyzing the results of their experiments. 9. In my opinion, Daniel Craig has been the best person to play the …… of secret agent James Bond in the Bond movies. 10. Our hands are recognized by medical professionals as a …… source for spreading flu and cold germs.

3. Read the text and do the tasks below it.

The Return of Artificial Intelligence

A. After years in the wilderness, the term 'artificial intelligence' (AI) seems poised to make a comeback. AI was big in the 1980s but vanished in the 1990s. It re-entered public consciousness with the release of AI, a movie about a robot boy. This has ignited a public debate about AI, but the term is also being used once more within the computer industry. Researchers, executives and marketing people are now using the expression without irony or inverted commas. And it is not always hype. The term is being applied, with some justification, to products that depend on technology that was originally developed by AI researchers. Admittedly, the rehabilitation of the term has a long way to go, and some firms still prefer to avoid using it. But the fact that others are starting to use it again suggests that AI has moved on from being seen as an over-ambitious and under-achieving field of research.

B. The field was launched, and the term 'artificial intelligence' coined, at a conference in 1956 by a group of researchers that included Marvin Minsky, John McCarthy, Herbert Simon and Alan Newell, all of whom went on to become leading figures in the field. The expression provided an attractive but informative name for a research program that encompassed such previously disparate fields as operations research, cybernetics, logic and computer science. The goal they shared was an attempt to capture or mimic human abilities using machines. That said, different groups of researchers attacked different problems, from speech recognition to chess playing, in different ways; AI unified the field in name only. But it was a term that captured the public imagination.

C. Most researchers agree that AI peaked around 1985. A public reared on science-fiction movies and excited by the growing power of computers had high expectations. For years, AI researchers had implied that a breakthrough was just around the corner. Marvin Minsky said in 1967 that within a generation the problem of creating 'artificial intelligence' would be substantially solved. Prototypes of medical-diagnosis programs and speech

recognition software appeared to be making progress. It proved to be a false dawn. Thinking computers and household robots failed to materialize, and a backlash ensued. `There was undue optimism in the early 1980s; says David Leaky, a researcher at Indiana University. 'Then when people realized these were hard problems, there was retrenchment. By the late 1980s, the term AI was being avoided by many researchers, who opted instead to align themselves with specific sub-disciplines such as neural networks, agent technology, case-based reasoning, and so on.

D. Ironically, in some ways AI was a victim of its own success. Whenever an apparently mundane problem was solved, such as building a system that could land an aircraft unattended, the problem was deemed not to have been AI in the first plate. 'If it works, it can't be AI; as Dr. Leaky characterizes it. The effect of repeatedly moving the goal-posts in this way was that AI came to refer to 'blue-sky' research that was still years away from commercialization. Researchers joked that AI stood for 'almost implemented'. Meanwhile, the technologies that made it onto the market, such as speech recognition, language translation and decision-support software, were no longer regarded as AI. Yet all three once fell well within the umbrella of AI research.

E. But the tide may now be turning, according to Dr. Leake. HNC Software of San Diego, backed by a government agency, reckon that their new approach to artificial intelligence is the most powerful and promising approach ever discovered. HNC claim that their system, based on a cluster of 30 processors, could be used to spot camouflaged vehicles on a battlefield or extract a voice signal from a noisy background - tasks humans can do well, but computers cannot. 'Whether or not their technology lives up to the claims made for it, the fact that HNC are emphasizing the use of AI is itself an interesting development; says Dr. Leaky.

F. Another factor that may boost the prospects for AI in the near future is that investors are now looking for firms using clever technology, rather than just a clever business model, to differentiate themselves. In particular, the problem of information overload, exacerbated by the growth of e-mail and the explosion in the number of web pages, means there are plenty of opportunities for new technologies to help filter and categorize information - classic AI problems. That may mean that more artificial intelligence companies will start to emerge to meet this challenge.

G. The 1969 film, 2001: A Space Odyssey, featured an intelligent computer called HAL 9000. As well as understanding and speaking English, HAL could play chess and even learned to lipread. HAL thus encapsulated the optimism of the 1960s that intelligent computers would be widespread by 2001. But 2001 has been and gone, and there is still no sign of a HAL-like computer. Individual systems can play chess or transcribe speech, but a general theory of machine intelligence still remains elusive. It may be, however, that the comparison with HAL no longer seems quite so important, and AI can now be judged by what it can do, rather than by how well it matches up to a 30-year-old science-fiction film. 'People are beginning to realize that there are impressive things that these systems can do; says Dr. Leake hopefully.

Comprehension Check

1. According to researchers, in the late 1980s, there was a feeling that ……..
   a) a general theory of AI would never be developed.
   b) original expectations of AI may not have been justified.
   c) a wide range of applications was close to fruition.
   d) more powerful computers were the key to further progress.
2. In Dr. Leake's opinion, the reputation of AI suffered as a result of ……..
   a) changing perceptions.
   b) premature implementation.
   c) poorly planned projects.
   d) commercial pressures.
3. The prospects for AI may benefit from ……..
   a) existing AI applications.
   b) new business models.
   c) orders from Internet-only companies.
   d) new investment priorities.
4. In 1985, AI was ……
   a) at its highest point.
   b) at its deepest point.
   c) at its lowest point.
   d) at its standard point.
5. Research into agent technology …….
   a) was costlier than research into neural networks.
   b) has already had a degree of success.
   c) reflected contemporary ideas about the potential of AI computers.
   d) had applications of AI The film 2001: A Space Odyssey

Комплект заданий рубежного контроля № 2

Variant 1

1. Choose the best option: present simple, present continuous, present perfect, present perfect continuous

1. In the last few years there **is** / **has been** considerable interest in… 2. At the moment, I **am working / have been working** on a new project. 3. For more than a decade analysts **are developing** / **have been developing** new ways to improve learning strategies. 4. In the literature, there **are** / **have been** several examples of new strategies to perform these tests, which all **entail / have entailed** setting new parameters. 5. Since 2012 there **are / have been** many attempts to establish an index, but until now no one **has managed** / **has been managing** to solve the issue of… 6. As yet, a solution **is not** / **has not been** found, although three attempts **have been made / have been making**. 7. Traditionally, researchers **always see** / **have always seen** the time factor as a constraint. 8. In the last two years, we **are investigating / have been investigating** new ways to do this. 9. This **receives / has received** much attention in the past decade. 10. Recent developments in this field **lead / have led** researchers to consider new ways to do this. Such methods **are showing / have been showing** very good results.

2. Fill in the gaps with the most appropriate words from the list: components, validate, philosophy, excluded, reliable, convened, initiate, locations, deduced, specific.

1. The prime minister has ……. a meeting of cabinet to discuss new policy initiatives. 2. The movie is being filmed in a number of different ……. in and around Vancouver. 3. Skills in organizing and integrating information are important ……. of thinking critically. 4. Psychologists say that we like others who share our beliefs and attitudes because they ……. these values, which further convinces us that our values are the best ones. 5. My partner and I share a common business ……., but our specific ideas for achieving our goals are somewhat different. 6. Western women are not encouraged to ……. a handshake with men in India, as it is not customary. 7. In the early Christian church, instrumental music was ……. from public worship because it was not seen to open the mind to Christian teachings. 8. You can depend on Donald to be on time because he's so …….. 9. This dictionary is not made for any ……. language level; it can be used by anyone studying English, from the beginner to the advanced learner. 10. I ……. they were a having a love affair by studying their body language at the company Christmas party.

3. ***Read the text and answer the questions below it.***

Today's Surfers Are Leaving Tradition Behind and Taking to The Sky

Pro surfer Pat Gudauskas of San Clemente, Calif., has just 30 seconds to make his move – and it needs to be big. He's under extreme pressure at a surfing competition on an island in the Indian Ocean. Only the top two surfers in this heat will advance – and he's in third place. Ten-time world champion Kelly Slater caught big air at the Hurley Pro surfing competition in Southern California. He picks his wave and paddles hard. Soon he's sweeping down the curving face of the breaking wave, zigging and zagging ahead of the chasing white water. Then, suddenly, he veers back, zooms up the face of the wave, and launches into a dizzying aerial whirl. It's part 540-degree spin and part backflip, a wild rotation in two directions at once.

Successfully landing the move, called a rodeo clown, Gudauskas scores a perfect 10. It launches him into first place as well as surfing history as the first person to pull off that trickiest of tricks in a top-level competition. Not too long ago, a dazzling aerial display like that might have gotten Gudauskas disqualified. It certainly wouldn't have put him in first place. But the past several decades have seen a slow but accelerating transformation in the sport of surfing. Gone are the days when the most radical moves you could pull in surfing were floaters – traveling atop a wave's crest – and tube rides – cruising inside the hollow tube of a breaking wave. Today's top surfers are doing something once unthinkable: leaving the wave altogether.

Up or Bust

Surfers are now busting a fast-growing list of aerial moves with names such as indy, varial, Superman, melon grab, method air, and front side air reverse. Such tricks are borrowed largely from skateboarders and freestyle snowboarders. Surfers are even moving in on a skater staple known as the kickflip. It's the trick of jumping up and kicking the board so that it rotates in mid-air before landing on it again and riding away. Pulling aerials with a skateboard on dry land is one thing. Pulling the same moves with a 2-meter (7-foot) surfboard on a collapsing wall of water, each cubic meter of which weighs one ton, might be diagnosed as insane. But catching air is the only way up for aspiring surfers. "Nowadays, if you don't know how to do an air, it's hard to get by," pro surfer Alana Blanchard told Current Science. "I don't really know many pros who don't do airs."

rail grab surf move wave

Catch the Wave

Catching a wave isn't like catching a bus. If you just sit and wait for it, it'll pass you by. And as it passes, it will send you in a complete circular orbit—back, up, forward, and down – before moving on and leaving you behind, right where you started. Catching a wave is really more like trying to jump onto a moving streetcar. As it bears down from behind, you point your board toward the beach and paddle hard, digging in with both arms to accelerate (go faster). If you can roughly match your speed to that of the wave, your surfboard will slide down the front of the wave. The ride is on. The forces on a surfer waiting to catch a wave are simple and balanced. The downward force of gravity on both board and rider is balanced by the upward force of buoyancy, created by water

pushing up on the partially submerged board. Once the wave is caught and the surfboard starts moving through the water, however, hydrodynamic forces – forces exerted on an object by moving water – come into play.

Although hydrodynamic forces are partly determined by the shape and design of the surfboard itself, a skilful surfer can control them. For example, leaning to the right on a moving board pushes the right edge of the surfboard deeper into the water. That creates extra drag (a backward force) on the right-hand side and makes the board turn right. With slight (and often not-so-slight) adjustments to the way you balance on the board, you can use hydrodynamic forces to carve turns up and down the face of a wave. Launching an aerial has something in common with popping an ollie on a skateboard. You start by turning up toward the lip (crest) of the wave. A vertical section of the lip becomes your launching pad. As you approach it, you shove hard on your rear foot to pop the front of the surfboard up and off the wave. Once airborne, you can level out the board by applying pressure with the front foot, causing the rear of the board to rise as if it's glued to your back foot. The exact path you take through the air is determined by your direction and your rotation at the moment you leave the wave. In the air, you become a projectile, and the only force that can act on you there is gravity. That's why the launch is so crucial.

Where the Waves Are

When a sweet surfing wave rears up on a beach in, say, Southern California, it's the grand finale of a journey that may have started days earlier, hundreds or thousands of miles away. At the point of origin, somewhere in the Pacific Ocean, the strong winds of a violent storm blow across the ocean's surface, kicking up waves in much the same way you do when you blow across the surface of a bowl of soup. Initially choppy and disorganized, the storm-whipped waves grow larger as the wind continues to blow. Traveling outward from their source, the waves separate into orderly rows of smooth, hump-shaped waves called ocean swells that cross vast distances of ocean before finally reaching shores.

Gently sloping beaches make for small, gentle spilling waves, which are great for beginners but useless for launching big aerials. Abrupt changes in depth, such as those caused by underwater reefs or sandbars, give rise to steep plunging waves. They're the kind of waves a surfer needs to launch aerial manoeuvres. If the beach's bathymetry is too steep, however, or the incoming waves are too big, the result is surging waves that "close out," or break all at once in an explosion of water. Those waves are generally unsurfable.

Comprehension Check

1. Which type of waves is important to have for a surfer who wants to do aerial manoeuvres?
   a) plunging waves
   b) surging waves
   c) orbital waves
   d) spilling waves
2. How does the author describe most surfers' response to the trend of aerial manoeuvres being incorporated into surfing and surfing competitions?
   a) ambivalent
   b) relieved and happy
   c) concerned
   d) annoyed and frustrated
3. Which of the following conclusions about aerial moves in surfing is supported by the passage?
   a) Aerial moves are fun to watch, but the conversation in surfing should focus more on the quality of judges and scoring process at competitions.
   b) There are only a few people in favour of the aerial moves, but they are loud and powerful.
   c) Aerial moves are risky, but the surfing community is ready to embrace the risk.
   d) Incorporating and supporting aerial moves in surfing is like asking for a lawsuit because of all the potential injuries.
4. Read the following sentences and answer the question below: "The exact path you take through the air is determined by your direction and your rotation at the moment you leave the wave. In the air, you become a projectile, and the only force that can act on you there is gravity." The word projectile means …..
   a) something pushed forward in the air
   b) crazy, risky person
   c) complex project
   d) an impenetrable force
5. This passage is mostly about …….
   a) surfers who like to try new moves
   b) how to become a professional surfer
   c) conflict in the surfing community
   d) a shift away from traditional surfing

Variant 2.

1. Choose the best option: past simple, present perfect simple, present perfect continuous.

1. As mentioned on the telephone to your administrative secretary, I would be interested in an internship in your laboratory. I **graduated / have graduated** in Computer Science from the University of Oregon in 2014, and **obtained / have obtained** a Master's degree in Applied Neurolinguistics the following year in Berlin. 2. I then **worked / have worked** on two major projects using neural networks. 3. The first one **was / has been** based in Shanghai and the second in Beijing. I am now back at the University of Oregon where for the last three months 4. I **was / have been** an assistant professor. 5. So far, I **designed / have designed** three different software applications, and I am currently working on a natural language system for vending machines. 6. Over the last three years I **also gained / have also gained** considerable experience in other aspects of language engineering as 7. I **attended / have attended** several congresses on such areas as artificial intelligence, language engineering standards, and logic programming. 8. I also **gave / have given** a series of workshops on these subjects here in Oregon, the last of which will be held at the end of this month. 9. My native language is Chinese, but I also speak fluent German as I **did / have done** a language course while I **was / have been** in Berlin for my Master's. 10. I **spent / have spent** a considerable amount of time here in the USA, so English is basically my second language.

2. Fill in the gaps with the most appropriate words from the list: transferal, consumption, aspect, selecting, previous, complexities, equate, uninjured, irrelevant, normalizes.

1. It is difficult to discuss the ……. of differing political philosophies in a short news clip. 2. You can't always ……. success with how much money a person has. There's more to life than that. 3. One of the most important steps in learning a second language is ……. the course of study that's right for you. 4. Studies show that constant exposure to media content ……. violence, with the result that children come to believe that society is violent. 5. Two of the people in the car accident were seriously hurt, but the third passenger was totally …….. 6. The ……. of funds from one account to another will take 24 hours. 7. The average daily ……. of salt in this country is much higher than recommended. 8. Schmitt and McCarthy have stated that vocabulary is now regarded as the key ……. of learning a second language. 9. In September of 1996, American rap star Tupac Shakur died from gunshot wounds he received the ……. week. 10. Your summary has too many ……. details; you need to make it much more concise.

3. ***Read the text and answer the questions below it.***

In Our Galaxy, Far, Far Away

In the film, *Star Wars: Episode IV – A New Hope*, a future Jedi named Luke Skywalker watched as two suns set on his home planet, Tatooine. When that film was made some 30 years ago, the existence of a planet with two stars was pure science fiction. Now, astronomers say, it's a scientific fact. On September 15,2011, NASA, the U.S. space agency, announced the discovery of Kepler-16b, a circumbinary planet, or a planet in cumbinary the orbit of two stars. Scientists had previously discovered a few other objects orbiting two stars, but Kepler-16b is the first confirmed planet. "It's the best example we have of a Tatooine-like world from Star Wars," says Nick Gautier, a scientist at NASA's Jet Propulsion Laboratory in Pasadena, Calif. "Now we don't expect Luke Skywalker or anything else to be living on Kepler-16b, but if you could visit there, you would see a sky with two suns just like Luke did."

Star Power

The discovery was made by the Kepler space telescope, which is on a mission to find Earthlike exoplanets – planets in orbit around stars other than the sun. Kepler-16b is the 21st confirmed planet that Kepler has detected since its launch in March 2009. Kepler-16b's star system is located between the constellations Cygnus and Lyra, about 200 light-years from Earth. A light-year equals the distance light travels through space in a single year, or about 5.9 trillion miles. The planet is about the size of Saturn, but, because it's gaseous, scientists don't believe it to be habitable.

