

Министерство науки и высшего образования Российской Федерации  
Нижекамский химико-технологический институт (филиал)  
федерального государственного бюджетного образовательного учреждения  
высшего образования  
«Казанский национальный исследовательский технологический университет»  
(НХТИ ФГБОУ ВО «КНИТУ»)

УТВЕРЖДАЮ



Заместитель директора по УР  
Н.И. Никифорова

« 03 » мая 2023 г.

**ФОНД ОЦЕНОЧНЫХ СРЕДСТВ**  
по дисциплине (модулю)

**Б1.О.08 Иностранный язык в профессиональной сфере**  
(наименование дисциплины (модуля))

**18.03.02 «Энерго- и ресурсосберегающие процессы в химической  
технологии, нефтехимии и биотехнологии»**  
(код и наименование направления подготовки/ специальности)

**«Машины и аппараты химических производств»**  
(наименование профиля/программы/направленности/специализации)

**Бакалавр**  
(квалификация)

**Очная**  
(форма обучения)

Нижнекамск, 2023 г.

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ФОС рассмотрен и одобрен на заседании кафедры иностранных языков,  
протокол от 03.03.2023 г. № 7.

Зав. кафедрой

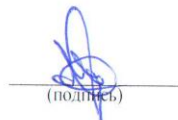
  
(подпись)

Г.Р. Ганиева  
(Ф.И.О.)

## СОГЛАСОВАНО

Протокол заседания кафедры МАХП, реализующей подготовку основ-  
ной образовательной программы от 19.04.2023 г. № 8.

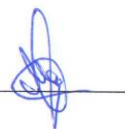
Зав. кафедрой

  
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(Ф.И.О., должность, организация, подпись)



**Перечень компетенций и индикаторов достижения компетенций с указанием этапов формирования  
в процессе освоения дисциплины**

Компетенция:

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

УК-4.1 - Знает основы деловой коммуникации, правила и закономерности устной и письменной формы речи, требования к деловой коммуникации на русском и иностранном языках;

УК-4.2 - Умеет применять на практике деловую коммуникацию в устной и письменной формах, методы и навыки делового общения на русском и иностранном языках;

УК-4.3 - Владеет навыками чтения и перевода текстов на иностранном языке в профессиональном общении; навыками деловых коммуникаций в устной и письменной форме на русском и иностранном языках.

| <b>Индикаторы достижения компетенции</b> | <b>Этапы формирования компетенции</b><br>(указать все темы из РПД) |   |                             |                                 | <b>Наименование оценочного средства</b>   |
|--|--|---|-----------------------------|---------------------------------|---|
|  | <b>Лекции</b>  | <b>Практические занятия</b>   | <b>Лабораторные занятия</b> | <b>Курсовой проект (работа)</b> |   |
| УК-4<br>УК-4.1<br>УК-4.2<br>УК-4.3       | <i>Не предусмотрены</i>  | Тема 1, Тема 2, Тема 3, Тема 4, Тема 5, Тема 6, Тема 7, Тема 8, Тема 9. | <i>Не предусмотрены</i>     | <i>Не предусмотрены</i>         | Перевод профессионально-ориентированного текста; устные лексические темы; контрольная работа; итоговая контрольная работа (тест). |

*Перечень оценочных средств по дисциплине (модулю)*

**III, IV семестры**

| <b><i>Оценочные средства</i></b>                | <b><i>Кол-во</i></b> | <b><i>Min, баллов<br/>(базовый уровень)</i></b> | <b><i>Max, баллов<br/>(повышенный уровень)</i></b> |
|---|----------------------|---|--|
| Перевод профессионально-ориентированного текста | 2                    | 20  | 35   |
| Устные лексические темы                         | 2                    | 20  | 35   |
| Контрольная работа                              | 1                    | 20  | 30   |
| Итого:  |                      | 60  | 100  |

**V семестр**

| <b>Оценочные средства</b>                       | <b>Кол-во</b> | <b>Min, баллов<br/>(базовый уровень)</b> | <b>Max, баллов<br/>(повышенный уровень)</b> |
|---|---------------|--|---|
| Перевод профессионально-ориентированного текста | 2             | 6  | 10  |
| Итоговая контрольная работа (тест)              | 1             | 6  | 10  |
| Экзамен   | 1             | 24                                       | 40  |
| Итого:  |               | 36                                       | 60  |

### *Шкала оценивания*

| Цифровое выражение | Выражение в баллах: | Словесное выражение              | Критерии оценки индикаторов достижения при форме контроля:   |  |
|--------------------|---------------------|----------------------------------|--|--|
|                    |                     |                                  | экзамен / зачет с оценкой  | зачет  |
| 5                  | 87 - 100            | Отлично (зачтено)                | Оценка «отлично» выставляется студенту, если теоретическое содержание курса освоено полностью, без пробелов; исчерпывающе, последовательно, четко и логически стройно излагает материал; свободно справляется с задачами, вопросами и другими видами применения знаний; использует в ответе дополнительный материал все предусмотренные программой задания выполнены, качество их выполнения оценено числом баллов, близким к максимальному; анализирует полученные результаты; проявляет самостоятельность при выполнении заданий | Оценка «зачтено» выставляется студенту, если ответы на вопросы по темам дисциплины последовательны, логически изложены, допускаются незначительные недочеты в ответе студента, такие как отсутствие самостоятельного вывода, речевые ошибки и пр |
| 4                  | 74 - 86             | Хорошо (зачтено)                 | Оценка «хорошо» выставляется студенту, если теоретическое содержание курса освоено полностью, необходимые практические компетенции в основном сформированы, все предусмотренные программой обучения учебные задания выполнены, качество их выполнения достаточно высокое. Студент твердо знает материал, грамотно и по существу излагает его, не допуская существенных неточностей в ответе на вопрос.   |  |
| 3                  | 60 - 73             | Удовлетворительно (зачтено)      | Оценка «удовлетворительно» выставляется студенту, если теоретическое содержание курса освоено частично, но пробелы не носят существенного характера, большинство предусмотренных программой заданий выполнено, но в них имеются ошибки, при ответе на поставленный вопрос студент допускает неточности, недостаточно правильные формулировки, наблюдаются нарушения логической последовательности в изложении программного материала.  |  |
| 2                  | Ниже 60             | Неудовлетворительно (не зачтено) | Оценка «неудовлетворительно» выставляется студенту, если он не знает значительной части программного материала, допускает существенные ошибки, неуверенно, с большими затруднениями выполняет практические работы, необходимые практические компетенции не сформированы, большинство предусмотренных программой обучения учебных заданий не выполнено, качество их выполнения оценено числом баллов, близким к минимальному  | Оценка «не зачтено» выставляется студенту, если студент не знает основных понятий темы дисциплины, не отвечает на дополнительные и наводящие вопросы преподавателя.  |