Although it has two stars, Kepler-16b is probably much colder than Earth because neither star is as powerful as Earth's sun. One star is 69 percent of the mass of the sun. The other is only 20 percent of the mass of the sun. The two stars – together called a binary star – orbit around a common center. They cross paths every 41 days. The planet orbits around both stars every 229 days. "We have two stars dancing around each other, and in our line of sight, they eclipse each other," says Laurance Doyle, principal investigator for the SETI (Search for Extraterrestrial Intelligence) Institute in Mountain View, Calif. "Then we have this exquisite little pirouette of the planet going around both of them."

The Light Stuff

Scientists are doing much more than admiring the fancy footwork of this dance in space. "One way to find exoplanets is to find stars whose planets orbit so they cross in front of the star visible from Earth," says Gautier. The Kepler telescope monitors the brightness of stars, he explains. When a planet crosses in front of a star during an eclipse, it dims some of the star's light for a few hours. By analyzing the changes in light, scientists can accurately determine the size and mass of the planet. Astronomers hope that further study of binary star systems will help shed light on how planets are formed. "There are as many binary stars as single stars and over 2,000 eclipsing binary stars within Kepler's line of view," says Gautier. "So, this could be very common."

Looking for Life

Kepler's main mission, however, is to find Earth-sized planets that are the right distance from a star to have a livable temperature. In February, 2011, NASA announced the discovery of 1,235 possible exoplanets. Now the challenge is to find one that could potentially support life. To date, Kepler has detected large gaseous planets like Jupiter that, because of their distance from their respective stars, would be as hot as Mercury. The telescope also has spied gas planets scope similar in size to Neptune in close orbit around stars. Kepler has even found rogue planets, planet-sized objects that appear to have broken free from the gravitational force of their stars so that they are no longer in orbit. "This is an example of another planetary system. A completely different type that we've never seen before," says Doyle.

Comprehension Check

1. What fictional planet does the writer compare Kepler-16b to?
   a) Pluto
   b) Lyra
   c) Tatooine
   d) Cygnus
2. How does the author describe Kepler-16b?
   a) as a rocky planet that orbits two stars
   b) as a moon that crosses the path of several stars
   c) as a planet probably much warmer than Earth
   d) as a gaseous planet about the size of Saturn
3. Which of the following conclusions about the Kepler space telescope is supported by the passage?
   a) NASA will stop searching for planets with the telescope.
   b) The telescope will soon find that Kepler-16b supports life.
   c) Kepler-16b is the last planet the telescope will discover.
   d) The telescope will most likely discover more planets.
4. Read this sentence from the passage: "The planet is about the size of Saturn, but, because it's gaseous, scientists don't believe it to be habitable." In this sentence, the word habitable means ……
   a) growing in size
   b) carefully observed
   c) suitable to live on
   d) covered with holes
5. Which statement best describes the main idea of the passage?
   a) The Kepler space telescope is on a mission to find Earthlike exoplanets.
   b) Scientist Nick Gautier is studying exoplanets to learn how planets form.
   c) Kepler-16b's star system is located about 200 light-years from Earth.
   d) NASA recently announced the discovery of a circumbinary planet.
   a) before

Комплект заданий рубежного контроля № 3

Variant 1

1. Complete each sentence by choosing the correct option.

1 **Were you able to / Could** you repair your DVD player when it broke down last week? 2 **Would / May** you explain how this program works, please? 3 You **may / might** come into work late tomorrow if you have a doctor's appointment early in the morning. 4 Sue's looking for the battery charger, but she **couldn't / hasn't been able to** find it yet. 5 They **couldn't / wouldn't** understand why the experiment had failed. 6 You **can't / aren't be able to** use that laptop; it's not yours! 7 **Are you able to / Could** you get me some ink for my printer, please? 8 **Could / Would** you mind lending me your mobile for a moment? 9 George was happy because he **had been able to / could** get a discount on his new television. 10 **Might / May** I have a look at your video camera, Paul?

2. Fill in the gaps with the most appropriate words from the list: perspectives, exposure, energetic, consultant, symbolic, welfare, liberalizing, modified, awareness, rejected.

1. A white dove is ……. of peace and goodwill between nations. 2. He worked in a bank for about 35 years, and then became a financial ……. after he retired. 3. Maurice Strong recently remarked that we cannot trade the ……. of our future generations for profits now. 4. Different cultures have very different ……. on death. For some it is the end; for others, it is a new beginning. 5. ……. to a foreign language at an early age can help in the acquisition of that language later on in life. 6. Children are amazingly …….; they can play for hours without getting tired. 7. The landscape of our planet is greatly ……. by the tremendous volume of water circulating on its surface. 8. Abraham Maslow observed that what is necessary to change a person is to change his ……. of himself. 9. Gautama Buddha was an Indian prince who ……. his wealthy lifestyle to lead a simpler existence. 10. Malta is currently

privatizing state-controlled companies and ……. markets in order to prepare for membership in the European Union.

3. Read the text and answer the questions below it.

Solving New York City's Hurricane Problem with Representations

Sketches or drawings can help people communicate to others ideas about how to solve problems, big or small. Drawings make ideas visual, so they are easier to understand than a spoken or written explanation, and using them allows for many different drafts to be presented before deciding on a final product. When a hurricane hit New York City in 2012, the city realized it was not prepared to handle such a disaster. The hurricane damaged the city badly and left many people without homes. Sea levels were going to continue to rise, which meant potential for more hurricanes and flooding, and the government realized it had to change some things about the city to make it better able to handle future disasters.

Rather than simply begin building bigger, stronger structures, like a giant wall around the city or a gate to keep water out, people started sketching out their ideas about how to make New York a place that could better withstand hurricanes. These people were experts chosen to take on the task of re-imagining the city. By using drawings, people were able to debate these ideas, decide which ones were best and change them as they saw fit. Drawings also allowed experts in certain areas to show and explain things to people who didn't know as much as them about those subjects.

Some people focused on how to change the city's natural environment, like the grassy areas next to the ocean, to make them more hurricane-friendly. They drew and presented sketches that showed how these areas could be used to absorb seawater. They also drew in things that could be planted to grow better in the changing environment, like plants that can withstand seawater. Others focused on important city buildings like hospitals. Hospitals in New York City were hit hard by the hurricane, and many people struggled to get the emergency care and basic medical help they needed during the disaster. The experts' drawings focused on ways to make hospital buildings stronger so that they could meet people's needs even in a crisis.

Others looked at how to improve public transportation, which is very important to keeping the city running. After the hurricane, many people in the city were stranded with no way to get around because the train system was badly affected by the storm. Transportation experts drew up ways to pump water out of train tunnels more quickly and get trains up and running sooner. People brought their drawings together and looked at all the ways to improve the city. Some ideas had to be rejected and replaced by more useful ones. The experts presented their ideas to the public at meetings because these changes would affect everyone living in the city and they wanted the citizens to be engaged in the process.

Finally, the city was able to decide on a plan it would use to start making the city stronger, and it used these sketches and representations to figure out other things, like how much it would cost the city, how many workers would be needed and how long the construction projects might take. Using the teamwork of many experts and sketch artists, the city was able to begin planning New York City's future and work toward preventing potential dangers.

Comprehension Check

1. What did people use when discussing how to protect New York City against hurricanes?
    a) drawings
    b) medical help
    c) seawater
    d) construction projects
2. The threat of another hurricane is a problem for New York City. What have people done to help solve this problem?
    a) People have moved to homes outside New York City.
    b) People have built sculptures of New York City.
    c) People have figured out ways to change New York City.
    d) People have spent less money on public transportation in New York City.
3. When a hurricane hit New York City in 2012, the city was not fully prepared to handle it. What evidence from the passage supports this statement?
    a) Drawings can help people exchange ideas with each other about how to solve problems, big or small.
    b) Because drawings make ideas visible, they can be easier to understand than spoken or written explanations.
    c) Sea levels are expected to keep rising, which means New York City may experience one or more hurricanes in the future.
    d) Many people struggled to get medical help during the hurricane and were left without homes afterward.
4. What was one reason for using drawings when discussing improvements to New York City after the hurricane?
    a) Some people prefer hearing an idea explained by an expert than seeing a drawing of that idea by a non-expert.

b) Drawings made it easier for many people to understand the improvements being discussed.
c) During the hurricane, many people in New York City were stranded and could not get the medical care they needed.
d) Some ideas that people came up with were not as good as others and had to be replaced.

5. What is this passage mainly about?
a) the damage that a 2012 hurricane did to hospitals and the train system in New York City
b) ideas that had to be rejected when figuring out ways to protect New York City from hurricanes
c) how grassy areas in New York City next to the ocean could be used to absorb seawater
d) ways to protect New York City from hurricanes and how drawings helped people discuss those ways

Variant 2.

1. ***Complete each sentence by choosing the correct option: modal verbs.***

1 They **had to / must** delay their research when the engineers came up against a technical problem. 2 You should **buy / have bought** a better telescope with the money you got on your birthday. This one isn't very good. 3 We **should / had better check / to check** the modem. 4 You **need / should** have passed your biology exam. Why didn't you? 5 You **needn't have got / needn't get** a new screen; your old one was perfectly adequate. 6 They **should / must** have asked for help when they couldn't find the file. Why didn't they? 7 Lee **wasn't supposed / ought not to** work in the lab while his boss was away. 8 He **ought to / supposed to** have fixed the phone by now, so let's give him a ring. 9 The company **mustn't / doesn't have to** do any more trials on the vaccine because it has been declared safe. 10 You **mustn't / needn't** use dangerous chemicals without wearing gloves and safety glasses.

2. Fill in the gaps with the most appropriate words from the list: amendments, sustainable, expansion, conflict, enabled, images, ratio, disoriented, versions, mentally.

1. After receiving a blow to the head, the player was confused and ……., and had to leave the game. 2. A copy of the suggested ……. has been sent to the members for their consideration. 3. The rapid ……. of e-commerce has radically changed the world of retail sales. 4. The flexible hours of my new job have ……. me to spend more time with my children. 5. It is important to ……. organize information in your head when studying. 6. We need to find a ……. energy source to replace our fossils fuels because eventually there won't be any oil or gas left. 7. George Bernard Shaw observed that there is only one religion, though there are a hundred ……. of it. 8. In the best possible learning environment, the computer-student ……. would be 1:1. 9. The ……. for fresh water is growing in many of the former Soviet republics, which share many of the same waterways. 10. Forming mental ……. of new vocabulary is a valuable aid in learning a second language.

3. Read the text and choose the best answer to the questions below.

News Debate: Phone Patrol

Should the police be allowed to dig through people's cell phones? Police officers in California have a new way to fight crime. If they arrest someone who is carrying a cell phone, officers can dig through the phone's content, including text messages, voice mails, e-mails, calendars, and photos. In a 5-2 ruling, the California Supreme Court stated in December 2011 that police officers are allowed to "open and examine what they find" on an arrested person, without a warrant. A warrant is permission from a judge based on reasonable suspicion.

The decision came about as a result of a 2007 case, People v. Diaz. Sheriffs in California's Ventura County arrested Gregory Diaz, saying they saw him participate in a drug deal. The sheriffs took Diaz's cell phone from his pocket and scrolled through the text messages. They found one linking Diaz to the sale. Diaz was convicted. Later, however, he appealed the charges. He said that phone snooping violated the Fourth Amendment, which protects against unreasonable searches and seizures.

The California Supreme Court's verdict upheld Diaz's conviction. The court stated that, based on past rulings from the U.S. Supreme Court, police can indeed look through anything "immediately associated with a person."

The two judges who voted against the verdict argued that cell phone searches are an invasion of privacy. They noted that smart phones can contain a wide variety of information about a person. Here are the arguments from people on both ends of the call.

Protection Over Privacy. The police need help keeping the streets safe, say supporters of cell phone searches. Officers in Shafter, Calif., note that the policy has already been helpful. "We were able to establish who [the arrested people] were in contact with. It helped us to find who may also be involved in that crime," Detective Chris Grider told Bakersfield's 23ABC. Some people also believe that the policy will deter people from committing crimes. "The police now have better means to find out if you're guilty," California resident Chris Eddy told San Diego 6 News. Furthermore, supporters of the ruling say it does not violate the Fourth Amendment. If you've already been arrested with reasonable evidence, they say, then it is fair for the police to search through anything on you.

Abuse of Power. Stop snooping through smart phones, argue opponents of the new ruling. "People could have ... pictures in there, like of their girlfriends, that they don't want somebody else to see, and it would be an

invasion of privacy not only for them, but the other person also," California resident Valinten Perez told 23ABC. San Diego resident Jim Tharayil added that he thinks the policy could be abused. He told San Diego 6 News that he can imagine police officers "using something else to pull you over and then using this to look through your cell phone." Justice Kathryn M. Werdegar, one of the judges who opposed the decision, says that police officers should have to obtain a warrant. It is unfair of police officers to "rummage at leisure through the wealth of personal and business information that can be carried on a mobile phone ... merely because the device was taken from an arrestee's person," she says.

Comprehension Check

1. Which amendment protects against unreasonable searches and seizures?
   a) the First Amendment
   b) the Second Amendment
   c) the Third Amendment
   d) the Fourth Amendment
2. The passage shows two sides of this debate: Should the police be allowed to dig through people's cell phones? According to the passage, all of these people are against the police being allowed to dig through people's cell phones except ……...
   a) Detective Chris Grider
   b) Justice Kathryn M. Werdegar
   c) Valinten Perez
   d) Gregory Diaz
3. What can you most likely conclude about Gregory Diaz after reading the passage?
   a) He was probably sentenced to jail.
   b) He wasn't actually guilty of a crime.
   c) He was related to one of the judges.
   d) He used to work as a police officer.
4. Read these sentences from the passage: "Diaz was convicted. Later, however, he appealed the charges." In this sentence, the word convicted means …….
   a) reported angry
   b) acted alone
   c) looked after
   d) found guilty
5. The author's purpose for writing this passage was all of the following EXCEPT
   a) to present evidence for both sides of the argument
   b) to let the reader come to his or her own conclusions
   c) to provide facts about the 2007 case People v. Diaz
   d) to offer convincing proof that one side is clearly right

Комплект заданий рубежного контроля № 4

Variant 1

1. Choose the correct option: verb forms.

Three red flags (1) **are / were** identified that indicate that the time to leave for a woman to leave her man has come. These red flags (2) **are / were**: five burps per day, two channel-zapping sessions per day, and five games on the Playstation with friends per week. A large number of women (3) **have / had** doubts about the right moment for leaving their partner. Often women (4) **wait / waited** in hope for a change in their partner's habits. One hundred couples (5) **are / were** analyzed, recording their daily life for six months. Women (6) **are / were** provided with a form to mark the moments of annoyance recorded during the day. Burps, channel-zapping sessions and games on the Playstation with friends (7) **produce / have produced / produced** the highest index of annoyance. The probability of eliminating these habits (8) **is / has been / was** found to significantly low when the three red flags (9) **are / have been / had been** operative for more than three months. Thus, these numbers (10) **provide / provided** a good indication of when the time to leave him has come.

2. Fill in the gaps with the most appropriate words from the list: graded, unique, successor, denied, paradigm, innovative, confirmed, released, equipped, aid.

1. Everest was not …… as the highest mountain peak on Earth until 1863. 2. A black bear was captured in the city and later …… in a forested area about 100 miles from here. 3. The apples have been …… according to size, color and taste. 4. In many developing countries, girls are marginalized and disadvantaged, and are …… access to a quality education. 5. Seat belts are necessary even if your car is …… with airbags. 6. The new …… for a successful business is to encourage more input from the workers. 7. Boris Yeltsin prepared Vladimir Putin to

be his …… as the leader of Russia. 8. Benetton's …… advertising techniques brought them a great deal of attention, both positive and negative. 9. While penguins cannot fly, they do flap their wings under water to …… in swimming. 10. The meanings of …… symbols, rituals, and institutions can be difficult to explain to different cultures.

3. Read the text and choose the best answer to the questions below.

Trash Talk: Price of Recyclables Sinks After China Bans U.S. Scrap

Some U.S. manufacturers are turning trash into treasure after a Chinese ban on imported waste flooded American scrapyards with paper and plastic. The import ban, announced in July, sent global prices for waste paper and plastic into a tailspin. Without access to their Chinese customers, U.S. waste and recycling firms are scrambling to find new buyers for the scrap they collect from curbside bins. But companies that use recycled materials to make things like cardboard, plastic bins, yarn and other goods are taking advantage.

"America has an endless supply of waste and it just got more endless," said Anthony Pratt, executive chairman of Pratt Industries, which uses 100% recycled material in its U.S. facilities to make boxes for Amazon.com Inc. as well as firms ranging from major manufacturers to pizza joints. Plunging scrap prices are also driving new demand for recycled materials, which usually have to compete with growing supplies of new plastic resin made cheaply from shale oil by U.S. plants.

On Wednesday, Target Corp., Procter & Gamble Co., Keurig Green Mountain Inc., Campbell Soup Co., Coca-Cola Co's North America business and others agreed to require suppliers of industrial plastic items like crates and trash bins to use more "post-consumer" material.

Not all of those companies signed on because of China's ban, but falling scrap prices have made the requirement an easier pitch, said Dylan de Thomas with The Recycling Partnership, which organized the pledge. "It's the definite silver lining of this scrap ban," he said. For environmentally conscious firms like Unifi Inc., which manufactures yarn and packaging from recycled plastic bottles, China's new rules help keep down production costs. "By having more supply, we expect the upward price pressure [on recycled material] will be mitigated," said Eddie Ingle, Unifi's vice president of supply chain.

Over two-thirds of America's wastepaper exports and more than 40% of its discarded-plastic exports ended up in China last year. Paper and plastic scrap exports to mainland China topped $2.2 billion. China told the World Trade Organization that it wants to limit the entry of "foreign waste." Under new rules, China by year-end would ban imports of used plastics and restrict some paper-scrap imports. U.S. buyers can't replace lost Chinese demand, said Bill Moore of Moore & Associates, a paper-industry consulting firm. It could take a while to build the domestic capacity needed to process our abundant scrap into new products, he said.

If China stands by its proposed restrictions, U.S. recycling businesses will need to invest in machinery to more stringently sort the waste they collect, said Bob Cappadona of Casella Recycling LLC, a waste-services company based in the Northeast. And it also means households will have to do a better job of sorting items headed for recycling, he added. Waste collectors say they are seeking out new scrap customers in other parts of Asia and Latin America. Still, they say China's purchasing power is needed in the global market. If recyclers can't find new markets, or places to store the scrap they collect, some waste could end up in a landfill, Mr. Moore said. "That's the ultimate disaster - you don't want to lose people's enthusiasm for doing recycling," he said.

Comprehension Check

1. American scrapyards are being filled with more paper and plastic. Who is now taking advantage of these extra recycled materials?
   a) Chinese customers that have use for recycled materials and waste
   b) companies that use recycled materials to make different kinds of goods
   c) companies that create a lot of plastic and paper waste
   d) the owners of American scrapyards and collectors of plastic and paper waste
2. What caused the amount of paper and plastic in American scrapyards to grow so quickly?
   a) a U.S. regulation that rewards waste production
   b) an influx in companies that recycle materials
   c) a Chinese ban on importing waste
   d) a change in the way households recycle
3. The lower prices for scrap could be a good thing for those who care about the environment. What evidence from the text supports this statement?
   a) U.S. waste and recycling firms are working quickly to find new buyers for the extra scrap.
   b) Lower scrap prices have made it easier for companies to use recycled material instead of new plastic.
   c) More than two-thirds of America's wastepaper exports ended up in China last year, prior to the ban.
   d) It could take a while for U.S. companies to build their ability to process all the extra scrap into new products.
4. Based on the article, what is a potential negative effect of a long-lasting Chinese ban on imported waste?
   a) If recyclers can't find new buyers for all the extra scrap, they will have to invent new products that use

recyclable materials.

b) If recyclers can't find new markets for all the extra scrap, the U.S. is likely to dispose of the scrap in the world's oceans.
c) If recyclers can't find different buyers for all the extra scrap, companies in the U.S. may have to shoulder the costs.
d) If recyclers can't find new markets or storage places for all the extra scrap, some recyclable waste could end up in a landfill.

5. What is the main idea of this article?

a) Because of a Chinese ban on imported waste, the price of scrap is falling in the U.S., helping companies that use recycled materials to make new products.
b) Because of a U.S. ban on exported waste, the price of scrap is falling in the U.S., helping companies that use recycled materials to make new products.
c) Because of new U.S. regulations, the price of scrap is falling in the U.S., which could have negative consequences for the environment.
d) Because of new global regulations, the price of scrap is rising in the U.S., which could have negative consequences for U.S. businesses.

Variant 2.

1. Choose the correct option: verb forms.

The three red flags that (1) **are / were** identified in our research – numbers of burps, zapping sessions, and Play station sessions – (2) **can / should** enable women to understand when they (3) **need / needed** to leave their partner. To counter any effects due to the nationality of the women involved (predominantly Italian in our sample), we (4) **currently do / are currently doing** tests in China. The results that we have obtained so far for China (5) **can / would** seem to con firm our initial findings, but with an additional fourth flag: time spent studying for examinations. In addition, the timeframe for the flags to be operative in China (6) **is / was** two months, rather than the three months reported in this paper. We (7) **also plan / will also plan** to replicate our tests on a wider range of women and a longer time scale, thus increasing the sample base from 100 to 1,000, and increasing the recording of daily life annoyances from six months to twelve months. Future research for the community at large (8) **can / could / will** be dedicated to doing analogous tests to enable men to see the signs of when they (9) **can / should** leave their woman, and for employees to identify when they (10) **can / should** leave their current employment.

2. Fill in the gaps with the most appropriate words from the list: comprehend, eliminate, media, ideology, foundations, decades, somewhat, adult, transmitting, publications.

1. Many teenagers begin smoking in an attempt to look more …….. 2. Some people feel that coverage of violent crimes in the …… often results in further crimes by those who wish to imitate what they see. 3. Your sister has changed …… since she came back from college. 4. In order to understand our earth and the processes which operate upon it, one must attempt to …… time spans of millions of years. 5. Regular practice of yoga can help to ……stress. 6. The company has a number of …… including a popular sports magazine, and a new fashion magazine. 7. Teachers act as the major vehicle for …… the school curriculum and associated values to children. 8. Workers who died during construction of the Great Wall of China were often simply buried in the ……. 9. Her acting career spanned several …… and attracted fans of all ages.10. Edward Abbey once noted that growth for the sake of growth is the …… of the cancer cell.

3. Read the text and choose the best answer to the questions below.

Nuclear Radiation Can Affect Our Health – For Better or Worse

You might not know exactly how to describe it, but chances are good that you know the word radiation can have two very different connotations. On the one hand, radiation exposure was one of the most feared consequences after an earthquake and a tsunami dam-sequence damaged a nuclear reactor in Japan earlier this year. On the other hand, radiation may have helped someone you know fight a disease such as cancer. How can one word have such different meanings?

All Around Us. Radioactive materials give off invisible atomic particles or energy called nuclear radiation. "Radiation is always around us," notes Dr. Ritsuko Komaki, a professor of radiation oncology at the MD Anderson Cancer Center in Houston. Very high exposures to nuclear radiation can cause sickness and, in the worst cases, death. But most radiation around us isn't something to worry about. Some normal amounts of nuclear radiation come from the sun, along with the sun's heat, visible light, ultraviolet rays, and more. Tiny bits of nuclear radiation are in soil too. "Usually it's a very low dose, and it's not harmful," says Komaki. Activities such as mountain climbing or taking a long airplane ride expose you to slightly more radiation - because you're closer to the sun. Experts generally don't worry about those exposures either.

Nuclear reactors, such as those at the Fukushima Daiichi plant in Japan that was damaged by the 2011 earthquake and tsunami, split uranium atoms. That action releases energy. The energy is used to boil water, which in turn creates steam that moves turbines that make electricity. When everything works, the process doesn't pollute the

air or water. Nuclear plants' fuel and certain wastes, however, are radioactive. When emergency measures failed at Fukushima, explosions and fires released radioactivity into the environment. Cleanup will take years. Meanwhile, the accident has heightened fears about radiation.

Radiation's Risks. After a nuclear accident, radiation levels in the area of the nuclear plant can be thousands of times higher than they were before. Very high exposures cause acute radiation syndrome. Symptoms can range "from not feeling right to seizures and even loss of consciousness and death," says Dr. David Weinstock at Boston's Dana-Farber Cancer Institute. In addition to making people sick right away, too much radiation can damage cells and raise a person's risk of developing cancer later in life. In 1986, a nuclear power plant exploded in Chernobyl, Ukraine. Years later, thyroid cancer rates rose among young adults nearby. (The thyroid gland helps control the body's energy levels and other functions.) The young people had grown up drinking milk from cows that ate contaminated grass.

Authorities are checking radiation levels in various foods and water to prevent similar problems in Japan. The U.S. Food and Drug Administration (FDA) is also monitoring foods coming from Japan to the United States. While scientists found slightly higher radiation on the West Coast after the Fukushima accident, amounts were way below danger levels. "The Fukushima event really poses no risk to people in the United States," says Weinstock.

On the Plus Side. Nuclear radiation can help us get - and stay - healthy too. A special type of radiation is used to treat some meats, fruits, and vegetables to kill bacteria that can make people sick, for instance. In the same way that nuclear radiation's energy can kill some of the body's cells, it can also be used to kill cancerous tumors. "We are just targeting the cancer cells and protecting normal tissue surrounding the cancer," explains Komaki, who primarily researches lung cancer. According to the National Cancer Institute, approximately half of all cancer patients receive some form of radiation therapy as part of their treatment. Some forms of nuclear radiation can help doctors track down health problems in the first place. Torso X-rays and computed tomography (CT) scans use nuclear radiation to see inside the body. The benefits from being able to find health problems generally outweigh any tiny risks from exposure to radiation, but some accidents have happened. As a result, the FDA wants medical scanning equipment to have even more safeguards than it does now. Either way, experts say it's a good idea to limit your exposure to nuclear radiation even when it's part of a medical test. Always ask why any scan is necessary, especially if you think you have had that same test recently. "If there's no justifiable reason for the extra radiation exposure, then don't let yourself be exposed" if you can help it, says Kelly Classic, a health physicist at Minnesota's Mayo Clinic and spokesperson for the Health Physics Society. Scientists and health experts around the globe continue to study nuclear radiation. They hope to harness its powerful benefits to continue to help people. When it's used intentionally, radiation can be a boon to human health. "There are hundreds of thousands to millions of people who are alive today because we've harnessed the power of radiation," says Weinstock.

Could It Happen Here? The United States hasn't had a major nuclear emergency since an accident closed Pennsylvania's Three Mile Island power plant in 1979. Will an accident happen here again? "Nobody can answer that question," says physicist Kelly Classic, a spokesperson for the Health Physics Society. But, she says, companies and communities are prepared. Power companies have regular safety drills for plants and nearby communities. People living nearby have access to emergency medicines such as potassium iodide in case of an accident. (That medicine temporarily blocks radioactive iodine from entering, and possibly harming, the thyroid gland.) Hospitals and emergency responders conduct regular drills on handling emergencies too.

Comprehension Check

1. What is one way radiation is used that is beneficial for our health?
    a) to kill bacteria in foods that could make us sick
    b) to disinfect surfaces like tables and door handles where bacteria often live
    c) to zap our bodies with extra energy for sports and activities
    d) to damage cells and eventually cause things like thyroid cancer
2. In the article, how does the author describe radiation?
    a) as something to avoid at all costs
    b) as something that's less harmful than its reputation suggests
    c) as something that can be both good and bad
    d) as something that is helpful for human health and food safety
3. Which of the following conclusions about radiation is supported by the passage?
    a) Radiation is more harmful than helpful.
    b) Radiation is neither harmful nor helpful.
    c) Radiation is more helpful than harmful.
    d) Radiation is both helpful and harmful.
4. Read the following sentence: "You might not know exactly how to describe it, but chances are good that you know the word radiation can have two very different connotations." In this sentence the word connotations means ……
    a) denotations
    b) meanings

c) connections
d) implications

5. This passage deals primarily with ……
   a) the ways that radiation can kill bacteria that may be present in foods
   b) the effects, both positive and negative, that radiation can have
   c) the fact that too much radiation can be harmful for our health, even causing cancer.
   d) why we should try to minimize our exposure to radiation

Комплект заданий рубежного контроля № 5

Variant 1

1. Complete the sentences by using the correct the gerund, infinitive or bare infinitive form of the verbs in brackets.

1. Would you mind (to help) me with my cases? 2. I completely understand what you mean when you say… Thanks for (to bring) it up. 3. I hear you may be able (to help) out with writing the paper. 4. I was wondering whether you might be interested in (to join) the Scientific Advisory Board. 5. It has been great to talk to you, but I just need (to make) a phone call. 6. Once again, thank you for (to contact) me. 7. Rather than (to go) through each report individually, we have organized our response under general areas. 8. Thank you for your help in (to solve) this problem. 9. We have amended the paper (to address) most of the comments outlined in the referees' reports. 10. The manuscript has been revised (to follow) the indications that you and the referees gave us.

2. Fill in the gaps with the most appropriate words from the list: conceivably, collapsed, adjacent, invoked, pose, encounter, straightforward, nonetheless, inclination, ongoing.

1. All his life, he refused to believe in any religion, but on his deathbed he suddenly … god, and asked for forgiveness. 2. Travelling to a different country allows you to … new ideas and new ways of living. 3. We didn't have very good tools, but I think we did a good job … . 4. The child had always shown artistic … so it came as no surprise when he decided to study visual arts in university. 5. Because of the melting of the polar ice caps, scientists say that trans-arctic voyages could … be possible within a few years. 6. On maps, … countries are usually shown in different colours. 7. Many citizens feel that a nuclear power plant could … serious environmental problems for the area. 8. On September 11th, 2001, the twin towers of the world trade centre completely … shortly after they were struck by airliners hijacked by terrorists. 9. Harriet is very … in her approach to dealing with clients. 10. Fighting in the region has not stopped, despite … peace negotiations.

3. Read the text 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.

Variant 2.

1. Complete the sentences by using the correct the gerund, infinitive or bare infinitive form of the verbs in brackets.

1. Would you mind (to help) me with my cases? 2. I completely understand what you mean when you say… Thanks for (to bring) it up. 3. I hear you may be able (to help) out with writing the paper. 4. I was wondering whether you might be interested in (to join) the Scientific Advisory Board. 5. It has been great to talk to you, but I just need (to make) a phone call. 6. Once again, thank you for (to contact) me. 7. Rather than (to go) through each report individually, we have organized our response under general areas. 8. Thank you for your help in (to solve) this

problem. 9. We have amended the paper (to address) most of the comments outlined in the referees' reports. 10. The manuscript has been revised (to follow) the indications that you and the referees gave us.

2. ***Fill in the gaps with the most appropriate words from the list: conceivably, collapsed, adjacent, invoked, pose, encounter, straightforward, nonetheless, inclination, ongoing.***

1. All his life, he refused to believe in any religion, but on his deathbed he suddenly … god, and asked for forgiveness. 2. Travelling to a different country allows you to … new ideas and new ways of living. 3. We didn't have very good tools, but I think we did a good job … . 4. The child had always shown artistic … so it came as no surprise when he decided to study visual arts in university. 5. Because of the melting of the polar ice caps, scientists say that trans-arctic voyages could … be possible within a few years. 6. On maps, … countries are usually shown in different colours. 7. Many citizens feel that a nuclear power plant could … serious environmental problems for the area. 8. On September 11th, 2001, the twin towers of the world trade centre completely … shortly after they were struck by airliners hijacked by terrorists. 9. Harriet is very … in her approach to dealing with clients. 10. Fighting in the region has not stopped, despite … peace negotiations.

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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.

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   a) yes;
   b) no;
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5. What is the main reason for role ambiguity?
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   b) lack of clarity in the role of the focal person;
   c) roles with excessive signs.

Комплект заданий рубежного контроля № 6

Variant 1.

1. ***Choose the correct option for the word in bold.***
I (1) **would / would like to** submit for publication in the Journal of Future Education the attached paper entitled "A Proposal for Radical Educational Reform" by Adrian Wallwork and Anna Southern. Our aim was (2) **to test / testing** the efficiency of short- and long-duration degree courses. Our study of 15,000 male and female graduates aged between 35 and 55 found that they (3) **would perform / would have performed** far better in their careers from a financial point of view if they (4) **undertook / had undertaken** a one-year course at university rather than the traditional three to four-year course. Our key finding is that people on shorter courses (5) **will / would** earn up to 15% more during their lifetime. The implications of this (6) **are / will be** not only for the graduates themselves. In fact, governments (7) **can / could** save considerable amounts of money, and universities (8) **will / would** be free to accept more students. We believe that our findings (9) **will / should** be of great interest to readers of your journal, particularly due to their counterintuitive nature and the fact they go against the general trend that claims that university courses (10) **would / should** be increased in length.

2. ***Fill in the gaps with the most appropriate words from the list: practitioner, eventually, thereby, currencies, widespread, restore, appreciating, manipulate, commodities, implicit.***
1. Scientists working in the battle against cancer are hoping to be able to … the DNA of a cancer sufferer so that the disease kills itself. 2. A proper diet and plenty of rest have helped to … her to good health. 3. British Columbia's main … are forest products and fish. 4. There has been a … migration of people to the urban centers of Iraq over the past 50 years. 5. The stars in our sky form from gas in the universe and … they grow old and die. 6. Medical … reports which are stored on computers are vulnerable to hackers who may want to steal private information. 7. The huge fast-food chains generally pay their workers low wages, … helping to depress wages for workers in the entire trade. 8. With the economy failing, the shopkeepers would only accept payment in foreign … . 9. Young children have an unquestioning and … faith in their parents' decisions. 10. The values of homes in this neighbourhood have been … steadily for about the past 5 years.