### Краткая характеристика оценочных средств

| <i>№<br/>п/п</i> | <i>Наименование<br/>оценочного сред-<br/>ства</i>   | <i>Краткая характеристика оценочного средства</i>  | <i>Представление<br/>оценочного сред-<br/>ства в фонде</i>                      |
|------------------|---|--|---|
| <i>1</i>         | <i>2</i>  | <i>3</i>   | <i>4</i>  |
| 1.               | Комплект про-<br>фессионально-<br>ориентированных<br>текстов<br>для письменного<br>перевода | Это вид учебной работы, где <i>реализованы все коммуникативные задачи. Совершены все необходимые переводческие трансформации. Перевод звучит естественно. Переводческие навыки проявлены в достаточной мере. Связный текст, адекватное применение лексико-грамматических средств, их диапазон широк. Языковые ошибки не существенны. Адекватно переданы функционально-стилистические особенности текста. Правильно передана структура предложения с точки зрения динамического синтаксиса (тема-рема). Сочетаемость слов, характерная для переводящего языка (ПЯ), не нарушается. Значения слов в контексте правильно поняты</i> | Тексты для перево-<br>да; послетекстовые<br>контрольные вопро-<br>сы и задания. |
| 2.               | Устные лексиче-<br>ские темы  | Средство контроля, организованное как специ-<br>альная беседа преподавателя с обучающимся на<br>темы, связанные с изучаемой дисциплиной, и<br>рассчитанное на выяснение объема знаний обу-<br>чающегося по определенному разделу, теме, про-<br>блеме и т.п.   | Вопросы по<br>темам/разделам дис-<br>циплины                                    |
| 3.               | Контрольная ра-<br>бота.  | Средство проверки умений применять получен-<br>ные знания для решения задач определенного ти-<br>па по теме или разделу.   | Комплект контроль-<br>ных заданий по ва-<br>риантам                             |
| 4.               | Итоговая кон-<br>трольная работа<br>(тест).   | Средство проверки умений применять получен-<br>ные знания для решения задач определенного ти-<br>па по теме или разделу.   | Комплект контроль-<br>ных заданий по ва-<br>риантам                             |

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*Факультет Подготовительный  
Кафедра иностранных языков*

Направление подготовки 18.03.02 «Энерго- и ресурсосберегающие процессы в химической технологии, нефтехимии и биотехнологии»  
Профиль подготовки «Машины и аппараты химических производств»

**Комплект профессионально-ориентированных текстов  
для письменного перевода**

## **1. TRANSISTOR**

The transistor is the key element in practically all modern electronics, and is considered by many to be one of the greatest inventions of the twentieth century. Its importance in today's society rests on its ability to be mass produced using a highly automated process (semiconductor device fabrication) that achieves astonishingly low per-transistor costs.

Although several companies each produce over a billion individually-packaged (known as discrete) transistors every year, the vast majority of transistors now produced are in integrated circuits (IC) along with diodes, resistors, capacitors and other electronic components, to produce complete electronic circuits.

The essential usefulness of a transistor comes from its ability to use a small signal applied between one pair of its terminals to control a much larger signal at another pair of terminals. This property is called gain. A transistor can control its output in proportion to the input signal, that is, act as an amplifier. From mobile phones to televisions, vast numbers of products include amplifiers for sound reproduction, radio transmission, and signal processing. Modern transistor audio amplifiers of up to a few hundred watts are common and relatively inexpensive.

Or, the transistor can be used to turn current on and off in a circuit as an electrically controlled switch, where the amount of current is determined by other circuit elements. Transistors are commonly used as electronic switches, for both high power applications including switched-mode power supplies and low power applications such as logic gates.

Prior to the development of transistors, vacuum tubes (valves) were the main active components in electronic equipment. The key advantages that have allowed transistors to replace their vacuum tubes predecessors in most applications are:

- Small size and minimal weight, allowing the development of miniaturized electronic devices.
- Highly automated manufacturing process, resulting in low per-unit cost.
- Lower possible operating voltages, making transistors suitable for small, battery-powered applications.
- No warm-up period for cathode heaters required after power application.

- Lower power dissipation and generally greater energy efficiency.
- Higher reliability and greater physical ruggedness.
- Extremely long life. Some transistorized devices have been in service for more than 30 years.
- Insensitivity to mechanical shock and vibration.

There are also some limitations in using transistors. Silicon transistors do not operate at voltages higher than above 1000 volts. In contrast, electron tubes have been developed that can be operated at tens of thousands of volts. High power, high frequency operation is better achieved in electron tubes due to improved electron mobility in a vacuum. Silicon transistors are much more sensitive than electronic tubes to an electromagnetic pulse, such as generated by an atmospheric nuclear explosion.

**1. Read the following statements and decide if they are true (T) or false (F).**

1. The transistor is one of the greatest achievements of the 19th century.
2. An IC, that is, a transistor with diodes, resistors, capacitors and other electronic components is known as discrete transistor.
3. Modern transistor audio amplifiers are relatively expensive.
4. One of the advantages of a transistor over a vacuum tube is its big size and maximum weight.
5. A transistor is very stable to mechanical shock and vibration.
6. There are not any limitations in using transistors.
7. Silicon transistors are much less sensitive than electronic tubes to an electromagnetic pulse.

**2. Complete these sentences according to the text.**

- |   |  |
|---|--|
| 1. Electron mobility is higher in ...   | a. every year                                |
| 2. Silicon transistors are much more sensitive than electronic tubes to ...       | b. in a vacuum                               |
| 3. Mechatronic circuits have replaced electromechanical devices in ...            | c. IC  |
| 4. Over a billion of individually-packaged transistors are produced ...           | d. usefull device                            |
| 5. Transistors can be easily mass-produced using a ...                            | e. importance in today's society             |
| 6. Very low cost of mass production is the main reason of transistor's ...        | f. an electromagnetic pulse                  |
| 7. Transistor's flexibility and reliability has made it ...                       | g. an equivalent mechanical control function |
| 8. Diodes, resistors, transistors along with other electronic components form ... | h. gain                                      |
| 9. It is easier and cheaper to use a standard microcontroller than to design ...  | i. controlling appliances and machinery      |
| 10. The ratio of the output signal to the input signal is called ...              | j. a highly automated process                |

**2. AUDIO RECORDING SYSTEMS**

Charles Cros, a French scientist, produced a theory concerning a phonograph, but he didn't manufacture a working model. It was Thomas Edison who produced a working model.



Edison conceived the principle of recording and reproducing sound in 1877 as a byproduct of his efforts to “play back” recorded telegraph messages and to transmit them by telephone.

Edison’s early phonograph recorded onto a tinfoil sheet phonograph cylinder using up-down motion of the stylus. The tinfoil sheet was wrapped around a grooved cylinder, and the sound was recorded as indentations into the foil. Edison’s early patents show that he also considered the idea that sound could be recorded as a spiral onto a disc, but Edison concentrated his efforts on cylinders, since the groove on the outside of a rotating cylinder provides a constant velocity to the stylus in the groove.

Alexander Graham Bell and his two associates took Edison’s tinfoil phonograph and modified it considerably to make it produce sound from wax instead of tinfoil. They began their work at Bell’s Volta Laboratory in Washington, D.C., in 1879 and continued until they were granted basic patents in 1886 for recording in wax.

It took many years and further improvements before the recording industry became a major factor in home entertainment. Disk recording is neither better nor worse than cylinder recording in potential audio fidelity. But there were commercial advantages to a disk system since the disk could be easily mass produced by molding and stamping and it required less storage space for a collection of recordings.

For a long time hi-fi recordings have been produced on vinyl gramophone records. Records use an analogue recording system, which stores patterns by cutting a continuous groove in a vinyl disk. The sound can be reproduced by spinning the record and using the movement of a metal needle in the groove to produce varying magnetic fields. These magnetic fields are then processed to produce the sound. A typical LP (long-playing record) has a recording capacity of about 45 minutes.

A digital recording system, known as a compact disc (CD) system, was introduced in 1982. This uses a laser optical mechanism in which a laser beam reads marks on the surface of a specially prepared perspex disk. It gives near-perfect reproduction of sound and the sound quality does not deteriorate with use. Some of the problems associated with vinyl records are eliminated such as “crackle” caused by dust and static, and “jumping”, due to scratches on the recording surface.

In a CD system, a recording is made by electronically sampling the sound 44,100 times every second. The electronic samples are used to control a laser beam, which makes a pattern of very small pits in the surface of the plastic disc. The audio pattern is represented by the length of the pits and the distance between them. The pits are arranged in circular tracks. A typical CD has about 20,000 circular tracks and a maximum recording capacity of 74 minutes.