3. ***Read the text and answer the questions below it.***

Video Game Research

Although video games were first developed for adults, they are no longer exclusively reserved for the grown-ups in the home. In 2006, Rideout and Hamel reported that as many as 29 percent of preschool children (children between two and six years old) in the United States had played console video games, and 18 percent had played hand-held ones. Given young children's insatiable eagerness to learn, coupled with the fact that they are clearly surrounded by these media, we predict that preschoolers will both continue and increasingly begin to adopt video games for personal enjoyment. Although the majority of gaming equipment is still designed for a much older target audience, once a game system enters the household it is potentially available for all family members, including the youngest. Portable systems have done a particularly good job of penetrating the younger market.

Research in the video game market is typically done at two stages: some time close to the end of the product cycle, in order to get feedback from consumers, so that a marketing strategy can be developed; and at the very end of the product cycle to 'fix bugs' in the game. While both of those types of research are important, and may be appropriate for dealing with adult consumers, neither of them aids in designing better games, especially when it comes to designing for an audience that may have particular needs, such as preschoolers or senior citizens. Instead, exploratory and formative research has to be undertaken in order to truly understand those audiences, their abilities, their perspective, and their needs. In the spring of 2007, our preschool-game production team at Nickelodeon had a hunch that the Nintendo DS - with its new features, such as the microphone, small size and portability, and its relatively low price point - was a ripe gaming platform for preschoolers. There were a few games on the market at the time which had characters that appealed to the younger set, but our game producers did not think that the game mechanics or design were appropriate for preschoolers. What exactly preschoolers could do with the system, however, was a bit of a mystery. So we set about doing a study to answer the query: What could we expect preschoolers to be capable of in the context of hand-held game play, and how might the child development literature inform us as we proceeded with the creation of a new outlet for this age group?

Our context, in this case, was the United States, although the games that resulted were also released in other regions, due to the broad international reach of the characters. In order to design the best possible DS product for a preschool audience, we were fully committed to the ideals of a 'user-centered approach', which assumes that users will be at least considered, but ideally consulted during the development process. After all, when it comes to introducing a new interactive product to the child market, and particularly such a young age group within it, we believe it is crucial to assess the range of physical and cognitive abilities associated with their specific developmental stage.

Revelle and Medoff (2002) review some of the basic reasons why home entertainment systems, computers, and other electronic gaming devices, are often difficult for preschoolers to use. In addition to their still developing motor skills (which make manipulating a controller with small buttons difficult), many of the major stumbling blocks are cognitive. Though preschoolers are learning to think symbolically, and understand that pictures can stand for real-life objects, the vast majority are still unable to read and write. Thus, using text-based menu selections is not viable. Mapping is yet another obstacle since preschoolers may be unable to understand that there is a direct link between how the controller is used and the activities that appear before them on screen. Though this aspect is changing, in traditional mapping systems real life movements do not usually translate into game-based activity.

Over the course of our study, we gained many insights into how preschoolers interact with various platforms, including the DS. For instance, all instructions for preschoolers need to be in voice-over, and include visual representations, and this has been one of the most difficult areas for us to negotiate with respect to game design on the DS. Because the game cartridges have very limited memory capacity, particularly in comparison to console or computer games, the ability to capture large amounts of voice-over data via sound files or visual representations of instructions becomes limited. Text instructions take up minimal memory, so they are preferable from a technological perspective. Figuring out ways to maximise sound and graphics files, while retaining the clear visual and verbal cues that we know are critical for our youngest players, is a constant give and take. Another of our findings indicated that preschoolers may use either a stylus, or their fingers, or both although they are not very accurate with either. One of the very interesting aspects of the DS is that the interface, which is designed to respond to stylus interactions, can also effectively be used with the tip of the finger. This is particularly noteworthy in the context of preschoolers for two reasons. Firstly, as they have trouble with fine motor skills and their hand-eye coordination is still in development, they are less exact with their stylus movements; and secondly, their fingers are so small that they mimic the stylus very effectively, and therefore by using their fingers they can often be more accurate in their game interactions.

Comprehension Check

1. In 2007, what conclusion did games producers at Nickelodeon come to?
   a) the preschool market was unlikely to be sufficiently profitable.
   b) one of their hardware products would probably be suitable for preschoolers.
   c) games produced by rival companies were completely

2. Which problem do the writers highlight concerning games instructions for young children?
a) Spoken instructions take up a lot of the available memory, inappropriate for preschoolers.
b) They should put their ideas for new games for preschoolers into practice.
3. The study carried out by Nickelodeon
a) was based on children living in various parts of the world.
b) focused on the kinds of game content which interests preschoolers.
c) investigated the specific characteristics of the target market.
d) led to products which appealed mainly to the US consumers.
4. Portable gaming systems have done a particularly good job of penetrating the younger market. Which of the following statements does not correspond to particular needs of preschoolers?
a) Written instructions have to be expressed very simply.
b) The children do not follow instructions consistently.
c) The video images distract attention from the instructions.
5. Which is the best title for the reading passage?
a) An overview of video games software for the preschool market;
b) Researching and designing video games for preschool children;
c) The effects of video games on the behaviour of young children;
d) Assessing the impact of video games on educational achievement.

Variant 2.

1. ***Choose the correct option for the word in bold.***
Dear Professor (1) **Michael Smith / Smith Michael** I am a PhD student at the (2) **University of Kubla Khan / Kubla Khan University**. I attended the Cole-Ridge conference last week and I found (3) **very interesting your seminar / your seminar very interesting**. I saw on your (4) **web page / page web** that is possible to have a placement period in your lab. It would be a real pleasure for me to join your (5) **research group / group research** and do some further research into (6) **innovative dream sequence storage ways / innovative ways to store dream sequences**. I would be able to help you with the following: 7. **Storing data / Data storing**. 8. **Teaching undergraduates / Undergraduate teaching**. 9. **Writing papers / Paper writing**. Where I think (10) **could I / I could** really add value would be in research work

2. ***Fill in the gaps with the most appropriate words from the list: manipulate, practice, implicit, currency, appreciative, widespread, eventually, thereby, restored, commodity.***
1. Reports suggest damage is … as a result of the flood. 2. In March 1998, the elected government of Sierra Leone was … to power, replacing the military regime which had taken control in a coup in the previous year. 3. Any aid given to developing countries by the developed nations seems to carry with it an … agreement that the developed country will get something in return. 4. My cousin just opened a dental … here in town. 5. Liechtenstein does not have its own …, but uses the Swiss franc. 6. Predators have a beneficial effect on the health of their prey, in that they often eat the old or diseased animals, … keeping the species strong. 7. Psychologists describe thinking as a set of processes used to … knowledge, ideas and images. 8. The stocks were once a much-desired …, but have since lost over 70% of their original value. 9. This disease will probably kill me …, but it's not going to keep me from living in the meantime. 10. George W. Crane once suggested that … words are the most powerful force for good on earth.

3. ***Read the text and answer the questions below it.***

Experience versus speed

Certain mental functions slow down with age, but the brain compensates in ways that can keep seniors as sharp as youngsters. Jake, aged 16, has a terrific relationship with his grandmother Rita, who is 70. They live close by, and they even take a Spanish class together twice a week at a local college. After class, they sometimes stop at a cafe for a snack. On one occasion, Rita tells Jake, 'I think it's great how fast you pick up new grammar. It takes me a lot longer.' Jake replies, 'Yeah, but you don't seem to make as many silly mistakes on the quizzes as I do. How do you do that?'

In that moment, Rita and Jake stumbled across an interesting set of differences between older and younger minds. Popular psychology says that as people age their brains 'slow down'. The implication, of course, is that elderly men and women are not as mentally agile as middle-aged adults or even teenagers. However, although certain brain functions such as perception and reaction time do indeed take longer, that slowing down does not necessarily undermine mental sharpness. Indeed, evidence shows that older people are just as mentally fit as younger people because their brains compensate for some kinds of declines in creative ways that young minds do not exploit.

Just as people's bodies age at different rates, so do their minds. As adults advance in age, the perception of sights, sounds and smells takes a bit longer, and laying down new information into memory becomes more difficult. The ability to retrieve memories also quickly slides and it is sometimes harder to concentrate and maintain attention.

On the other hand, the ageing brain can create significant benefits by tapping into its extensive hoard of accumulated knowledge and experience. The biggest trick that older brains employ is to use both hemispheres simultaneously to handle tasks for which younger brains rely predominantly on one side. Electronic images taken by cognitive scientists at the University of Michigan, for example, have demonstrated that even when doing basic recognition or memorization exercises, seniors exploit the left and right side of the brain more extensively than men and women who are decades younger. Drawing on both sides of the brain gives them a tactical edge, even if the speed of each hemisphere's process is slower.

In another experiment, Michael Falkenstein of the University of Dortmund in Germany found that when elders were presented with new computer exercises they paused longer before reacting and took longer to complete the tasks, yet they made 50% fewer errors, probably because of their more deliberate pace.

One analogy for these results might be the question of who can type a paragraph 'better': a 16-year-old who glides along at 60 words per minute but has to double back to correct a number of mistakes or a 70-year-old who strikes keys at only 40 words per minute but spends less time fixing errors? In the end, if 'better' is defined as completing a clean paragraph, both people may end up taking the same amount of time.

Computerized tests support the notion that accuracy can offset speed. In one so-called distraction exercise, subjects were told to look at a screen, wait for an arrow that pointed in a certain direction to appear, and then use a mouse to click on the arrow as soon as it appeared on the screen. Just before the correct symbol appeared, however, the computer displayed numerous other arrows aimed in various other directions. Although younger subjects cut through the confusion faster when the correct arrow suddenly popped up, they more frequently clicked on incorrect arrows in their haste.

Older test takers are equally capable of other tasks that do not depend on speed, such as language comprehension and processing. In these cases, however, the elders utilize the brain's available resources in a different way. Neurologists at Northwest University came to this conclusion after analyzing 50 people ranging from age 23 to 78. The subjects had to lie down in a magnetic resonance imaging (MRI) machine and concentrate on two different lists of printed words posted side by side in front of them. By looking at the lists, they were to find pairs of words that were similar in either meaning or spelling.

The eldest participants did just as well on the tests as the youngest did, and yet the MRI scans indicated that in the elders' brains, the areas which are responsible for language recognition and interpretation were much less active. The researchers did find that the older people had more activity in brain regions responsible for attentiveness. Darren Gleitman, who headed the study, concluded that older brains solved the problems just as effectively but by different means.

Comprehension Check

1. The conversation between Jake and Rita is used to give an example of
   a) the way we learn languages;
   b) the changes that occur in our brains over time;
   c) the fact that it is easier to learn a language at a young age;
   d) the importance of young and old people doing things together.
2. In paragraph six, what point is the analogy used to illustrate?
   a) working faster is better than working slower;
   b) accuracy is less important than speed;
   c) accuracy can improve over time;
   d) working faster does not always save time.
3. In the computerized distraction exercises, the subjects had to
   a) react to a particular symbol on the screen;
   b) type a text as quickly as possible;
   c) move an arrow in different directions around the screen;
   d) click on every arrow that appeared on the screen.
4. What are the advantages of older people's brains due to the text?
   a) aptitude for recalling;
   b) the speed of each hemisphere's process is slower;
   c) they are able to use both sides at once and tap into extensive hoard of accumulated knowledge and experience;
   d) the speed of our brain increases with age.
5. What is peculiar about brain functioning of older people according to popular psychology?
   a) older people do not cope well with new technology;
   b) they are not able to use both sides at once;
   c) the speed of our brain decreases with age;
   d) the older we get the harder it is to concentrate for any length of time.

Перечень типовых тем сообщения по теме модуля 1

Тема «Что такое наука»

1. Word Changing Ideas: 10 new technologies that will make a difference.
2. The Machine That Would Predict the Future
3. Modeling formal theories
4. Reference systems
5. Cognitive science
6. Knowledge representation

Перечень типовых тем сообщения по теме модуля 2

Тема «Эволюция научного мировоззрения»

1. Introduction to Quantum Physics: Blackbody Radiation and Planck's Hypothesis
2. Intensity of blackbody radiation versus wavelength at three temperatures
3. The Nuclear Reactor Nuclear Fission
4. Tunneling Through a Potential Energy Barrier
5. The Electron Microscope
6. Creativity and Probability

Перечень типовых тем сообщения по теме модуля 3

Тема «Наука и общество»

1. How are language choices influenced by the context in which communication takes place?
2. Some sociolinguistic research
3. Technology and society: The socio-economic impact of the mobile phone
4. The origins of human diversity
5. Penalties administered for university student plagiarism
6. Big questions facing modern medical science

Перечень типовых тем сообщения по теме модуля 4

Тема «Перспективы развития науки»

1. A bridge across the generation. The road to success
2. Artificial Intelligence
3. Smart office
4. Potential effects of the digital revolution
5. Innovations
6. "Simple" and "complicated" in modern science

Перечень типовых тем сообщения по теме модуля 5

Тема «Наука в повседневной жизни человека»

1. Computers and intelligence
2. Advantages and disadvantages of networks
3. Computer aided design
4. Implementation of information technologies is the most drastic alteration in our lives.
5. The possibilities of innovative technological gadgets and machines.
6. The main ways technology impacts our daily life.

Перечень типовых тем сообщения по теме модуля 6

Тема «Наука: от увлечения до профессии»

1. How to be a celebrity in science
2. Nobel winners
3. "Simple" and "complicated" in modern science
4. My scientific ambitions in life

5. How to deal with nervousness before the presentation
6. Strategies for good presentations/reports

Примеры типовых вопросов и заданий для оценки работы на семинарах

Модуль 1. Тема «Что такое наука»

Типовые вопросы

1. What do sociologists mean by the term *society*? Do you agree with this definition? Why *yes* or why *not*?
2. Describe three technological advances in recent years that have changed the society you live in.
3. How are technologically advanced societies different from societies with simpler technologies? Give an example of how they differ.
4. What are the effects of practicing a patient's brain surgery using Virtual Reality and computer simulation before performing it?
5. Virtual Reality has been slow to catch on with consumers, despite the high-profile launches of headsets from Facebook Inc.'s Oculus unit. What conclusion can be drawn based on this evidence?
6. Why are the formal sciences often excluded from the system of science?
7. Why was science more closely linked to philosophy than it is now?
8. How did science develop in the 17th and 18th centuries?
9. How do some businesses believe Virtual Reality is affecting their training for employees?
10. Comment on the expression 'Science is a global human endeavor'.

Типовые задания

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. Think and talk about the experiences of contemporary science that have interested, excited or concerned you, either professionally or in your personal life. The following famous scientists' quotations may help you. Discuss them in the group. Express your own opinion.

1. "Science is a way of thinking much more than it is a body of knowledge." Carl Sagan 2. "The most beautiful experience we can have is mysterious. It is the fundamental emotion that stands at the cradle of true art and true science." Albert Einstein 3. "Millions saw the apple fall, Newton was the only one who asked why?" Bernard M. Baruch 4. "Your assumptions are your windows on the world. Scrub them off every once in a while, or the light won't come in." Isaac Asimov 5. "If you thought that science was certain - well, that is just an error on your part." Richard P. Feynman 6. "I would rather have questions that can't be answered than answers that can't be questioned." Richard Feynman 7. "A straight line is not the shortest distance between two points." Madeleine L'Engle 8. "When my information changes, I alter my conclusions. What do you do, sir?" John Maynard Keynes 9. "Science is the great antidote to the poison of enthusiasm and superstition." Adam Smith 10. Your favorite quotation / expression about science.

3. Read the text 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. Subtopics 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'.

4. Fill in the gaps with the most appropriate words from the list: contract, legal, period, available, similar, analysis, indicates, research, factor, economy.

1. He did an …… of the way children learn language for his Master's thesis. 2. He was arrested for drunk driving because he had drunk more than the …… limit of alcohol. 3. The culture of the United States is quite …… to that of Canada. 4. The Canadian …… is largely based on natural resources. 5. Environmental pollution seems to be an important …… in the increase in cancers all over the world. 6.The apartment will be …… on June first. 7. The young popstar became famous while still in high school after winning a …… with a major record label. 8. Your continued lateness for class …… to me that you are not really a very serious student. 9. Living in Berlin during the …… when the Berlin Wall was torn down was an unforgettable experience. 10. Some …… into second language learning suggests that oral fluency may increase with moderate amounts of alcohol.

5. Writing Task. Write an academic essay on the topic "What Is the Role of Science and Technology in the Society?". Write at least 250 words.

6. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

7. Search the Internet and go to the libraries to find scientific and technical articles on the topics of Module 1. Analyze the gathered material, then prepare a 10-minute report on the chosen topic. Give a Power Point presentation in the group.

Модуль 2. Тема «Эволюция научного мировоззрения»

Типовые вопросы

1. Scientists must consider a variety of factors when designing a robot. What evidence from your own experience supports this conclusion?
2. How is scientific knowledge changing nowadays?
3. What will softbots look like? How will they move? How will they carry things, or navigate small quarters?