To play back the recording, the disk is made to revolve at a constant speed and a laser beam is directed at its surface. The varying reflection of the laser beam is fed into a digital-to-analogue converter (DAC). This produces the electronic signals, which are amplified to drive a loudspeaker.

In 1989, sales of compact disks (CDs) exceeded sales of long-play albums (LPs) for the first time. By 1990, CD sales were more than double those of LPs. Cheaper CD players and the introduction of mid-price and budget-price discs have been partly responsible for the increase in CD sales.

**1. Read the following sentences and decide if they are true (T) or false (F).**

1. It was Alexander Bell who produced the first working model of a phonograph.
2. A phonograph was manufactured in 1887.
3. Edison concentrated his efforts on discs.
4. Bell produced sound from wax instead of tinfoil.
5. Recording industry became a kind of entertainment.
6. A compact disc system was introduced in 1980s.

7. A laser optical mechanism gives near-perfect reproduction of sound.
8. The quality of sound in CDs greatly deteriorate with use.
9. Crackle is not caused by dust and static.
10. Scratches on the recording surface contribute to “jumping”.
11. By 1990 sales of CDs exceeded sales of LPs.
12. Cheapness of CDs is responsible for the increase in sales.

## **2. Answer the questions to the text.**

1. What is Thomas Edison famous for?
2. What is a phonograph?
3. How was the sound recorded: on the foil or on the disc?
4. What did Edison concentrate his efforts on? Why?
5. How did Bell modify tinfoil phonograph?

## **3. ROBOTS**

The origin of the word “robot” is said to have appeared first in a play called RUR (Rossum’s Universal Robots) written by a Czech playwright, Karel Čapek. Men riding on a fully-packed train in the outskirts of Prague were just like machines lacking in individuality, Čapek called such men robots in his play by parodying the word ‘robota’ meaning slave labour. The word ‘robot’ came into being by the bitter satire of the condition of man who was deprived of his humanity and became like a machine.

For years robots have been quite familiar figures in our minds in the form of mechanical-driven dolls, or the heroes in children’s cartoons who exhibit superhuman qualities. However, the image of industrial robot used in manufacturing processes is far different from such. Among industrial robots, there are different types ranging from hand-operated “magic hands” to others equipped with intelligent faculties by incorporating micro-computers. Hence, there is no clear-cut definition for industrial robots.

The automatically controlled industrial manipulators are divided into three generations: programmed, adaptive and intellectual. Characteristic of the first generation – the programmed robots – is that their control system acts according to a rigid oft-repeated programme all the time. But the programmed robot is easily retuned to various action programmes. All the industrial robots in stamping, mechanical processing, forge and foundry work, and in other auxiliary “manual” operations as well as in loading and unloading that have been widely introduced belong to this generation. They will continue to be the main type of robot.

Adaptive robots, or robots of the second generation, are being developed along with them. Where they differ is that they possess the most elementary senses in their manipulators – tactile (sense and touch), power (reaction to the magnitude of the work effort), locating (reaction to the distance to the object and the speed of approaching it), and light (reaction to the object located within a beam of light), and subsequently microprocess the information.

The third generation – the intellectual robots – possesses far richer means for sensing (including sight), for processing information with a view and carrying out a decision. It enables us to say that the robot possess “artificial intellect”.

Many of the robots in use today do jobs that are especially difficult for human workers. These are the types of jobs that require great strength or pose danger. For example, robots are particularly useful in the auto-manufacturing industry where parts of automobiles must be welded together. As mechanical supermen, robots may do anything from moving heavy components between workstations on a factory floor to carrying bags of cement.

Spray painting is another task suited to robots because robots do not need to breathe. Unlike human painters, they are unaffected by the poisonous fumes. Third in the list of useful jobs for robots is the assembly of electronic parts. Robots shine at installing chips in printed circuit boards

because of a capability that robots have that people don't. Their automatic accuracy is particularly valuable in this kind of industry because locating and fixing mistakes is costly.

Robots that are fitted with video cameras and other sensing devices can detect heat, texture, size and sound. These robots are used in space projects, nuclear reactor stations, and underwater exploration research.

The use of industrial robots has produced a number of economic and social advantages. Among them are the improvement in productivity, greater humanization of working life, prevention of labour accidents, improvement of product quality and the development of new industries.

**1. Arrange these sentences in order to make a logical paragraph paying attention to the dates.**

1. In 1954, the American inventor George Devol began work that eventually led to the industrial robot as we know it today.
2. Between 1967 and 1969, researchers at the Stanford Research Institute in the United States developed a robot with wheels named Shakey.
3. Since then, many companies have entered the robotics market.
4. This was because it could only be controlled by a separate mainframe computer, which sent its commands to the robot through a radio channel.
5. All three helped Shakey to move freely and avoid obstacles.
6. Later devices were more successful – for example, a four-legged robot developed at the Tokyo Institute of Technology in 1980.
7. In 1983, a six-legged robot was developed by Odette Incorporated, for commercial production.
8. This system combined a human controller with automatic processing of information about the terrain, right down to the foot movements needed to ensure smooth movement.
9. Shakey was fitted with bump detectors, a sonar range finder, and a TV camera.
10. This was an extremely difficult job for the driver, and the machine regularly became unbalanced and fell over.
11. A battery-powered model, Odex 1, used a radio channel for leg control and a video link for conveying images.
12. Shakey was thought to be a failure.
13. This machine could walk over obstacles and lift loads several times its own weight.
14. The machine carried a human operator who had to control each of the four legs.
15. In 1967, the General Electric Corporation (GEC) had developed a four-wheeled machine for the US Department of Defense.
16. The next important step was the development of robots with legs.

**2. Answer the questions to the text.**

1. What is the origin of the word "robot"?
2. How did robots look like for many years?
3. Is there an exact definition of the word "robot"?
4. How many generations of industrial manipulators are there?
5. What generation do industrial robots which are used in stamping belong to?

#### **4. AUTOMOBILE PRODUCTION**

**1. Match the English combinations with the corresponding Russian ones:**

1. mechanical engineer
2. to deal (with)
3. designing cars
4. to put into mass production
5. long service life
6. driving safety

7. to meet up-to-date demands
8. smooth-acting clutch
9. silent gearbox
- 10 dependable brakes and steering system
- 11 to subject to tests
- a. долгий срок службы
- b. запустить в массовое производство
- c. подвергать испытаниям
- d. плавное сцепление
- e. отвечать современным требованиям
- f. иметь дело (с кем-л., чем-л.)
- g. надежные тормоза и рулевое управление
- h. безопасность езды (вождения)
- i. бесшумная коробка передач
- j. инженер-механик
- k. конструирование автомобилей

## 2. Read the text.

Specialists in automobile industry deal with designing and manufacturing cars, so they should know that the production of the automobile comprises the following phases:

- 1) Designing,
- 2) Working out the technology of manufacturing processes,
- 3) Laboratory tests,
- 4) Road tests,
- 5) Mass production (manufacturing).

Why is it necessary to know all these facts?

It is important to know them as before the automobile (car or truck) is put into mass production, it should be properly designed and the automobile must meet up-to-date requirements.

What are these requirements?

The automobile must have high efficiency, long service life, driving safety, ease of maintenance and pleasant appearance.

In order to obtain all these qualities engineers should develop up-to-date methods of designing cars, using new types of resistant to corrosion light materials. Also it is important to know computer science because it is intended to shorten the time between designing and manufacturing. Computers offer quick and optimal solutions of problems.

But before the car is put into mass production all its units and mechanisms are tested, first in the plant's laboratory, then the car undergoes a rigid quality control in road tests. Only then the car is put into mass production. Why are these tests required? What qualities are required of the automobile? The modern automobile must be rapid in acceleration, must have smooth acting clutch, silent gearbox, dependable brakes and steering system, as well as pleasant appearance. Also it must be comfortable and have all conveniences.

## 3. Find the answers to the following questions. Write down the questions in the order they are asked.

1. Why is it important for the specialists in automobile industry to driving safety, ease of maintenance and computing methods?

2. What qualities are required of the automobile?

3. Why are cars subjected to road-tests?

4. What requirements must the automobile meet?

5. What phases does the production of the automobile comprise?

## 4. Complete the sentences using the information from the text:

1. The cars are subjected to road tests in order...

2. The car must have the following units...
3. The car must have the following qualities...
4. The production of the automobile comprises the following phases...
5. Engineers should develop up-to-date methods of...

**5. Work with a partner to label the types of car.**

- a. Convertible
- b. Estate car( station wagon)
- c. Hatchback
- d. Pick up
- e. Saloon( sedan)
- f. Sports car
- g. Limousine
- h. Coupe
- i. SUV(4x4)

**6. Which types of cars would you choose for your parents, friends and yourself? Justify your choice and compare it with your partner.**

**7. Speak about the modern automobile.**

## **5. INFORMATION SECURITY**

A biological virus is a very small, simple organism that infects living cells, known as a host, by attaching itself to them and using them to reproduce itself. This often causes harm to the host cells.

Similarly, a computer virus is a very small program routine that infects a computer system and uses its resources to reproduce itself. It often does this by patching the operating system to enable it to detect program files, such as .COM or .EXE files. It then copies itself into those files. This sometimes causes harm to the host computer system.

When the user runs an infected program, it is loaded into memory carrying the virus. The virus uses a common programming technique to stay resident in memory. It can then use a reproduction routine to infect other programs. This process continues until the computer is switched off.

The virus may also contain a payload that remains dormant until a trigger event activates it, such as the user pressing a particular key. The payload can have a variety of forms. It might do something relatively harmless such as displaying a message on the monitor screen or it might do something more destructive such as deleting files on the hard disk.

When it infects a file, the virus replaces the first instruction in the host program with a command that changes the normal execution sequence. This type of command is known as a JUMP command and causes the virus instructions to be executed before the host program. The virus then returns control to the host program which then continues with its normal sequence of instructions and is executed in the normal way.

To be a virus, a program only needs to have a reproduction routine that enables it to infect other programs. Viruses can, however, have four main parts. A misdirection routine that enables it to hide itself; a reproduction routine that allows it to copy itself to other programs; a trigger that causes the payload to be activated at a particular time or when a particular event takes place; and a payload that may be a fairly harmless joke or may be very destructive. A program that has a payload but does not have a reproduction routine is known as a Trojan.

To prevent or limit the effects of disaster you should take security measures and protect hardware and software. If your work deals with the use of the Internet, you should implement network controls by installing firewalls to protect external and internal attacks. Another way of protection is using encrypted data including monitoring username and password use. Don't use common names or dictionary words in passwords. To protect from natural disasters install uninterruptible power supplies and surge protectors.

Periodically make full backups, which copy all files. If your files are very important, keep backups in separate locations, in fireproof containers, under lock and key. Virus protection programs are another way of feeling safe. Use only vendor-supplied software products that guarantee they are virus-free.

**1 Answer the questions to the text.**

1. How does a biological virus infect living cells?
2. What is a computer virus?
3. What files does the virus copy itself into?
4. What technique is used by virus to become resident in memory?
5. How long does the process of infection continue?

**2. Complete the sentences with appropriate words from the box.**

*Backups/ to be executed/ payload /reproduction/ host program /resources/  
hide /firewalls/ encrypted data/ security measures*

1. A computer virus infects a computer system and uses its ... to reproduce itself.
2. The virus contains a ... that remains dormant until the user presses a particular key.
3. The virus replaces the first instruction in the ... with a command that changes the normal execution sequence.
4. A JUMP command causes the virus instructions ... before the host program.
5. A ... routine is needed to infect other programs.
6. A misdirection routine enables a virus to ... itself.
7. To protect hardware and software you should take ....
8. Installing ... helps to withstand external and internal attacks.
9. To protect your work from stealing use ....
10. Copy all your files and keep your ... in separate locations under lock and key.

**6. MODERN LIGHT-WAVE COMMUNICATION TECHNOLOGY**

Not long ago the concept of using light pulses instead of electrical signals to transmit information was only a concept. Today, light-wave communication systems are among the most sophisticated transmission systems in the telecommunication network. They are at once efficient, versatile and relatively inexpensive to install and maintain.

The efficiency of light-wave systems is perhaps their most renowned quality. They carry enormous amounts of information over long distances at very high speeds. Consider, for example, the speed and capacity of the Bell System's long distance light-wave system. Light pulsing through a single, hair-thin glass fiber in this system can transmit the entire contents of Webster's dictionary – more than 2700 pages – over thousands of miles in only six seconds.

Not less impressive than this tremendous speed and capacity is the versatility of light-wave systems. As they are digital systems they can transmit easily any of these types of information: voice signals, high-speed data signals, and television signals. Without undermining quality or efficiency a single system can accommodate thousands of telephone conversations, and alternately handle data or video signals. Finally light-wave systems are inexpensive to install and operate compared to their wire-and-cable counterparts. Moreover, they allow considerable savings.

The reasons for such savings stem from the technology of light-wave communication. Conventional telecommunication transmission is based on the conduction of electrons through metal (usually copper wires). Light-wave systems, however, substitute photons for electrons and glass fibers for copper. Since lightguide cables are only a fraction of the diameter and weight of

copper cables they are easy to handle and take up far less space. They can be installed in existing underground ducts sometimes right next to copper cables.

In addition, light-wave systems are immune to electromagnetic interference, and therefore require no protection from it. Also, light can travel much farther through light-wave cables without regeneration than can electrons through copper carrier systems. This is because the light encounters little resistance from the very pure glass fiber through which it travels. Light-wave systems require significantly fewer signal regenerators than do electrical digital carrier systems: typically one every ten miles instead of one every mile.

**1. Read the following statements and decide if they are true (T) or false (F).**

1. Light-wave communication systems are not as efficient as conventional ones.
2. The versatility of light-wave systems is one of their most renowned qualities.
3. It is expensive to install and maintain light-wave systems.
4. In conventional systems electrons flow in a conductor.
5. Light guide cables take up too much space.
6. It is not possible to place light guide cables next to copper cables.
7. Electrical digital carrier systems require one regenerator every mile.

**2. Answer the questions to the text.**

1. Is the idea of using light pulses to transmit information new?
2. What are the qualities of light-wave communication systems? 4. What is their versatility?
5. Are they cheaper to install and operate than their wire-and-cable counterparts?
6. Is there any difference between conventional and light-wave systems?

**Критерии оценки письменного перевода текста объемом 1600 знаков – max 35 баллов (III, IV семестры) / 10 баллов (V семестр).**

| <i>баллы<br/>III, IV,<br/>V се-<br/>местр</i> | <i>баллы<br/>V се-<br/>местр</i> | <i>Коммуникативные и пе-<br/>реводческие<br/>задачи</i>  | <i>Языковые средства</i>  |
|---|----------------------------------|--|---|
| 30-35   | 9-10                             | <i>Реализованы все комму-<br/>никативные задачи. Со-<br/>вершены все необходимые<br/>переводческие транс-<br/>формации. Перевод зву-<br/>чит естественно. Переводческие навыки<br/>проявлены в достаточной<br/>мере.</i> | <i>Связный текст, адекватное применение лек-<br/>сико-грамматических средств, их диапазон<br/>широк. Языковые ошибки не существенны.<br/>Адекватно переданы функционально-<br/>стилистические особенности текста. Пра-<br/>вильно передана структура предложения с<br/>точки зрения динамического синтакси-<br/>са(тема-рема). Сочетаемость слов, харак-<br/>терная для переводящего языка (ПЯ), не<br/>нарушается. Значения слов в контексте<br/>правильно поняты и для них найдены удач-<br/>ные эквиваленты.</i> |
| 25-30   | 6-8                              | <i>Коммуникативные задачи<br/>реализованы, но текст<br/>производит впечатление<br/>неестественного для пе-<br/>реводящего языка. Не все<br/>переводческие трансфор-<br/>мации совершены пра-</i>                         | <i>Достаточно связный текст, восприятие<br/>которого может быть затруднено в от-<br/>дельных случаях из-за неправильно выбран-<br/>ного эквивалента, нарушения законов соче-<br/>таемости слов ПЯ или ошибочного понима-<br/>ния отдельных элементов исходного текста<br/>(ИТ). Функционально-стилистические осо-</i>   |