4. After scientists have a number of ideas about robot movement in mind, what types of tests do they then perform?
5. Scientists need to test different abilities of the robots. While scientists perform these tests, they measure how much energy the robots require to function for a long period of time and how much space they take up. Why do the scientists run these tests and track these measurements to create a final model?
6. The Kepler space telescope was launched on March 7, 2009. What is an effect of this occurrence?
7. How does the black box on an airplane record information about the flight?
8. Solid state memory boards are more reliable than magnetic tapes for recording and transmitting flight information. Which evidence from your experience supports this conclusion?
9. How do you feel about the future of transistors and nanotechnology?
10. How might Laurance Doyle, principal investigator for the SETI Institute, have felt when he learned of the discovery of Kepler-16b? How do you know?

Типовые задания

1. Fill in the gaps with the correct form of the verbs in brackets.

1) This workshop ..... (take place) in the Art Gallery every Wednesday from 10am-12pm. 2) The whole team ..... (perform) well at the moment. I believe they will win. 3) In the UK students ..... (enter) law undergraduate degree programmes immediately after high school. 4) Natural gas spot prices ..... (fall) as a result of relatively warm weather in much of the U.S. 5) Green plants ..... (consume) carbon dioxide and ..... (release) oxygen under the influence of light. 6) What ..... (you / do)? I ..... (try) to write an essay. 7) Please be quiet! I ..... (want) to watch the game. 8) The company ..... (operate) a wide range of cultural sightseeing every year. 9) My parents ..... (sail) around western Italy this summer, and probably won't be back until late September. 10) Paula is busy right now. She ..... (talk) on the phone with her dad.

2. Read the text and answer the questions below it.

Space Telescope Finds Hundreds of New Worlds

They're out there in the depths of space. There are giant ones, small ones, weird ones, and most likely ones we can't even imagine. We're talking about planets, of course. For years, astronomers have speculated that the sun is not the only star with planets circling it. Now, thanks to the Kepler space telescope, they have proof that our Milky Way galaxy could actually be teeming with planets of all sizes and types. Scientists call planets orbiting stars other than our sun extrasolar planets, or exoplanets for short.

Kepler Spans the Sky

The Kepler space telescope was launched on March 7, 2009. It is named after Johannes Kepler, the 16th-century German astronomer who discovered the laws of planetary motion. The telescope, which orbits the sun between Earth and Mars, is the most advanced and sensitive optical telescope ever constructed. It is so light sensitive that, if it were pointed back toward Earth at night, it would be able to detect when one person in a small town turned off a single porch light.

Kepler's mission, however, is not to detect porch lights. The spacecraft has one mission only – exoplanet hunting. For nearly two years, it has been peering at approximately 100,000 stars in a portion of the Milky Way. On February 2, NASA, the U.S. space agency, released its findings from Kepler's sky search conducted between May and September 2009. The telescope had discovered 1,235 possible exoplanets orbiting 997 stars. The find includes 68 about the size of Earth and 54 planets in what scientists call the Goldilocks zone – the zone around a star that permits liquid surface water, considered an essential condition to produce life.

How to Find an Exoplanet

As sensitive as it is, Kepler cannot see the planets themselves. The stars it is looking at are from a few hundred to a few thousand light-years away. A light-year is the distance that light, traveling at 186,000 miles per second, covers in a year. That distance comes to approximately 5.9 trillion miles. Kepler uses what scientists call the transit technique. The telescope is able to measure the very slight drop in starlight that occurs when an orbiting object passes in front of a star. Once Kepler registers an object passing around a star (usually after three passes), teams of scientists on Earth begin to focus on the object and try to analyze it.

Ground-based telescopes at the W. M. Keck Observatory in Hawaii, for example, are used to determine a possible planet's mass. Astronomers do that by measuring a star's wobbles – the tiny back-and-forth movements caused by the pull of a planet's gravity. Once size and mass are determined, as well as the type of star an exoplanet orbits, astronomers can make an educated guess as to what the planet is composed of. Sometimes the planet can be rocky, such as Earth, or gaseous, similar to Jupiter or Saturn. Or it may be some other type of exoplanet altogether.

Hot Jupiter's and Rogue Planets

It takes time and a lot of work for astronomers to verify that what Kepler notices is, indeed, an exoplanet, and what kind of planet it might be. That is why it has taken two years to confirm many of Kepler's discoveries. So far, Kepler has led to the discovery of a number of different types of exoplanets: • hot Jupiter's large planets like

Jupiter mainly made up of gas; they orbit their stars as closely as Mercury orbits our sun; • super-Neptune's - gas planets similar to Neptune that also orbit close to their stars; • rogue planets – planet-sized objects that have been ejected from their star systems and are no longer bound to their stars by gravity.

Kepler-10b

In January, 2011, NASA scientists announced that they had discovered, for the first time, an Earth-like rocky exoplanet rather than a gas giant. The exoplanet, which they named Kepler-10b, orbits a sun-like star 560 light-years from Earth. Unfortunately, Kepler-10b is unlikely to support life, as it is 60 times closer to its star than Earth is to the sun. It is also 1.6 times denser than Earth - roughly the density of an "iron dumbbell," says astronomer Natalie Batalha, the leader of the Kepler team. Some believe that Kepler-10b may have originated much farther from its star and moved inward. If the planet supported life in the past, say astronomers, there is no way it could now. Still, Kepler- 10b will go down in the history books as the most Earth-like exoplanet ever discovered – so far.

Continuing the Search

Many astronomers think that it is only a matter of time before Kepler locates Earth's twin revolving around a star that may even be close to us. The space telescope has surveyed only a tiny fraction of the stars in the Milky Way. Once an Earth-like exoplanet is discovered, however, finding out whether it has all the ingredients for life will be a new hurdle. It will require costly new telescopes, including one capable of scanning such planets for evidence of oxygen, water, and carbon dioxide. Such a huge scientific mission will be expensive, but many scientists believe the exploration should continue at any cost. "We are at a very special moment in the history of mankind," Cornell University astronomer Martha Haynes told The Associated Press.

Comprehension Check

1. To which planet do scientists compare Kepler-10b?
   a) Earth
   b) Jupiter
   c) Neptune
   d) Mars
2. The Kepler space telescope was launched on March 7, 2009. What is an effect of this occurrence?
   a) Johannes Kepler has recently been interviewed by several television stations.
   b) Earth's twin has been located revolving around a star in the Milky Way.
   c) Astronauts are traveling to several super-Neptunes to conduct research.
   d) Scientists have discovered hundreds of exoplanets in the Milky Way.
3. What can you conclude after reading the passage?
   a) Many astronomers agree that exoplanets aren't worth studying.
   b) In the near future, astronauts will be able to visit Kepler-10b.
   c) Most exoplanets have oxygen, water, and carbon dioxide.
   d) Scientists will continue to search for Earth-like exoplanets.
4. Read this sentence from the passage: "For years, astronomers have speculated that the sun is not the only star with planets circling it." In this sentence, the word speculated means ……
   a) competed with members in the same group
   b) persuaded others to believe false information
   c) formed a belief without hard evidence
   d) stopped a mission that was unsuccessful
5. The primary purpose of this passage is ……
   a) to describe the mission of the Kepler space telescope
   b) to explain why so many different types of exoplanets exist
   c) to list the features of stars in the Goldilocks zone
   d) to discuss NASA's plans for the future of astronomy
6. What are exoplanets? (open answer)
7. The author writes that Kepler-10b is "unlikely to support life because it is 60 times closer to its star than Earth is to the sun." Why might the author draw this conclusion? (open answer)
8. The question below is an incomplete sentence. Choose the word that best completes the sentence. Astronomers determine an exoplanet's size and mass ……. making an educated guess as to what the planet is composed of.
   a) because
   b) before
   c) however
   d) although

3. Writing Task. Write a personal letter to your friend living abroad on the topic "How I took part in an academic activity or event". Write at least 250 words.

4. Translate one paragraph from the following text in the written form paying attention to its grammar, lexical, and stylistic peculiarities.

Iranians Turn to Telegram App Amid Protests

Nearly a decade ago, a then-fledgling internet tool played a starring role in a protest movement that swept Iran, with organizers and witnesses communicating with each other, and the rest of the world, via Twitter. Today, a loose-knit group of Iranian protesters has added a new tool: Telegram, a smartphone messaging app that people have used to share information about demonstrations and videos of gatherings. "Telegram has been the most important tool for many Iranians to access uncensored news and information," said Fereidoon Bashar co-director of ASL19, a Canada-based research and tech lab that helps people in Iran access information. Sharing news and information has become important during the protests, which have evolved without centralized leadership, Mr. Bashar said. Iranians' use of social media to facilitate protests, and the government's efforts to block them, represent the latest moves in a cat-and-mouse game that has played out in several countries in recent years.

The Iranian government has moved to rein in protesters' ability to organize and communicate. It is restricting access to Telegram and Instagram, the photo-sharing site owned by Facebook Inc., state media has reported. The semi-official Iranian Labor News Agency reported over the weekend that authorities had ordered blockages of mobile and landline internet access in areas near protests or anti-government gatherings. In response, Iranians have ramped up their use of circumvention tools to allow apps like Telegram to function, according to activists and developers of the tools. State Department spokeswoman Heather Nauert said the U.S. is calling on Iran to stop blocking social-media sites and to respect the rights of protesters to speak freely in public and online. "When a nation clamps down on social media…we ask the question, 'What are you afraid of?" she said.

5. Fill in the gaps with the most appropriate words from the list: linking, regulate, potential, ensure, partners, inappropriateness, criteria, impact, seek, construction, compensation, technological, contributor, implied, shifting, maintain, registration, elementary, community, tradition.

1. Libya has long been a crossroads, ……. three continents. 2. ……. for fall programs begins on August first. 3. Eating plenty of fruits, vegetables, protein and dairy products will ……. your body gets the minerals it needs. 4. He received almost half a million dollars in ……. after an accident in which the brakes on his new car failed. 5. Potential immigrants to this country are evaluated using a point system which examines ……. such as age, health, work skills, and education. 6. The discoveries of Albert Einstein began a ……. revolution that has generated more change in a century than in the previous two thousand years. 7. Studies by Gradman and Hanania have shown that regular out of class reading is the most important direct ……. to success on the TOEFL test. 8. In November of 1995, Hsu Youshen and Gary Harriman were ……. in the first gay wedding to be held in Taiwan. 9. I can't believe Sandra ……. that I was having some kind of affair with my boss just because I often work late with him. 10. The ……. sands of the desert in some parts of Egypt can make for a difficult and dangerous crossing. 11. I would ……. a second opinion if you don't agree with what your doctor said. 12. The number and kind of animals and plants making up a lake ……. changes continuously. 13. Setting off fireworks on Halloween is a popular ……. in this country. 14. In the future, we may have tiny computers inside us to monitor, and even ……. functions such as heart rate or blood pressure. 15. I can't understand why they hired him to work in the computer lab; at best he has only a very ……. knowledge of computers. 16. European diseases had a devastating ……. on the native people of Guatemala. 17. My uncle works in ……. as an electrician. 18. The ……. of his language continually causes great embarrassment at our weekly staff meetings. 19. Ensuring that a child's basic needs are met helps to enable them to reach their full …….. 20. One of the goals of the United Nations is to ……. international peace and security.

6. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

7. Search the Internet and go to the libraries to find scientific and technical articles on the topics of Module 2. Analyze the gathered material, then prepare a 10-minute report on the chosen topic. Give a Power Point presentation in the group.

Модуль 3. Тема «Наука и общество»

Типовые вопросы

1. Why can educational institutions be leaders in knowledge net-working.
2. Explain why the key to the success of knowledge management and e-learning is offering strategic differentiation.
3. What is a comprehensive model of the innovation process?
4. Why are knowledge transfer networks important in the innovation process?
5. What limitations do traditionally-used indicators to track technological transfers have? Why do they prevent

innovation?

6. Do you agree with the following statements: Knowledge is your most valuable information? It's critical that information security best practices be followed for knowledge management processes and tools? Support your answer with evidence from your own experience.
7. Do you agree with the following statements: Knowledge that sits on a shelf has no value? The value of knowledge depends on communication and socialization? Support your answer with evidence from your own experience.
8. How does the process of technology adoption occur?
9. Why is knowledge management based on the idea that knowledge is an asset that should be managed?
10. Why are global collaborations necessary to support innovation process?

Типовые задания

1. Active to Passive: convert the following sentences into passive ones.
Example: This paper considers the advantages and disadvantages of a world court of justice. = In this paper the advantages and disadvantages of a world court of justice are considered.
1. In this paper, we address the need to promote awareness. 2. We summarize the latest developments in search engines. 3. This survey has highlighted the urgency of the situation. 4. This work aims to find an alternative to school education. 5. We have not included details on this progress in this document. 6. In Section 4 we attempt to make some sense of these findings. 7. Future work will deal with this aspect. 8. One of the advantages of PCA analysis is that it enables one to classify new samples quickly.

2. Choose the correct option: can, be able, could, may, will.
1. I **could / am able to** be wrong, but I don't think so. 2. I will **can / be able to** tell you tomorrow. 3. He **can** / **is able to** speak ten languages. 4. I hope to **can / be able** to see her tomorrow. 5. She has never **could / been able** to do this. 6. I **can / may** see that you like this one. 7. If I knew the answer I **can / could** tell you. 8. I **can / could** come at 6.0 if you like. 9. We **will / may** go the US next year but I'm not sure. 10. In five years' time inflation **will / could** be at over 15%.

3. Read the text and do the exercises below it.

A Revolution in Knowledge Sharing

The pressure to transform our institutions of learning continues. Virtually every enterprise and institution is grappling with the disruptions and opportunities caused by Web-enabled infrastructures and practices. New best practices, business models, innovations, and strategies are emerging, including new ways to acquire, assimilate, and share knowledge. Using technologies that are already developed or that will be deployed over the next five years, best practices in knowledge sharing not only are diffusing rapidly but will be substantially reinvented in all settings: educational institutions, corporations, government organizations, associations, and nonprofits. But institutions of learning are in a unique position to benefit from an added opportunity: providing leadership in e-knowledge.

E-knowledge finds expression in many shapes and forms in a profoundly networked world. It is not just a digitized collection of knowledge. E-knowledge consists of knowledge objects and knowledge flows that combine content, context, and insights on application. E-knowledge also emerges from interactivity within and among communities of practice and from the troves of tacit knowledge and tradecraft that can be understood only through conversations with knowledgeable practitioners. E-knowing is the act of achieving understanding by interacting with individuals, communities of practice, and knowledge in a networked world. E-knowledge commerce consists of the transactions based on the sharing of knowledge. These transactions can involve the exchange of digital content/context and/or tacit knowledge through interactivity.

Transactable e-knowledge can be exchanged for free. E-knowledge is enabling not only the emergence of new best practices but also the reinvention of the fundamental business models and strategies that exist for e-learning and knowledge management. E-knowledge is technologically realized by the fusion of e-learning and knowledge management and through the networking of knowledge workers. Transactable e-knowledge and knowledge net-working will become the lifeblood of knowledge sharing. They will create a vibrant market for e-knowledge commerce and will stimulate dramatic changes in the knowledge ecologies of enterprises of all kinds. They will support a "Knowledge Economy" based on creating, distributing, and adding value to knowledge, the very activities in which colleges and universities are engaged. Yet few colleges and universities have taken sufficient account of the need to use their knowledge assets to achieve strategic differentiation.

In *It Doesn't Matter*, a recent article in Harvard Business Review, Nicholas G. Carr endorsed corporate leaders' growing view that information technology offers only limited potential for strategic differentiation. Similar points are starting to be made about e-learning, and knowledge management has been under fire as ineffectual for some time. The truth is that e-learning and knowledge management can provide strategic differentiation only if they drive genuine innovation and business practice changes that yield greater value for learners. Carr's article provoked a host of contrary responses, including a letter from John Seely Brown and John Hagel III. Brown is well-known for

his insights into the ways in which knowledge sharing can provide organizations with a solid basis for strategic differentiation.

Comprehension Check

Do the following statements agree with the claims of the text writer? There are three possible options (YES, NO, NOT GIVEN). Choose one option. Discuss your opinions with your groupmates.

1. E-knowledge is primarily based on practices used in business.
2. Educational institutions can be leaders in knowledge net-working.
3. E-knowledge has several benefits to it.
4. Communities of practice are one source of E-knowledge.
5. The key to the success of knowledge management and e-learning is offering strategic differentiation.

4. Fill in the gaps with the most appropriate words from the list: obviously, projecting, dimensions, attitude, granted, parameters, undertaking, disintegrate, statistics, concentrated.

1. The students in the class had a negative ……. towards learning because the teacher treated them like idiots whenever they made mistakes. 2. Nearly 90 percent of Canada's population is ……. within 160 kilometers of the United States/Canada border. 3. The Hawaiian Islands are the ……. tops of the biggest mountain range in the world. 4. Look at that sunburn; she ……. forgot to put on her sunscreen. 5. Human hair and fingernails are the last part of the body to ……. after we die. 6. His measurements of the ……. of the room were not very accurate. 7. If you change the ……. of your spreadsheet, it may not print properly. 8. Remodeling the kitchen was a huge ……. for us because we'd never done anything like it before.
9. The government has ……. political asylum to those refugees from Kosovo who requested it. 10. Recent ……. show that over 15% of immigrants to this country end up leaving the country within 3 years due to a lack of work.