|       |     |   |  |
|-------|-----|---|--|
|       |     | <i>вильно. Переводческие навыки не проявлены в достаточной мере.</i>  | <i>бенности текста в основном переданы.</i>  |
| 20-25 | 3-5 | <i>Реализованы не все коммуникативные задачи или часть из них реализована неадекватно. Переводческие навыки неустойчивы.</i>  | <i>В тексте есть грубые грамматические или лексические ошибки, искажающие смысл предложений (не более 3). Структурный и лексический диапазоны заметно ограничены, связность текста нарушена. Отсутствует попытка передать функционально-стилистические особенности текста.</i> |
| 0-20  | 0-2 | <i>Коммуникативные задачи в целом не реализованы. Перевод представляет собой бессмысленный текст. Отсутствуют навыки работы со словарём (неумение выбрать нужное по контексту слово). Переводческие навыки практически отсутствуют.</i> | <i>Исходный текст студентом не понят. Неправильно передана структура предложений. Большое количество грубых лексико-грамматических ошибок, нарушения сочетаемости в ПЯ. Функционально-стилистические особенности текста студентом не осознаются и грубо нарушаются.</i>        |



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 Профиль подготовки «Машины и аппараты химических производств»

**Устные темы**

**По дисциплине Б1.О.08 «Иностранный язык в профессиональной сфере»**

1. Communication Systems
2. Cybernetics.
3. Nanotechnologies.

**Критерии оценивания монологического высказывания – max 35 баллов (III, IV семестры)**

| Решение коммуникативной задачи  | Лексико-грамматическое оформление речи   | Произносительная сторона речи | Баллы III, IV, V семестр |
|---|--|-------------------------------|--------------------------|
| <b>Задание выполнено полностью:</b> цель общения достигнута; тема раскрыта в полном объеме (полностью раскрыты все аспекты, указанные в задании, даны развернутые ответы на 2 дополнительных вопроса); социокультурные знания использованы в соответствии с ситуацией общения.    |  |                               | 30-35                    |
| <b>Задание выполнено:</b> цель общения достигнута, но тема раскрыта не в полном объеме (аспекты, указанные в задании, раскрыты не полностью; даны краткие ответы на 2 дополнительных вопроса); социокультурные знания в основном использованы в соответствии с ситуацией общения. | Используемый лексико-грамматический материал соответствует поставленной коммуникативной задаче. Демонстрируется разнообразный словарный запас и владение простыми и сложными грамматическими структурами, используются различные типы предложений. Лексико-грамматические ошибки практически отсутствуют (допускается не |                               | 25-30                    |

|   |   |   |       |
|---|---|---|-------|
|   | более 4 негрубых языковых ошибок, не затрудняющих понимание).   |   |       |
| <b>Задание выполнено частично:</b> цель общения достигнута не полностью; тема раскрыта в ограниченном объеме (не все аспекты, указанные в задании, раскрыты; дан ответ на один дополнительный вопрос или даны неточные ответы на 2 дополнительных вопроса); социо-культурные знания мало использованы в соответствии с ситуацией общения. | Используемый лексико-грамматический материал в целом соответствует поставленной коммуникативной задаче. Наблюдается некоторое затруднение при подборе слов и неточности в их употреблении. Используются простые грамматические структуры. Допускаются лексико-грамматические ошибки (не более 6 языковых ошибок). | <b>Речь понятна:</b> практически все звуки в потоке речи произносятся правильно: не допускаются фонематические ошибки (меняющие значение высказывания); соблюдается правильный интонационный рисунок. | 20-25 |
| <b>Задание не выполнено:</b> цель общения не достигнута.  | Недостаточный словарный запас, неправильное использование грамматических структур, многочисленные языковые ошибки не позволяют выполнить поставленную коммуникативную задачу.   | <b>Речь почти не воспринимается на слух</b> из-за неправильного произношения многих звуков и многочисленных фонематических ошибок.  | 0-20  |

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Профиль подготовки «Машины и аппараты химических производств»

### **Экзаменационные вопросы**

1. Сделайте полный письменный перевод текста «Cybernetics» на русский язык составьте аннотацию по данному тексту.
2. Сделайте полный письменный перевод текста «Advances in Technology» на русский язык и составьте аннотацию по данному тексту.
3. Сделайте полный письменный перевод текста «Nanotechnologies» на русский язык и составьте аннотацию по данному тексту.
4. Сделайте полный письменный перевод текста «Dangers in new Technologies» на русский язык и составьте аннотацию по данному тексту.
5. Сделайте полный письменный перевод текста «Scientific Exploration» на русский язык и составьте аннотацию по данному тексту.
6. Сделайте полный письменный перевод текста «Dangers in new Technologies» на русский язык и составьте аннотацию по данному тексту.
7. Сделайте полный письменный перевод текста «Advances in Technology» на русский язык и составьте аннотацию по данному тексту.

**Критерии оценки письменного перевода текста объёмом 1600 знаков– тах 20 баллов.**

| <b>Баллы</b> | <b>Коммуникативные и переводческие задачи</b>   | <b>Языковые средства</b>   |
|--------------|---|--|
| 18-20        | Реализованы все коммуникативные задачи. Совершены все необходимые переводческие трансформации. Перевод звучит естественно. Переводческие навыки проявлены в достаточной мере. | Связный текст, адекватное применение лексико-грамматических средств, их диапазон широк. Языковые ошибки не существенны. Адекватно переданы функционально-стилистические особенности текста. Правильно передана структура предложения с точки зрения динамического синтаксиса (тема-рема). Сочетаемость слов, характерная для |

|             |   |  |
|-------------|---|--|
|             |   | <i>переводящего языка (ПЯ), не нарушается. Значения слов в контексте правильно поняты и для них найдены удачные эквиваленты.</i>   |
| <i>9-17</i> | <i>Коммуникативные задачи реализованы, но текст производит впечатление неестественного для переводящего языка. Не все переводческие трансформации совершены правильно. Переводческие навыки не проявлены в достаточной мере.</i>        | <i>Достаточно связный текст, восприятие которого может быть затруднено в отдельных случаях из-за неправильно выбранного эквивалента, нарушения законов сочетаемости слов ПЯ или ошибочного понимания отдельных элементов исходного текста (ИТ). Функционально-стилистические особенности текста в основном переданы.</i> |
| <i>1-8</i>  | <i>Реализованы не все коммуникативные задачи или часть из них реализована неадекватно. Переводческие навыки неустойчивы.</i>  | <i>В тексте есть грубые грамматические или лексические ошибки, искажающие смысл предложений (не более 3). Структурный и лексический диапазоны заметно ограничены, связность текста нарушена. Отсутствует попытка передать функционально-стилистические особенности текста.</i>   |
| <i>0</i>    | <i>Коммуникативные задачи в целом не реализованы. Перевод представляет собой бессмысленный текст. Отсутствуют навыки работы со словарём (неумение выбрать нужное по контексту слово). Переводческие навыки практически отсутствуют.</i> | <i>Исходный текст студентом не понят. Неправильно передана структура предложений. Большое количество грубых лексико-грамматических ошибок, нарушения сочетаемости в ПЯ. Функционально-стилистические особенности текста студентом не осознаются и грубо нарушаются.</i>  |

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Профиль подготовки «Машины и аппараты химических производств»

**Комплект заданий для контрольной работы  
По дисциплине Иностранный язык в профессиональной сфере**

**Вариант I.**

**Задание 1. Текст по специальности.**

**1. Прочитайте текст, переведите его письменно.**

**HOW ELECTRICITY WORKS FOR US**

One of the most useful properties of electricity is its ability to produce heat. Electricity produces heat in a conductor as it overcomes the conductor's resistance to the flow of electrons through it, just as mechanical energy produces heat in overcoming friction. The heat-producing effect of electricity is used in electric ranges, toasters, soldering irons, and many other devices. In incandescent light bulbs, the effect is used to make a filament glow brightly.