5. Group discussion on the topic «Principles of Knowledge Management». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.

1. Knowledge management is based on the idea that knowledge is an asset that should be managed.
2. Knowledge management principles are an enduring set of guidelines for managing knowledge that are established by an organization, program or team. Knowledge management is based on the idea that knowledge is an asset that should be managed.
3. Knowledge that isn't improved quickly loses its value. Knowledge management is a process of continual improvement.
4. Search is a critical tool for knowledge discovery. Executive management may choose to make search a priority.
5. A primary goal of knowledge management is to facilitate the sharing of knowledge. Encourage your organization to share (e.g. lunch and learn sessions).
6. Knowledge that sits on a shelf has no value. The value of knowledge depends on communication and socialization. The creation, assessment, improvement and use of knowledge is largely a social process.
7. Your knowledge management program needs the support of executive management to have any chance of success. Knowledge management principles define your high-level approach to managing your organization's knowledge.
8. Knowledge is your most valuable information. It's critical that information security best practices be followed for knowledge management processes and tools.

6. Read the text and render it in English.

О развитии образования в Российской Федерации

Национальная доктрина образования до 2025 года является основополагающим государственным документом, который устанавливает приоритет такой сферы общественной деятельности как образование. Этот нормативный акт определяет политику государства, направления и стратегию развития. Доктрина образования до 2025 года устанавливает цели обучения и воспитания, а также их пути достижения с помощью разработки подпрограмм в политике государства и постановки прогнозируемых результатов.

Цели программы следующие: обеспечение высокого уровня качества жизни населения, создание базы для развития стабильного уровня национальной безопасности, духовного и социально-экономического развития страны; провозглашение и укрепление принципов правового демократического государства, в котором будет проживать гражданское общество; обеспечение активно развивающейся экономики рыночного типа квалифицированными кадрами, которые будут принимать активное участие в интеграции экономики на мировом уровне, создавая высокую конкурентоспособность страны и инвестиционную привлекательность; восстановления российского статуса «великая держава» в искусстве, культуре, науке, экономике и высоких технологиях.

Доктрина образования в Российской Федерации отражает различные интересы многонационального гражданского общества, способствует созданию условий для повсеместного получения образования населением, позволяет обеспечить равенство правовых позиций всех граждан на практике и дать

возможность каждому человеку повышать уровень образования на протяжении жизни. Рассматриваемый документ определяет образование как приоритетную сферу формирования и накопления умений и знаний. Национальная доктрина образования в Российской Федерации способствует созданию благоприятных обстоятельств для обнаружения и развития способностей творческого направления российских граждан, воспитания в них принципов нравственного типа и трудолюбия <…..>.

7. Writing Task. Write a summary on one of the topics: "How to Organize Knowledge Building", "How to Prepare a Scientific Paper", "Development of Fundamental Sciences in the Russian Federation". Write at least 1000 words.

8. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

Модуль 4. Тема «Перспективы развития науки»

Типовые вопросы

1. Why is it now recognized that scientific knowledge is more essential for wealth creation of nations today than either capital or land?
2. Do you agree with the following statement: Rather than combating climate change by reducing global demand for energy – a task that seems impossibly challenging – the development of effective nuclear fusion would solve the world's energy demands while averting climate catastrophe? Prove your opinion. Support your answer with evidence from your own experience.
3. Why is it risky to try and use drones underground? Support your answer with evidence from your own experience.
4. Do you agree with the following statement: Forbes' suggestion that the Powerwall will kill nuclear power is probably overblown, but that this represents a radical development for the energy industry as a whole is beyond question? Support your answer with evidence from your own experience.
5. Do you agree with the following statement: The possible consequences of using gene drives to combat malaria are frightening – the possibility of the target gene escaping into a different population, for instance, as well as unknown ramifications for the ecosystem as a whole? Support your answer with evidence from your own experience.
6. How does radiation help doctors identify health problems in patients?
7. Why do you think the accident at Fukushima has "heightened fears about radiation"?
8. Name the three broad areas which relate to people's health, according to the socio-ecological view of health.
9. Which members of society benefited most from the healthy lifestyles approach to health?
10. Do you agree with the following statement: Beamed traffic will travel through tunnels costing less to build than subway tunnels? Prove your opinion. Support your answer with evidence from your own experience.

Типовые задания

1. Complete the sentences by choosing the correct form of the verbs in brackets. Use Past Simple, Past Perfect Simple, or Past Perfect Continuous together with any other words given.

1. We no (sooner / start) talking about Marion than she (appear) in front of us. 2. By the time Francis (arrive) at the cafй, we (finish) our coffee and were ready to leave. 3. How long (you see) Carol before you broke up with her? 4. It wasn't the first time she (fall for) someone so insensitive. 5. We (only talk) for a few minutes before we realized we'd become good friends. 6. As they (paint) their new flat all day long, they were exhausted in the evening. 7. They didn't recognize me at first because they (never see) me wearing a suit before. 8. Neither of them (have) a long relationship before they started going out with each other. 9. I asked them about the rumor, but nobody (hear) anything. 10. The babysitter went home with a headache because the children (make) a noise the whole evening.

2. Read the following essay and fill in the gaps with one of the words or phrases from the list: invented, research, innovations, Internet, email, life expectancy, breakthrough, technophobes, cybernetics, analysed, safeguards, nuclear engineering, invented, genetic engineering, technophiles, experiment.
Express your own opinion on the essay whether you agree or disagree with the author.

Technology has come a long way in the last 50 years, and our lives have become better as a result. Or have they? The last 50 years have seen more changes than in the previous 200.

There have been many remarkable advances in medicine and medical technology that have helped to increase our average 1. ..... way beyond that of our ancestors. Incredible 2. ..... such as satellite television have changed the way we spend our leisure hours. Perhaps the most important 3. ....., however, has been the microchip. Nobody could have imagined, when it was first 4. ....., that within a matter of years, this tiny piece of silicon and

circuitry would be found in almost every household object from the kettle to the video recorder. And nobody could have predicted the sudden proliferation of computers that would completely change our lives, allowing us to access information from the other side of the world via the 5. ..... or send messages around the world by 6. ..... at the touch of a button.

Meanwhile, 7. ..... into other aspects of information technology is making it easier and cheaper for us to talk to friends and relations around the world. Good news for 8. ..... who love modern technology, bad news for the 9. ..... who would prefer to hide from these modern miracles. But everything has a price. The development of 10. ..... led to mass automation in factories, which in turn led to millions losing their jobs. The genius of Einstein led indirectly to the threat of nuclear war and the dangerous uncertainties of 11. ..... (we hear of accidents and mishaps at nuclear power stations around the world, where 12. ..... to prevent accidents were inadequate).

The relatively new science of 13. ..... has been seen as a major step forward, but putting modified foods on to the market before scientists had properly 14. ..... them was perhaps one of the most irresponsible decisions of the 1990s. Meanwhile, pharmaceutical companies continue to 15. ..... on animals, a move that many consider to be cruel and unnecessary. Of course, we all rely on modern science and technology to improve our lives. However, we need to make sure that we can control it before it controls us.

3. Group discussion on the topic «Science and its Development». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.

1. Energy storage is a huge challenge for modern technology (think about how often a smartphone needs charging), but particularly for renewable energy.
2. Forbes' suggestion that the Powerwall will kill nuclear power is probably overblown, but that this represents a radical development for the energy industry as a whole is beyond question.
3. If that sounds too prosaic, consider that 3D printing is a proposed solution for the challenges of building a colony on Mars. It might allow us to build using the materials already there, rather than transporting them 228 million kilometres at enormous expense. The stuff of science fiction? Yes, but 20 years ago, so was the idea of printing a house.
4. Cryonics (often incorrectly called cryogenics, which annoys physicists) is for most people the stuff of science fiction. Only a few hundred people have so far been cryonically preserved. We take the cryopreservation of human embryos for granted; we've been preserving human embryos cryonically for decades now.

4. Read the text and do the exercises below it.

The Rocket – From East to West

A. The concept of the rocket, or rather the mechanism behind the idea of propelling an object into the air, has been around for well over two thousand years. However, it wasn't until the discovery of the reaction principle, which was the key to space travel and so represents one of the great milestones in the history of scientific thought, that rocket technology was able to develop. Not only did it solve a problem that had intrigued man for ages, but, more importantly, it literally opened the door to the exploration of the universe.

B. An intellectual breakthrough, brilliant though it may be, does not automatically ensure that the transition is made from theory to practice. Despite the fact that rockets had been used sporadically for several hundred years, they remained a relatively minor artefact of civilization until the twentieth century. Prodigious efforts, accelerated during two world wars, were required before the technology of primitive rocketry could be translated into the reality of sophisticated astronauts. It is strange that the rocket was generally ignored by writers of fiction to transport their heroes to mysterious realms beyond the Earth, even though it had been commonly used in fireworks displays in China since the thirteenth century. The reason is that nobody associated the reaction principle with the idea of traveling through space to a neighboring world.

C. A simple analogy can help us to understand how a rocket operates. It is much like a machine gun mounted on the rear of a boat. In reaction to the backward discharge of bullets, the gun, and hence the boat, move forwards. A rocket motor's 'bullets' are minute, high-speed particles produced by burning propellants in a suitable chamber. The reaction to the ejection of these small particles causes the rocket to move forwards. There is evidence that the reaction principle was applied practically well before the rocket was invented. In his Noctes Atticae or Greek Nights, Aulus Gellius describes 'the pigeon of Archytas', an invention dating back to about 360 BC. Cylindrical in shape, made of wood, and hanging from string, it was moved to and for by steam blowing out from small exhaust ports at either end. The reaction to the discharging steam provided the bird with motive power.

D. The invention of rockets is linked inextricably with the invention of 'black powder'. Most historians of technology credit the Chinese with its discovery. They base their belief on studies of Chinese writings or on the notebooks of early Europeans who settled in or made long visits to China to study its history and civilization. It is probable that, sometime in the tenth century, black powder was first compounded from its basic ingredients of

saltpetre, charcoal and sulphur. But this does not mean that it was immediately used to propel rockets. By the thirteenth century, powder propelled fire arrows had become rather common. The Chinese relied on this type of technological development to produce incendiary projectiles of many sorts, explosive grenades and possibly cannons to repel their enemies. One such weapon was the 'basket of fire' or, as directly translated from Chinese, the 'arrows like flying leopards'. The 0.7-meter-long arrows, each with a long tube of gunpowder attached near the point of each arrow, could be fired from a long, octagonal-shaped basket at the same time and had a range of 400 paces. Another weapon was the 'arrow as am flying sabre', which could be fired from crossbows. The rocket, placed in a similar position to other rocket-propelled arrows, was designed to increase the range. A small iron weight was attached to the 1.5m bamboo shaft, just below the feathers, to increase the arrow's stability by moving the center of gravity to a position below the rocket. At a similar time, the Arabs had developed the 'egg which moves and burns'. This 'egg' was apparently full of gunpowder and stabilized by a 1.5m tail. It was fired using two rockets attached to either side of this tail.

E. It was not until the eighteenth century that Europe became seriously interested in the possibilities of using the rocket itself as a weapon of war and not just to propel other weapons. Prior to this, rockets were used only in pyrotechnic displays. The incentive for the more aggressive use of rockets came not from within the European continent but from far-away India, whose leaders had built up a corps of rocketeers and used rockets successfully against the British in the late eighteenth century. The Indian rockets used against the British were described by a British Captain serving in India as 'an iron envelope about 200 millimetres long and 40 millimeters in diameter with sharp points at the top and a 3m-long bamboo guiding stick'. In the early nineteenth century, the British began to experiment with incendiary barrage rockets. The British rocket differed from the Indian version in that it was completely encased in a stout, iron cylinder, terminating in a conical head, measuring one meter in diameter and having a stick almost five meters long and constructed in such a way that it could be firmly attached to the body of the rocket. The Americans developed a rocket, complete with its own launcher, to use against the Mexicans in the mid-nineteenth century. A long cylindrical tube was propped up by two sticks and fastened to the top of the launcher, thereby allowing the rockets to be inserted and lit from the other end. However, the results were sometimes not that impressive as the behavior of the rockets in flight was less than predictable. Since then, there have been huge developments in rocket technology, often with devastating results in the forum of war. Nevertheless, the modern-day space programs owe their success to the humble beginnings of those in previous centuries who developed the foundations of the reaction principle. Who knows what it will be like in the future?

Comprehension Check

Choose the most suitable headings for paragraphs A-E from the list of headings below (1-9).

List of Headings

1. How the reaction principle works
2. The impact of the reaction principle
3. Writer's theories of the reaction principle
4. Undeveloped for centuries
5. The first rockets
6. The first use of steam
7. Rockets for military use
8. Developments of fire
9. What's next?

Choose the correct option (a, b, c or d).

1. The greatest outcome of the discovery of the reaction principle was that …….
   a) rockets could be propelled into the air.
   b) space travel became a reality.
   c) a major problem had been solved.
   d) bigger rockets were able to be built.
2. According to the text, the greatest progress in rocket technology was made
   a) from the tenth to the thirteenth centuries.
   b) from the seventeenth to the nineteenth centuries.
   c) from the early nineteenth to the late nineteenth century.
   d) from the late nineteenth century to the present day.
3. Match the inventions (1-5) and the people who first invented or used them (a-b).
   1. rockets for displays
   2. black powder
   3. rocket-propelled arrows for fighting
   4. rockets as war weapons
   5. the rocket launcher
   a) the Chinese
   b) the Indians

c) the British
d) the Arabs
e) the Americans

5. Writing Task. Write an academic essay on one of the following topics: "The Advances of Science in the 21st", "Science Will Never End". "The Discovery I am Proud of". Write at least 250 words.

6. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

7. Search the Internet and go to the libraries to find scientific and technical articles on the topics of Module 4. Analyze the gathered material, then prepare a 10-minute report on the chosen topic. Give a Power Point presentation in the group.

Модуль 5. Тема «Наука в повседневной жизни человека»

Типовые вопросы

1. Do you agree with the following statement: Implementation of Information technologies is the most drastic alteration in our lives? Support your answer with evidence from your own experience.
2. What are the main ways technology impacts our daily life?
3. What are the possibilities of innovative technological gadgets and machines?
4. Do you agree with the following statement: A literature review is not a list in paragraph form, composed on the basis of the above table, where you "stack" the summary of each article/book you have read? Support your answer with evidence from your own experience.
5. What do scientists in Britain think about alternative therapies?
6. Do you agree with the following statement: Master's thesis represents a student's collective understanding of his/her program and major? Support your answer with evidence from your own experience.
7. What do scientists believe to be ineffective but harmless?
8. Do you agree with the following statement: A proper thesis defense gives you and your faculty advisers the chance to discuss your topic and research in greater detail? Support your answer with evidence from your own experience.
9. Why will defending your master's thesis give you confidence to speak up in front of others, a skill that will serve you throughout your career?
10. What could he added to the group of therapies that deserved to be provided with resources for further investigation?

Типовые задания

1. Choose the correct option.
1. **Having passing / For passing / To pass** this exam you need to study / for studying. 2. **To not fail / To don't fail / In order not to fail** I suggest that you study as much as possible. 3. **To carry / Carrying out** this request entails to do / doing a lot of research. 4. **To live / Living** in Europe is often easier than to live / living in Africa. 5. **To live / Living** well in Japan you need a high salary. 6. **Not to have / To don't have / Not having** access to email would be a problem for most people. 7. I visited the mosque before **to come / coming** to the conference. 8. This section is devoted **to analyze / analyzing** the production process. 9. This is dedicated **to provide / providing** a good service for everyone. 10. This article contributes **to understand / understanding** how the process works.

2. Read the text and answer the questions below it.

Hard Disk Drive Technology

A few years ago, a query about the health of a person's hard disk drive would have been met with a blank stare. Nowadays, almost everyone is aware of this remarkable electronic storage medium that is part of every modern computer, even though most users remain ignorant of the complexity of hard drive technology. In the early days of computing, an information record of a computer' s memory content was kept on punched cards similar to the way in which an automated piano stores the keynote sequences on a piano roll. Later, magnetic tape was used to store electronic signals, and is still the favoured means of economically backing up the contents of hard drives. However, accessing information sequentially stored on tape is slow since the electronic data must be input through a fixed head in a single pass.

Hard disk drives solve this problem by incorporating a spinning platter on which magnetic data can be made accessible via a moving head that reads and writes information across the width of the disk. It is analogous to the way in which a person can choose to play a particular track on a CD player by causing the arm to move the head

across the disk. The CD player is, in fact, necessarily similar in design to a hard drive, although there are significant differences in speed of data access.

Most modern hard drives incorporate several platters to further reduce the time spent seeking the required information. Also, some newer drives have two heads; one for reading, and a second head for writing data to disk. This separation of tasks enables much higher densities of magnetic information to be written on the platter, which increases the capacity of the hard drive.

There are three important ways in which the capacity of hard disks has been increased. First, the data code itself has been tightened with express coding techniques. Second, as previously noted, the head technology has been improved; and third, the distance between the heads and the platters has been greatly reduced. It is hard to believe, but the head can be made to pass over the magnetised platter at distances of less than 1 micro inch (the width of a typical human hair is 5000 microinches). This is achieved by means of a special protective coating applied to the platter. Each of these three improvements enables speedier access to the data.

Hard drives are more commonplace than tape recorders these days, but it must be remembered that they are much more fragile. Treated with respect they may last a number of years, but they are quite easily damaged, often with disastrous consequences for the user, whose precious data can become lost forever. Dropping a drive is almost always fatal, as is passing an incorrect electrical current through one (by faulty connection). Dust and even extremes of temperature can cause failure. Yet, no physical damage can ever result from the input of data via the keyboard or mouse. Of course, over time the magnetized coating on the platters will erode, yet this is almost entirely independent of the amount of use.

There are serious questions being raised about the direction of the future of electronic storage media. Some researchers claim that it would be wiser to invest more time and money in setting up systems for streaming data across networks of computers from centralised banks of information storage. This would avoid the need for each personal computer user to have his or her own copy of a software program resident on a local hard drive. Personal data files could be kept at a central storage unit, and be suitably protected from disaster by a failsafe backup system.

As the Internet becomes ever more pervasive, and the speed of access to other machines increases across our telephone lines, it might be possible to do away with local storage systems altogether.

Comprehension Check

1. Nowadays, hard disk drive technology is:
   a) less complex;
   b) part of every modern computer;
   c) expensive;
   d) not difficult to understand.
2. Magnetically-coated disks are one of many types of:
   a) sequential access information systems;
   b) information storage solutions;
   c) tape storage solutions;
   d) CD players.
3. Connecting a hard drive incorrectly usually:
   a) results in excess temperature;
   b) erodes the magnetized material on the platters;
   c) damages the keyboard or mouse;
   d) destroys the drive.
4. Keyboard or mouse use can easily cause:
   a) incorrect electrical currents;
   b) the magnetized coating on the platter to wear out;
   c) physical damage to the hard disk drive;
   d) none of the above.
5. In the future, a computer user might be able to access personal data files from:
   a) a central storage unit;
   b) a local hard drive;
   c) a software program;
   d) the local bank.

3. Group discussion on the topic «Implementation of Information Technologies in our Everyday Life». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.

1. Implementation of Information technologies is the most drastic alteration in our lives.
2. The possibilities of innovative technological gadgets and machines.
3. The main ways Technology Impacts Our Daily Life.

4. Translate one paragraph from the following text in the written form paying attention to its grammar, lexical, and stylistic peculiarities.

Highs & Lows

Hormone levels - and hence our moods – may be affected by the weather. Gloomy weather can cause depression, but sunshine appears to raise the spirits. People may become so depressed and lacking in energy that their work and social life are affected. This condition has been given the name SAD (Seasonal Affective Disorder). Sufferers can fight back by making the most of any sunlight in winter and by spending a few hours each day under special, full-spectrum lamps. These provide more ultraviolet and blue-green light than ordinary fluorescent and tungsten lights. Scientists are working to discover the links between the weather and human beings' moods and performance.

It is generally believed that tempers grow shorter in hot, muggy weather. There is no doubt that 'crimes against the person' rise in the summer, when the weather is hotter and fall in the winter when the weather is colder. Research in the United States has shown a relationship between temperature and street riots. The frequency of riots rises dramatically as the weather gets warmer, hitting a peak around 27-30°C. But is this effect really due to a mood change caused by the heat? Some scientists argue that trouble starts more often in hot weather merely because there are more people in the street when the weather is good.

Psychologists have also studied how being cold affects performance. Researchers compared divers working in icy cold water at 5°C with others in water at 20°C (about swimming pool temperature). The colder water made the divers worse at simple arithmetic and other mental tasks. But significantly, their performance was impaired as soon as they were put into the cold water – before their bodies had time to cool down. This suggests that the low temperature did not slow down mental functioning directly, but the feeling of cold distracted the divers from their tasks.

Psychologists have conducted studies showing that people become less skeptical and more optimistic when the weather is sunny. However, this apparently does not just depend on the temperature. A link between weather and mood is made believable by the evidence for a connection between behavior and the length of the daylight hours. This, in turn, might involve the level of a hormone called melatonin, produced in the pineal gland in the brain. The amount of melatonin falls with greater exposure to daylight. Research shows that melatonin plays an important part in the seasonal behavior of certain animals. For example, food consumption of stags increases during the winter, reaching a peak in February/ March. It falls again to a low point in May, then rises to a peak in September, before dropping to another minimum in November. These changes seem to be triggered by varying melatonin levels.

5. Group discussion on the topic «Defending Master`s Thesis is a Challenge». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.

1. Master`s thesis represents a student`s collective understanding of his/her program and major.
2. Completing your research and resulting paper demand your full attention.
3. "Defending" implies aggressive arguing about his or her work.
4. A proper thesis defense gives you and your faculty advisers the chance to discuss your topic and research in greater detail.
5. Defending your master`s thesis will give you confidence to speak up in front of others, a skill that will serve you throughout your career.

6. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

7. Search the Internet and go to the libraries to find scientific and technical articles on the topics of Module 5. Analyze the gathered material, then prepare a 10-minute report on the chosen topic. Give a Power Point presentation in the group.

Модуль 6. Тема «Наука: от увлечения до профессии»

Типовые вопросы

1. What was named Gilbert because of Gilbert's scientific attitude, together with his contribution to knowledge of magnetism? What was new about Gilbert's scientific research method?
2. The scientist believed that stars are not equidistant from the earth. What new astronomical believes are stated in Gilbert's theory?
3. Do you agree with the following statement: Being transformed into profession, science has become a technique of mastering external environment and life? Support your answer with evidence from your own experience.
4. What are scientists at trying to find out by applying nanotags?

5. Do you agree with the following statement: Emerging technologies result in competitive advantages of current scientific research? Support your answer with evidence from your own experience.
6. Will you characterize one of the oldest forms of wildlife tracking technology? Support your answer with evidence from your own experience.
7. Do you agree with the following statement: Medicine, law and engineering suggest scientific research as an occupation? These professions share the following features: 1) a higher educational qualification as a prerequisite to entry into the occupation; 2) the privilege of monopoly of certain functions; 3) a measure of admission control into the occupation. Support your answer with evidence from your own experience.
8. Why can genius be easily destroyed by discouragement?
9. Do you agree with the following statement: When given a choice, people will have different views regarding which caricature best represents a particular person's face? Support your answer with evidence from your own experience.
10. Why does the ease with which truly great ideas are accepted and taken for granted fail to lessen their significance?

Типовые задания

1. Choose the correct position option for the adverb in bold.

1. I will **shortly** contact you again **shortly**. 2. I would **really** appreciate **really** your input on this. 3. I'm sorry about that. I will **immediately** look into it **immediately**. 4. Should you have any questions **please** let us know **please**. 5. The discussion should be reviewed since it is **mainly** based **mainly** on results published in… 6. Sorry I **obviously** didn't make myself clear **obviously**. 7. The reviewer's suggestion **certainly** is **certainly** helpful. 8. **Unfortunately,** due to limited resources I am unable to accept your invitation **unfortunately** to come to the meeting. 9. You sounded a little annoyed in your last mail. Maybe I had not **properly** expressed myself **properly**. 10. **Please** accept our apologies for not getting back to you sooner **please**. 11. **Unfortunately** I am writing to tell you that **unfortunately** I no longer have the time to… 12. It is envisaged that **probably** the first applications will **probably** be limited to hospitals.

2. Read the text and answer the questions below it.

William Gilbert and Magnetism

The 16th and 17th centuries saw two great pioneers of modern science: Galileo and Gilbert. The impact of their findings is eminent. Gilbert was the first modern scientist, also the accredited father of the science of electricity and magnetism, an Englishman of learning and a physician at the court of Elizabeth. Prior to him, all that was known of electricity and magnetism was what the ancients knew, nothing more than that the lodestone possessed magnetic properties and that amber and jet, when rubbed, would attract bits of paper or other substances of small specific gravity. However, he is less well known than he deserves.

Gilbert's birth pre-dated Galileo. Born in an eminent local family in Colchester County in the UK, on May 24, 1544, he went to grammar school, and then studied medicine at St John's College, Cambridge, graduating in 1573. Later he travelled in the continent and eventually settled down in London. He was a very successful and eminent doctor. All this culminated in his election to the president of the Royal Science Society. He was also appointed personal physician to the Queen (Elizabeth I), and later knighted by the Queen. He faithfully served her until her death. However, he didn't outlive the Queen for long and died on November 30, 1603, only a few months after his appointment as personal physician to King James.

Gilbert was first interested in chemistry but later changed his focus due to the large portion of mysticism of alchemy involved (such as the transmutation of metal). He gradually developed his interest in physics after the great minds of the ancient, particularly about the knowledge the ancient Greeks had about lodestones, strange minerals with the power to attract iron. In the meantime, Britain became a major seafaring nation in 1588 when the Spanish Armada was defeated, opening the way to British settlement of America. British ships depended on the magnetic compass, yet no one understood why it worked. Did the Pole Star attract it, as Columbus once speculated; or was there a magnetic mountain at the pole, as described in Odyssey, which ships would never approach, because the sailors thought its pull would yank out all their iron nails and fittings? For nearly 20 years, William Gilbert conducted ingenious experiments to understand magnetism. His works include On the Magnet, Magnetic Bodies, and the Great Magnet of the Earth.

Gilbert's discovery was so important to modern physics. He investigated the nature of magnetism and electricity. He even coined the word "electric". Though the early beliefs of magnetism were also largely entangled with superstitions such as that rubbing garlic on lodestone can neutralise its magnetism, one example being that sailors even believed the smell of garlic would even interfere with the action of compass, which is why helmsmen were forbidden to eat it near a ship's compass. Gilbert also found that metals can be magnetized by rubbing materials such as fur, plastic or the like on them. He named the ends of a magnet "north pole" and "south pole". The magnetic poles can attract or repel, depending on polarity. In addition, however, ordinary iron is always attracted to a magnet. Though he started to study the relationship between magnetism and electricity, sadly he didn't complete

it. His research of static electricity using amber and jet only demonstrated that objects with electrical charges can work like magnets attracting small pieces of paper and stuff. It is a French guy named du Fay that discovered that there are actually two electrical charges, positive and negative.

He also questioned the traditional astronomical beliefs. Though a Copernican, he didn't express in his quintessential beliefs whether the earth is at the centre of the universe or in orbit around the sun. However, he believed that stars are not equidistant from the earth but have their own earth-like planets orbiting around them. The earth itself is like a giant magnet, which is also why compasses always point north. They spin on an axis that is aligned with the earth's polarity. He even likened the polarity of the magnet to the polarity of the earth and built an entire magnetic philosophy on this analogy. In his explanation, magnetism is the soul of the earth. Thus a perfectly spherical lodestone, when aligned with the earth's poles, would wobble all by itself in 24 hours. Further, he also believed that the sun and other stars wobble just like the earth does around a crystal core, and speculated that the moon might also be a magnet caused to orbit by its magnetic attraction to the earth. This was perhaps the first proposal that a force might cause a heavenly orbit.

His research method was revolutionary in that he used experiments rather than pure logic and reasoning like the ancient Greek philosophers did. It was a new attitude towards the scientific investigation. Until then, scientific experiments were not in fashion. It was because of this scientific attitude, together with his contribution to our knowledge of magnetism, that a unit of magneto motive force, also known as magnetic potential, was named Gilbert in his honour. His approach of careful observation and experimentation rather than the authoritative opinion or deductive philosophy of others had laid the very foundation for modern science.

Comprehension Check

1. William Gilbert is the accredited father of the science of …
   a) transmutation of metal;
   b) electricity and magnetism;
   c) traditional astronomy.
2. Gilbert changed his focus due to the large portion of mysticism of alchemy involved. What particular change of focus is meant in the text?
   a) Prior to medicine, he studied alchemy;
   b) Prior to magnetism explanation, he questioned the traditional astronomical beliefs;
   c) He gradually developed his interest in physics after chemistry study.
3. Gilbert also found that metals can be magnetized by
   a) interfering with the action of compass;
   b) the Earth`s crystal core;
   c) rubbing materials such as fur, plastic or the like on them.
4. The scientist believed that stars are not equidistant from the earth. What new astronomical believes are stated in Gilbert`s theory?
   a) The earth is at the centre of the universe;
   b) Stars are in orbit around the sun;
   c) The polarity of the magnet is not likened to the polarity of the earth.
5. Which of the options is not a part of Gilbert`s discoveries?
   a) The earth wobbles on its axis;
   b) Metals can be magnetised;
   c) Stars are at different distances from the earth;
   d) There are two charges of electricity.

3. Fill in the gaps with the most appropriate words from the list: minimize, abandoned, induces, predominantly, uniform, denotes, exhibited, arbitrary, revises, complement.

1. A true scientist continually … his general theories as his knowledge increases. 2. If the experiments are set up properly, you can … the potential for bias in the results. 3. Boys' hair must be cut to … length at her son's private school. 4. The father … a total lack of understanding for the stress his child was feeling. 5. Teaching remains a … female profession in this country. 6. The number in brackets beside the course name … the number of credits the course is worth towards a degree. 7. We found a cat that had been … by its owners when they moved away. 8. Trying to read in a second language without sufficient knowledge of vocabulary simply … feelings of frustration. 9. Massage treatments can be used to … conventional medical therapies. 10. At one time, … arrest and detention without trial were common features of many military dictatorships throughout Latin America.

4. Group discussion on the topic «Science is More than a Social Institution. It is also a Profession». Discuss the following statements in the group. Express and prove your opinions; support them with the examples from your experience.

1. Medicine, law and engineering suggest scientific research as an occupation. These professions share the following features: 1) a higher educational qualification as a prerequisite to entry into the occupation; 2) the privilege of

monopoly of certain functions; 3) a measure of admission control into the occupation; 4) formal / informal authority of a professional body to control its members; 5) a limitation on the contractual obligations of the professional towards his client or employer.
2. Being transformed into profession, science has become a technique of mastering external environment and life.
3. Emerging technologies result in competitive advantages of current scientific research.

5. Writing Task. Write an academic report on the topic "Nanotechnology is the heart of things that we surround ourselves with every day". Group discussion on the topic «Requirements for Thesis Structure and Defense in the Russian Federation and Abroad». Discuss the statements of the text «Presenting your Thesis» in the group. Express and prove your opinions; support them with the examples from your experience.

6. Choose a scientific article in English concerning your own field of science from any valid information source (10 000 printed characters) and prepare its oral translation into Russian.

7. Search the Internet and go to the libraries to find scientific and technical articles on the topics of Module 6. Analyze the gathered material, then prepare a 10-minute report on the chosen topic. Give a Power Point presentation in the group.

Перечень тем к зачету

(для ликвидации академической задолженности и устранения академической разницы)

1 Семестр

1. Word Changing Ideas: 10 new technologies that will make a difference.
2. Modeling formal theories
3. Knowledge representation in academic discourse
4. A bridge across the generation. The road to success
5. Artificial Intelligence
6. Potential effects of the digital revolution
7. Innovations in science and technology
8. "Simple" and "complicated" in modern science
9. The origins of human language diversity
10. Penalties administered for university student plagiarism

Перечень тем к зачету

(для ликвидации академической задолженности и устранения академической разницы)

2 Семестр

1. My scientific ambitions in life
2. Reference systems in academic writing.
3. What kind of the language style is suitable for academic writing and speaking?
4. Managing an academic career: Science is more than a social institution, it is also a profession.
5. What provides the foundation for excellent dissertation defence?
6. What are the principles of writing an article abstract?
7. Computers and intelligence in modern academic discourse
8. Advantages and disadvantages of scientific networks
9. Implementation of information technologies in language and communication.
10. The possibilities of innovative technology for technological development

Примеры заданий к зачету

(для ликвидации академической задолженности и устранения академической разницы)

1 Семестр

1. Choose the correct option for the word in bold.

Dear Professor (1) **Michael Smith / Smith Michael** I am a postgraduate student at the Southern University. I attended the Summer conference last week and I found (2) **very interesting your seminar / your seminar very interesting**. I saw on your web page that is possible to have a placement period in your lab. It would be a real pleasure for me to join your (3) **research group / group research** and do some further research into (4) **innovative**

dream sequence storage ways / innovative ways to store dream sequences. I (5) **would / would be able to** help you with the following: (6) **Storing data / Data storing** and **Teaching undergraduates / Undergraduate teaching**. Where I think (7) **could I / I could** really add value would be in research work. I (8) **attached / have attached** a paper and some recent results, which I hope you will (9) **find both / both find** interesting and useful. I would be able to get funding from my university to cover the (10) **costs of a placement period / period placement costs**, so I would need no grant or scholarship. Please (11) **find attached / attached find** my CV with (11) **the complete list of my publications / my publications complete list** and a (12) **letter of recommendation / recommendation letter** from my tutor, Professor Zhukov. (14) **Thank you in advance / In advance thank you** for any help you (15) **can give me / may be able to give me.**

2. Choose the most appropriate answer.

Expert Systems and Knowledge Representation

Expert systems are still a rapidly developing area of artificial intelligence. Modern expert systems are capable of (1) _____ when controlling complex operator consoles, when (2) _____ for faults in electronic devices, when diagnosing, they are also used in meteorology, geology, engineering, etc. Since (3) _____ made on the basis of expert systems are extremely important, the (4) _____ of such a system should be open to verification. It should be noted that the crucial difference between expert systems and other software is (5) _____, in which knowledge about a corresponding subject domain is stored. This knowledge should be represented in a form (6) _____ for specialists in the corresponding (7) _____ and these systems should provide the possibility of (8) _____ the knowledge base, adding new knowledge and changing already accumulated knowledge in particular. Expert systems developers often note that easy knowledge base modification is often the main (9) _____ for success of expert systems produced. Development and integration of the systems are especially urgent when there is a (10) _____ and when performing a small task requires involvement of many specialists. Therefore, development of knowledge representation methods and knowledge processing methods is crucial in the process of expert systems development.