Another very useful property of electricity is that it can be a source of magnetism; electrons flowing through a wire create a magnetic field around the wire. This effect is the basis for the operation of electromagnets, which make possible electric motors, telephones, loudspeakers, and many other devices.

Electricity has several other useful properties. It can be made to jump a narrow gap separating two conductors, creating a spark. An important application of such sparks is in igniting the fuel in the cylinders of gasoline engines. Electricity can also produce chemical changes.

In a gas or vacuum, electrons can be accelerated to high speed and directed in specific directions. Electrons used in this way make possible many kinds of devices, including television picture tubes, fluorescent lights, and X-ray tubes. In certain semiconductor devices, such as transistors, the movement of electrons can be readily controlled by electrical means. Such devices are used in computers, radios, tape recorders, and many other products.

Electricity is most easily explained by the electron theory, developed in the early 20th century. The electron theory, in turn, depends on the atomic theory of matter.

The center, or nucleus, of an atom contains one or more particles called protons. A proton has a type of electric charge that is said to be positive. Circling the nucleus are one or more electrons, which are much smaller than the proton. An electron has a type of charge that is said to be negative.

An electrically neutral atom has one electron for each proton. In such an atom, the positive and negative charges exactly balance. An atom may lose or gain one or more electrons, leaving it with a net positive or negative charge. A charged atom is called anion.

**II. Составьте свой словарь из слов, встретившихся при переводе текста.**

**III. Ответьте письменно на вопросы по тексту. Вопросы перепишите.**

- 1) Which useful properties of electricity do you know?
- 2) What does the electron theory depend on?
- 3) What is a proton?

**IV. Найдите в тексте эквиваленты следующих слов и словосочетаний:**

light bulbs, the flow of electrons, the conductor's resistance, soldering irons, device, to jump a narrow gap separating two conductors, semiconductor devices, to depend on, X-ray tubes, an ion, a type of charge, an atom may lose or gain one or more electrons.

**V. Поставьте глагол-сказуемое в нужной форме (Present, Past, Future Simple)**

1. He (not/to work) at a plant, he (to work) in a construction company.
2. You (to see) the last news program yesterday?
3. If he (to help) us, we (to finish) our project ahead of time.
4. When you (to come) home tomorrow?
5. He usually (to go) to bed very early because he (to take) an early bus to town.
6. I (to apply) a new method for my research work last year.
7. They (to build) the Eiffel Tower in 1899.
8. Water (to boil) at 100 C.
9. Next year some new houses (to appear) in our street.
10. Yesterday it (to take) me 30 minutes to get to the centre of the town.

**VI. Употребите правильную форму глагола в условных предложениях:**

1. I (interpret) ... for you at the conference tomorrow if I (be) ... not already scheduled to work at the UN. I have a friend who (do) ... it for you, if she (be, not) ... busy. 2. If I (have) enough money, I (backpack) around Europe. But, unfortunately, I am broke. 3. If I (have) enough money in my twenties, I (backpack) around Europe. But, unfortunately, I was broke. 4. If the price of this tour to GB (come) down, more people will buy it.

**VII. Переведите на английский язык, учитывая три типа условных предложений:**

1. Если бы он не ел так много, он бы не умер так рано. 2. Она пожалеет, если сделаете это. 3. Мы бы не опоздали, если бы наша машина не сломалась. 4. Если бы она носила контактные линзы, она была бы симпатичней. 5. Если бы не дети, они бы уже давно разошлись. 6. Если бы я был на вашем месте, я бы так не говорил.

**VIII. Из нескольких вариантов (1, 2, 3, 4) выберите единственно правильный.**

**1. If I had some spare time I ... Spanish.**

1. would learn 2. learn
3. will learn 4. have learnt

**2. If I had known when your birthday was, I ... you a present.**

1. bought 2. would buy
3. will buy 4. would have bought

**3. What will you do if your computer ... ?**

1. won't work 2. don't work
3. doesn't work 4. wasn't working

**4. It would be useful for you if you ... this task a second time.**

1. would do 2. did
3. had done 4. do

**5. I ... turn down their offer if they asked me.**

1. won't 2. wouldn't

3. don't 4. wouldn't have

## **Вариант II.**

### **I. Прочитайте текст, переведите его письменно.**

#### **HOW ELECTRICITY IS PRODUCED**

The most familiar way of producing static electricity is by rubbing, or friction. Rubbing together two different kinds materials that are insulators can transfer electrons from one substance to another. The substance that gains electrons acquires a negative charge, and the one that loses them acquires a positive charge. For example, rubbing a balloon against dry hair produces an opposite electric charge in the balloon and the hair (which will be drawn to the balloon). Similarly, shuffling over a carpet in dry weather will produce a sufficient electrostatic charge on a person's body to give a slight shock when the person touches a conductor.

Objects can also acquire an electric charge through a process called electrostatic induction. In the illustration Electrostatic Induction, a charged object (the negatively charged rod) is brought near an electrically insulated metal sphere, but not into contact with it. The excess electrons in the rod will repel the electrons from the part of the sphere nearest the rod to the part farthest from the rod. If electrons are allowed to escape from the sphere through an electrical connection to the ground, the sphere will be left with a net positive charge.

Current Electricity is produced by creating a difference in electric potential between two points connected by a conductor. A potential difference exists between two points when one has more electrons than the other. The point with excess electrons is called the negative terminal; the other, the positive terminal. The potential difference between the two terminals creates an electrical pressure called electromotive force (emf), or voltage.

The two most common ways of creating a voltage to produce current are chemically (using batteries) and by electromagnetic induction (using generators). A voltage can also be created by heat, light, or mechanical pressure.

The electromagnetic induction method for producing an electric current involves the use of a permanent magnet or an electromagnet. When a wire is moved through a magnetic field, the electrons in the wire are displaced and move toward one end of the wire. This action makes one end negative, the other positive.

Under certain conditions, heat will cause electrons to flow between two different materials. One device for producing this effect is the thermocouple, which is used as a measuring instrument and as a control device.

### **II. Составьте свой словарь из слов, встретившихся при переводе текста.**

### **III. Ответьте письменно на вопросы по тексту. Вопросы перепишите.**

1) What is static electricity?

2) By what is current electricity produced?

3) Which ways of creating a voltage to produce current do you know?

### **IV. Найдите в тексте эквиваленты следующих слов и словосочетаний:**

A charged object, rubbing, friction, an electric current, a sufficient electrostatic charge, the negative terminal; the thermocouple, the positive terminal, insulators, electrostatic induction, to repel the electrons from the part of the sphere nearest the rod to the part farthest from the rod, electromotive force (emf), electromagnetic induction method.

### **V. Поставьте глагол-сказуемое в нужной форме (Present, Past, Future Simple)**

1. She (not/ to teach) English at school.
2. You (to meet) him yesterday?
3. The firm (to buy) new computers next month.
4. The Dean (to ask) many questions at the lecture last week.
5. Where you (to go) next summer?
6. They (to use) new scientific data for their last experiment.
7. When the concert (to be over) all the people (to leave) the hall.
8. Every year students (to take part) in scientific research.
9. The first computer (to appear) in the 1960-s.
10. If the weather (to be) fine, we (to go) to the village.

**VI. Употребите правильную форму глагола в условных предложениях:**

1. I (interpret) ... for you at the conference tomorrow if I (be) ... not already scheduled to work at the UN. I have a friend who (do) ... it for you, if she (be, not) ... busy. 2. If I (have) enough money, I (backpack) around Europe. But, unfortunately, I am broke. 3. If I (have) enough money in my twenties, I (backpack) around Europe. But, unfortunately, I was broke. 4. If the price of this tour to GB (come) down, more people will buy it.

**VII. Переведите на английский язык, учитывая три типа условных предложений:**

1. Я помогу вам, если приду рано. 2. Если бы он был осторожнее, он бы не попал в дорожное происшествие. 3. Я дам вам мой номер телефона на тот случай, если вы захотите мне позвонить. 4. Если бы она принялась учить английский еще в детстве, она бы знала его сейчас очень хорошо. 5. Если бы он не ел так много, он бы не умер так рано.

**VIII. Из нескольких вариантов (1, 2, 3, 4) выберите единственно правильный.**

**1. If I had known you had a mobile phone I... you.**

1. would contact 2. had contacted
3. contacted 4. would have contacted

**2. If she could cook as well as you, she ... a restaurant.**

1. would open 2. will open
3. had opened 4. opened

**3. If it ... I'll come and meet you in the car.**

1. rain 2. will rain
3. rains 4. would rain

**4. It ... wonderful if he had said that. But he didn't.**

1. was 2. will be
3. would be 4. would have been

**5. We'll go to the theatre to-night if we ... the tickets.**

1. get 2. will get
3. are getting 4. would get

**Критерии оценивания выполнения контрольной работы:**

- 1) полнота и правильность ответа;
- 2) степень осознанности, понимания изученного;
- 3) языковое оформление ответа.

До 20-30 баллов ставится, если:

1) студент полно излагает материал, дает правильное определение основных понятий;

2) обнаруживает понимание материала, может обосновать свои суждения, применить знания на практике, привести необходимые примеры не только из учебника, но и самостоятельно составленные;



3) излагает материал последовательно и правильно с точки зрения норм литературного языка.

До 10-20 баллов – студент дает ответ, удовлетворяющий тем же требованиям, что и для отметки «5», но допускает 1–2 ошибки, которые сам же исправляет, и 1–2 недочета в последовательности и языковом оформлении излагаемого.

До 5-10 баллов – студент обнаруживает знание и понимание основных положений данной темы, но:

1) излагает материал неполно и допускает неточности в определении понятий или формулировке правил;

2) не умеет достаточно глубоко и доказательно обосновать свои суждения и привести свои примеры;

3) излагает материал непоследовательно и допускает ошибки в языковом оформлении излагаемого.

До 0-5 баллов ставится, если студент обнаруживает незнание большей части соответствующего вопроса, допускает ошибки в формулировке определений и правил, искажающие их смысл, беспорядочно и неуверенно излагает материал. Оценка «2» отмечает такие недостатки в подготовке, которые являются серьезным препятствием к успешному овладению последующим материалом.

Министерство науки и высшего образования Российской Федерации  
Нижекамский химико-технологический институт (филиал) федерального государственного бюджетного образовательного учреждения  
высшего образования  
«Казанский национальный исследовательский технологический университет»

*Факультет Подготовительный  
Кафедра иностранных языков*

Направление подготовки 18.03.02 «Энерго- и ресурсосберегающие процессы в химической технологии, нефтехимии и биотехнологии»  
Профиль подготовки «Машины и аппараты химических производств»

**Комплект заданий для итоговой контрольной работы (тест)  
По дисциплине Иностранный язык в профессиональной сфере**

**Вариант I**

1. I can't go to the history lecture next Tuesday, could you pick up an extra copy of the \_\_\_\_\_?  
a) qualifications c) options  
b) tuition fees d) handouts
2. The strengths of metals decreased while the temperature \_\_\_\_\_.  
a) increased c) was measured  
b) was fixated d) was defined
3. The branch of physics which involves the behaviour and properties of light is \_\_\_\_\_.  
a) radiometry c) optics  
b) quantum mechanics d) electronics
4. "Are they good friends?" "No, they don't like \_\_\_\_\_".  
a) they c) them  
b) themselves d) each other
5. We'll have to walk a bit \_\_\_\_\_ if we want to arrive on time.  
a) fast c) faster  
b) more fast d) more faster
6. To tell \_\_\_\_\_ truth, I didn't expect to see him.  
a) – c) an  
b) a d) the
7. I can't find my umbrella. I think somebody \_\_\_\_\_ it by mistake.  
a) took c) is taking  
b) takes d) has taken
8. He is never going to let me \_\_\_\_\_ my mistake.  
a) to forget to have forgotten c) forget  
b) forgetting d) to have forgotten
9. Everybody will \_\_\_\_\_ work hard if they want to pass exams.  
a) have to c) have  
b) be to d) be allowed to

10. Выберите реплику, наиболее соответствующую ситуации общения

Friend: “\_\_\_\_\_”.

You: “OK, see you”.

- a) I’m afraid I must be going now. Good-bye.
- b) Would you excuse me, please? It’s time I was going off. Good-bye.
- c) Can I talk to you?
- d) Well. I must be off now. Bye.

11. Выберите реплику, наиболее соответствующую ситуации общения

Professor: “I invite you to take part in our scientific conference to be held next week”

Student: “\_\_\_\_\_”.

- a) You are the first to tell me about it.
- b) It’s out of the question. I am very busy.
- c) Not sure I’ll be able to. I am defending my graduation project next week.
- d) You are being too kind.

12. Выберите реплику, наиболее соответствующую ситуации общения

A: “Excuse me, where are the trolleys?”

B: “\_\_\_\_\_”.

- a) You are quite right.
- b) Do you mean those things for carrying objects over there?
- c) Listen! I don’t know it myself.
- d) They are over there.

13. At present the head of the Commonwealth is Queen Elizabeth II. However, when the monarch dies, the successor to the crown \_\_\_\_\_ Head of the Commonwealth.

- a) automatically becomes
- b) is elected by the people of the Commonwealth
- c) does not automatically become
- d) is elected by the people of the UK

14. A traditional sweet dessert on Thanksgiving Day in the USA is a \_\_\_\_\_ .

- a) pumpkin pie
- b) apple pie
- c) cheesecake
- d) rhubarb pie

15. Расположите части делового письма в правильном порядке.

☐

11 November, 2007

☐

I would like to thank you for your welcome when we met on the 12<sup>th</sup>. I was very interested to learn more of your company's activities and requirements, and am writing this letter to confirm certain points which we discussed.

☐

John Bertrand  
Manager, Customer Service

☐

Dear Mr Blackwood,

☐

LETRA PLANPLC  
Tea House  
Chester Road  
Manchester

☐

Yours sincerely,

☐

Mr. F. Blackwood  
Chief Purchasing Officer,

New Approach Ltd.,  
Nottingham NG6 4JF

16. Определите, к какому виду делового документа относится представленный ниже отрывок.

.....  
.....  
The most suitable of our products for your requirements is the Artemis 66A Plus. This product combines economy, quick charging time and is now in stock. I enclose a detailed quotation, specifications and delivery terms...  
.....  
.....

- a) Offer Letter
- b) Memo

- c) Letter of Complaint
- d) Cover Letter

*Прочитайте текст и выполните задания.*

*Automation*

1. Automation is the use of control systems in concern with other applications of information technology to control industrial machinery and processes, reducing the need for human intervention. In the scope of industrialization, automation is a step beyond mechanization.