1	a)	advising	b)	decongesting	c)	counseling
2	a)	searching	b)	inquiring	c)	interrogating
3	a)	ideas	b)	solutions	c)	decisions
4	a)	automated argumentation	b)	minding case	c)	reasoning process
5	a)	knowledge base	b)	management information	c)	intelligence data
6	a)	disposable	b)	available	c)	prescribed
7	a)	topical area	b)	subject domain	c)	application field
8	a)	machining	b)	updating	c)	modifying
9	a)	core driver	b)	criterion	c)	crucial factor
10	a)	crowd of people	b)	uncertainty of scientists	c)	lack of specialists

3. Read the text and answer the questions below it.

Basics of Research Paper Writing (Part 2)

Abstract. Basically, an abstract comprises a one-paragraph summary of the whole paper. Abstracts have become increasingly important, as electronic publication databases are the primary means of finding research reports in a certain subject area today. Hence, everything of relevance to potential readers should be in the abstract, everything else not. Note that the thematic scope of an abstract progresses in a similar way as the complete paper following the Hourglass Model: 1 Motivation: Why do we care about the problem and the results? 2 Problem: What problem is the paper trying to solve and what is the scope of the work? 3 Solution: What was done to solve the problem? 4 Results: What is the answer to the problem? 5 Implications: What implications does the answer imply? There are some things that should not be included in an abstract, i.e. information and conclusions not stated in the paper, references to other literature.

Introduction. The introduction serves the purpose of leading the reader from a general subject area to a particular field of research. Three phases of an introduction can be identified (Swales, 1993): 1 Establish a territory: bring out the importance of the subject and/or make general statements about the subject and/or present an overview on current research on the subject. 2 Establish a niche: oppose an existing assumption or reveal a research gap or formulate a research question or problem or continue a tradition. 3 Occupy the niche: sketch the intent of the own work and/or outline important characteristics of the own work; outline important results; and give a brief outlook on the structure of the paper. In brief, the introduction should guide the reader to current state of the art in the field and should allow the reader to understand the rest of the paper without referring to previous publications on the topic.

Body. The body of a paper reports on the actual research done to answer the research question or problem identified in the introduction. It should be written as if it were an unfolding discussion, each idea at a time. Often, the body comprises several sections and subsections, whereas structure, organization and content depend heavily on the type of paper, publication outlet, publisher and the creativity of the authors. In empirical papers, the paper body describes the material and data used for the study, the methodologies applied to answer the research questions and

the results obtained. It is very important that the study is described in a way that makes it possible for peers to repeat or to reproduce it. Crucial is the value of the reflections abstracted from the experience and their relevance to other researchers working on related methods, theories or tools. Methodology papers describe a novel method which may be intended for use in research or practical settings (or both), but the paper should be clear about the intended audience. Theory papers describe principles, concepts or models on which work in the field (empirical, experience, methodology) is based; authors of theoretical papers are expected to position their ideas within a broad context of related frameworks and theories. Generally, the body of a paper answers two questions, namely how was the research question addressed (materials, methods) and what was found.

Discussion. Thinking in terms of the Hourglass Model, the discussion part (sometimes presented as 'Discussion', 'Discussion and Conclusion', or simply 'Conclusion') is the counterpart to the introduction. This part includes the following: A presentation of back-ground information as well as recapitulation of the research aims of the study. A brief summary of the results, whereas the focus lies on discussing and not recapitulating the results. A comparison of results with previously published studies. Conclusions or hypotheses drawn from the results, with summary of evidence for each conclusion. Proposed follow-up research questions and outlook on further work.

References. Embedding the own work in related literature is one of the essential parts of research writing. This is achieved by citing related work within the text and by listing all cited references at the end of the paper. Different publishers require different formats or styles for citing a paper in the text and for listing references. The most commonly used referencing systems are variations of the following: Name and year system. References are cited by their respective authors and the year of publication, e.g. 'Chuck and Norris (2013) define …'. This system is very convenient for authors, as the citation does not have to be changed when adding or removing references from the list.

Alphabet-number system. This system lists the references in alphabetical order and cites them by their respective number in parentheses or (square) brackets, e.g. 'As reported in [4], …'. This system is relatively convenient for readers, as it does not break the flow of words while reading a sentence with many citations. On the other hand, the author has to keep an eye on the references cited in the text as their numbers may change when the reference list is updated. Citation order system. This system is similar to the alphabet-number system with one major difference: the reference list is not sorted alphabetically, but in the order of appearance (citation by number) in the text. Variations of the referencing systems mentioned above are used in most of the common style guides, for instance American Psychological Association (APA) style, Chicago style, Council of Biology Editors (CBE) style and Modern Language Association (MLA) style.

Comprehension Check

1. Why have abstracts become increasingly important?
2. What is usually included in an abstract?
3. What should not be included in an abstract?
4. Name and describe three phases of an introduction.
5. Do you agree that the introduction in Russian papers coincide with the English ones? Explain your answer and give some examples.
6. What is the purpose of the body of a paper?
7. How do empirical papers, case study papers, methodology papers, and theory papers differ from each other?
8. What does the 'Discussion and Conclusion' part include?
9. Choose and describe the most commonly used referencing systems. Are there any differences among them? What are they?
10. What referencing system is used in your field of science? Give some examples.

4. Write an academic essay of a describe type on the following topic: The role of science and technology in the society.

Примеры заданий к зачету

(для ликвидации академической задолженности и устранения академической разницы)

2 Семестр

1. Choose the correct option for the word in bold.

A. My current (1) **researches are / research is** concerned with blind signal processing, (2) **that / which** is, manipulating or extracting (3) **information / informations** from (4) **any / some** kind of signal without (5) **to know / knowing** the system, or the physical process, through (6) **whom / which** the signal has passed before (7) **to be / being** sensed. In mathematical terms, this is a very difficult problem, which (8) **can** / **might** be solved by using just two basic tools: diversity and statistics. In the last few years, I have been treating "frequency" diversity. My main objective is (9) **extraction / to extract** only those maps that are related to astrophysical radiations.

B. I (10) **hear / am hearing / having heard** that you (11) **have / have had / have been had** problems downloading the files recently. Sorry about this. I (12) **speak / will speak / have spoken** to the Systems Manager

and she (13) **promises / had promised / promised** to get back to you by lunchtime. I (14) **also forward / have also forwarded** you Jean's comments. I will ring you later in the week to see how you (15) **get** / **are getting** on.

2. Choose the most appropriate answer.

Scientific and Technical Texts

Scientific and technical texts are the texts which contain (1) _____ of both scientific and technical functional (2) _____, among which one can mention informative value, logic, consistency, accuracy, objectivity, and clarity. As for lexical and grammatical (3) _____, the following ones should be mentioned: terminology usage and (4) _____ (attribute groups, nominative and elliptical constructions). Among the (5) _____ of scientific and technical texts one can mention the following ones: impersonal narration, objectivity, logic, use of clichés. The aim of scientific and technical texts is to (6) _____ certain information or data. The presentation of information is focused on logical (7) _____, rather than emotional one. Scientific and technical translation challenges are caused by (8) _____ in language structures, terminological gaps, stylistic peculiarities of source texts and (9) _____, variables in topic and comment relations in the source language and the target language, etc. Translation (10) _____ help overcome these difficulties at three different levels – lexical, grammatical, and stylistic ones.

1	a)	characteristics	b)	exponents	c)	precursors
2	a)	styles	b)	mandrels	c)	distinctiveness
3	a)	stuff	b)	highlights	c)	features
4	a)	special grammar	b)	specific attributes	c)	peculiarities
5	a)	semantic meanings	b)	stylistic features	c)	syntactic constructions
6	a)	describe	b)	consider	c)	present
7	a)	acquisition	b)	perception	c)	aggregation
8	a)	similarities	b)	differences	c)	uniqueness
9	a)	original structures	b)	resulting versions	c)	target texts
10	a)	procedures	b)	shifts	c)	refinements

3. Read the text and answer the questions below it.

On the Structure of Scientific Texts

In the study of text structure there are basically two approaches which we may adopt. On the one hand, we may seek to understand the mechanisms of textual cohesion, to discover what makes a sequence of sentences into a coherent text. Such a study involves the discussion of anaphora, of reference and substitution, of ellipsis, of the role of conjunctions and 'sentence adverbs', of lexical and semantic cohesion between sentences, and so forth. The alternative approach is to take a more global perspective, to seek to understand the overall organization of texts, to understand how one episode of a narrative develops from another and how paragraphs and chapters are built into cohesive wholes.

The two approaches to the study of text have thus proceeded with relatively little interaction. There has been scarcely any attempt to relate the two aspects of text structure within a comprehensive linguistic framework; the first real effort in this direction is represented by the work of Grimes (1975). Furthermore, the study of 'macro-structure' has been concentrated almost wholly on narrative texts, and primarily on fictional texts, short stories, novels and folk-tales. Narrative texts of a non-literary nature such as newspaper reports and historical writings have been generally neglected, and non-narrative texts have been almost completely ignored.

A characteristic of all texts at the level of micro-structure is that sentences are linked by some kind of 'thematic progression'. Every sentence adds some semantic content to what has preceded (unless, of course, it is a vacuous repetition), it builds upon what has gone before in order to convey something new. From the viewpoint of its communicational role a sentence has two parts, a theme and a rhema (Firbas 1966, 1974). The theme comprises those elements which are related in some way to what has been said or written earlier (in the same text or in preceding discourse) or to some feature of the extra-linguistic context, and which can be assumed by the speaker to be known about already – they can be taken as 'given'. The rhema is made up of those elements which convey information that is in some sense 'new' or unpredictable, and which therefore push forward the message being communicated. A second basic characteristic of all texts at the level of micro-structure is that sentences are linked by what may be called 'semantic progression'. This term embraces the numerous devices by which temporal, logical, causal and many other types of relationships between sentences or clauses are signaled.

The typical connectors of descriptive passages are those expressing spatial relationships (behind, in front of, besides, next to, etc.), e.g.: *Opposite the town hall on the other side of the square stood the medieval church. Beside it was the old grammar school, behind it . . . and through the churchyard . . .* [etc.]. Another common group of non-temporal connectors is formed by those expressing teleological relations, such as because, therefore (cause): *Because Mary had forgotten to buy some bread, Harry went to the shops. Mary had forgotten to buy some bread. Therefore, Harry went to the shops.* since (circumstance): *Since the concert had been cancelled we went to the cinema*. So (result): *The soup was too hot, so we could not eat it.*

Both circumstance and result may be regarded as weaker forms of the causative, thus the replacement of since and so by because or therefore is often possible, as it is here. At times the result relationship may be so weak that the connector can be omitted altogether: *The soup was too hot. We could not eat it*. Similar remarks apply to the reason connector for: *I gave in to his demands, for there was nothing else to do, I gave in to his demands. There was nothing else to do. I gave in to his demands because there was nothing else to do.* Other non-temporal connectors are those of concession (although, even though, nevertheless, yet, in spite of), condition (if . . . then), correlation (as . . . so), coordination (and), alternation (or, either . . . or, alternatively), antithesis (but, on the contrary), contrast (but, by contrast), and denial of expected consequence (but, however).

This brings us to the macro-structural organization of text. Here we find features of thematic and semantic progression as well. It is quite natural to expect to find that the general principles of thematic progression should extend beyond the level of the paragraph to larger segments of text. Grady (1971) has shown how Christensen's analysis of paragraph structure can be applied to complete texts. Just as the paragraph has a 'topic sentence' which provides the foundation for its succeeding sentences, so too the text as a whole has an initial section of one or more paragraphs in which the 'topics' to be discussed are presented. Subsequent paragraphs (or groups of paragraphs) are related to this introductory section either coordinatively or subordinately, in the same way as the sentences are in an individual subsequent paragraph. A similar picture results from an extension of Daneš' notion of thematic progression to relations among paragraphs.

Just as the thematic elements of a sentence may be related to either the rhema or the theme of its immediately preceding sentence giving either a linear or a parallel progression respectively, so may the 'theme sentence' of a paragraph be related either to the 'new' parts of its preceding paragraph or to some part of its 'theme sentence'.

Comprehension Check

1. What is the difference between two approaches which one may adopt while studying text structure? Explain your opinion.
2. How have the two approaches been studied?
3. What are narrative texts of a non-literary nature? Give some examples.
4. What does the level of text micro-structure mean?
5. What are the differences between a theme and a rhema?
6. Why is semantic progression important in the text structure? Give some examples.
7. When can the connector be omitted? Explain your opinion.
8. How are features of thematic and semantic progression applied to the macro-structural organization of text?
9. What provides the foundation for the succeeding sentences?
10. Why may the thematic elements of a sentence be related to either the rhema or the theme of its immediately preceding sentence?

***4. Write an academic essay of a discuss type on the following topic: Some researchers became advocates of peace. What led them to their fateful decision*?**

4.2. Процедуры оценивания знаний, умений, навыков, формы и организация текущего контроля и промежуточной аттестации обучающихся

Текущий контроль и промежуточная аттестации студентов в университете ведется в соответствии с Положением о текущем контроле успеваемости и промежуточной аттестации студентов РГРТУ им. В.Ф. Уткина.

Текущий контроль успеваемости

Дисциплина делится на 3 модуля. Каждый модуль учебной дисциплины включает в себя изучение законченного раздела, части дисциплины.

Основными видами контроля знаний, умений и навыков в течение каждого модуля учебной дисциплины являются рубежные контроли и работа на семинарах.

Текущий контроль по модулю учебной дисциплины осуществляется по графику учебного процесса. Сроки контрольных мероприятий (КМ) и сроки подведения итогов по модулям учебной дисциплины отображаются в рабочих учебных планах на семестр (отрезках). Студент должен выполнить все контрольные мероприятия, предусмотренные в модуле учебной дисциплины к указанному сроку, после чего преподаватель проставляет балльные оценки, набранные студентом по результатам текущего контроля модуля учебной дисциплины в ЭУ.

Контрольное мероприятие считается выполненным, если за него студент получил оценку в баллах, не ниже минимальной оценки, установленной программой дисциплины по данному мероприятию.

Студенты, не сдавшие контрольное мероприятие в установленный срок, продолжают работать над ним в соответствие с порядком, принятым кафедрой.

Промежуточная аттестация

Формой промежуточной аттестации по дисциплине является зачет.

Зачет

В рамках рейтинговой системы контроля успеваемости студентов, зачет по дисциплине формируется набором в течение семестра, предусмотренной в программе дисциплины, суммы баллов, при выполнении им всех контрольных мероприятий.

Дифференцированный зачет

Зачеты по курсовому проекту проходят в форме дифференцированного зачета с проставлением в зачетной ведомости оценок «отлично», «хорошо», «удовлетворительно» и «неудовлетворительно». Зачет по курсовому проекту проставляется по результатам защиты студентами курсового проекта перед комиссией, назначенной кафедрой.

Оценивание дисциплины ведется в соответствии с Положением о текущем контроле успеваемости и промежуточной аттестации студентов РГРТУ им. В.Ф. Уткина.

Методика оценки по рейтингу

Студент, выполнивший все предусмотренные учебным планом задания и сдавший все контрольные мероприятия, получает итоговую оценку по дисциплине за семестр в соответствии со шкалой:

Рейтинг	**Оценка на экзамене, дифференцированном зачете**	**Оценка на зачете**
85 – 100	отлично	Зачтено
71 – 84	хорошо	
60 – 70	удовлетворительно	
0 – 59	неудовлетворительно	Не зачтено

Рейтинг студента по дисциплине за семестр определяется как сумма баллов, полученных им за все модули учебной дисциплины, и баллов за промежуточную аттестацию. Максимальное количество баллов за дисциплину в семестре устанавливается равным 100.