2. Automation plays an increasingly important role in the world economy and in daily experience. Engineers strive to combine automated devices with mathematical and organizational tools to create complex systems for a rapidly expanding range of applications and human activities.

3. Many roles for humans in industrial processes presently lie beyond the scope of automation. Tasks requiring subjective assessment or synthesis of complex sensory data, such as scents and sounds, as well as high-level tasks such as strategic planning, currently require human expertise. In many cases, the use of humans is more cost-effective than mechanical approaches even where automation of industrial tasks is possible.

17. Определите, какое утверждение соответствует содержанию текста.

- a) People can rely on automation in all industrial processes.
- b) Automation concerns only industrial processes.
- c) The task of automation is to reduce the need for humans as it is too cost-effective.
- d) Automation is not a universal substitute of human's role in industrial processes.

18. Завершите утверждение согласно содержанию текста.

*People need automation nowadays because ...*

- a) in some cases they can't do without it.
- b) it intensifies their work greatly.
- c) it facilitates their daily life and work.
- d) it provides them with additional workplaces.

19. Ответьте на вопрос

*How does automation benefit to people?*

- a) Automation excludes people's role in industrial processes.
- b) People rely on it as their work is more cost-effective.
- c) Automation promotes further humans' development.
- d) Automation controls industrial machinery and processes, reducing the need for human intervention.

20. Определите основную идею текста.

- a) People rely on automation in controlling industrial processes, world economic growth.
- b) Automation has its advancements as well as shortcomings concerning the way of its application.

- c) Automation is the only way of advancement people's work and life.
- d) In spite of playing a great role in industry, world economy and people's daily activities, automation can't entirely substitute people.

## Вариант II

1. The right to \_\_\_\_\_ has been described as a basic human right.

  - a) compulsory education
  - b) graduate courses
  - c) general knowledge
  - d) education
2. He asked the student to \_\_\_\_\_ the unit of resistance more accurately.

  - a) define
  - b) control
  - c) respond
  - d) amplify
3. An effective method for solving a problem using a finite sequence of instructions is called \_\_\_\_\_ .

  - a) algorithm
  - b) calculation
  - c) identification
  - d) measurement
4. The gold ring \_\_\_\_\_ he gave her on their wedding anniversary was very expensive.

  - a) that
  - b) what
  - c) such
  - d) whose
5. The younger you are, \_\_\_\_\_ it is to learn.

  - a) the easiest
  - b) more easier
  - c) the easier
  - d) easier
6. London was founded in \_\_\_\_\_ century BC by Julius Caesar.

  - a) 1st
  - b) an 1st
  - c) a 1st
  - d) the 1 st
7. The Prime Minister's Election \_\_\_\_\_ soon.

  - a) will held
  - b) will be held
  - c) held
  - d) will hold
8. He has succeeded in \_\_\_\_\_ a new job.

  - a) found
  - b) to find
  - c) to have been found
  - d) finding
9. John \_\_\_\_\_ take a taxi because he was late.

  - a) had to
  - b) was to
  - c) could
  - d) was able to
10. Выберите реплику, наиболее соответствующую ситуации общения  
Susan: "I'm afraid I've been keeping that book of yours too long"  
Mary: "\_\_\_\_\_".

  - a) Here you are.
  - b) Please accept my apologies.
  - c) It's quite all right.
  - d) Could you give me my book?
11. Выберите реплику, наиболее соответствующую ситуации общения  
Student: "Shall I read the text again for the next time?"  
Teacher: "\_\_\_\_\_".

  - a) Yes, of course.
  - b) You seem to know better.
  - c) Nothing of the kind.
  - d) It's out of the question.
12. Выберите реплику, наиболее соответствующую ситуации общения  
A: "Excuse me, where are the trolleys?"

B: “ \_\_\_\_\_ ”.

- a) You are quite right.
- b) Do you mean those things for carrying objects over there?
- c) Listen! I don't know it myself.
- d) They are over there.

13. The present British Royal Family's surname is \_\_\_\_\_ .

- a) Windsor
- b) Stuart
- c) Plantagenet
- d) Buckingham

14. A large shopping centre in the US is called a \_\_\_\_\_ .

- a) hypermarket
- b) shopping mall
- c) shopping store
- d) department store

15. Расположите части делового письма в правильном порядке.

- ☐ Dear Mr. Trowel,
- ☐ Megan Wight
- ☐ Mr. Trowel  
Deptford, Essex SD7 DJ6
- ☐ 46 Francis Drive  
Deptford, Essex SD7 OTX
- ☐ 23 September, 2010
- ☐ I would like to apply for the position of the accountant which you advertised  
in the International Herald Tribune of September 21.
- ☐ Yours sincerely,

16. Определите, к какому виду делового документа относится представленный ниже отрывок.

.....  
.....

Thank you for your letter of 26 June sending us samples of cotton prints. We find both the quality and prices satisfactory and are pleased to give you an order for the following items on the understanding that they are supplied from stock at the prices named.

.....  
.....

- a) Order Letter
- b) Inquiry Letter
- c) Letter of Complaint
- d) Resume

*Прочитайте текст и выполните задания.*

#### *Plasma Cutters*

1. Modern industry depends on the manipulation of heavy metals and alloys. We need metals to build the tools and transportation necessary for day-to-day business. The reason is simple: metals are extremely strong and durable, so they're the logical choice for most things that need to be especially big, especially sturdy, or both.

2. The funny thing is that metal's strength is also a weakness: because metal is so good at resisting damage, it's very difficult to manipulate and form into specialized pieces. People can precisely cut and manipulate the metals using the plasma cutter. The plasma cutter is actually a common tool that has been around since World War II.

3. Plasma cutters are not the only devices to harness the power of plasma. Neon signs, fluorescent lighting and plasma displays, just to name a few, all rely on it to get the job done. These devices use “cool” plasma. Though cool plasma cannot be used to cut metals, it has tons of other useful applications.

17. Определите, какое утверждение соответствует содержанию текста.

- a) Plasma cutter uses all the best possibilities of plasma.
- b) “Cool” plasma is a device which is applied for illumination.
- c) People use metals in building tools and transportation as they are easy to work with.
- d) The drawback of metal is in its difficulty to be manipulated and formed into specialized pieces.

18. Завершите утверждение согласно содержанию текста.

*Modern industry relies on plasma cutters as ...*

- a) metals are the most frequently used material in industry.
- b) they are common tools to manipulate with metals.
- c) plasma has a great many applications.
- d) they are the most effective devices in manipulating with metals and their alloys.

19. Ответьте на вопрос.

*How is the effectiveness of plasma used in industry?*

- a) Due to plasma cutters metals can be manipulated and formed.
- b) Metals can be manipulated both by plasma cutters and “cool” plasma.
- c) In spite of having good characteristics metals’ drawback is in being manipulated primarily by plasma cutters.
- d) Plasma cutter is irreplaceable for manipulations with metals and “cool” plasma can be used for illumination.

20. Определите основную идею текста.

- a) It would be impossible to manipulate with metals without plasma cutters.
- b) Plasma is the latest achievement in industry designating for metals manipulation.
- c) Plasma cutters are not the only devices to harness the power of plasma.
- d) Modern industry relies on plasma as it has a lot of valuable applications.

**Критерии оценивания лексико-грамматического теста – max 10 баллов (V семестр).**

| баллы | Процедура оценивания и критерии   |
|-------|---|
| 8-10  | Контрольные, тестовые задания выполнены полно и правильно. Возможно допущение очень незначительного количества ошибок. Правильность выполнения от 91 % и более.                     |
| 4-7   | Контрольные, тестовые задания в основном выполнены (выполнение от 75% и более, но менее 91%). Допущено незначительное количество ошибок (лексических, грамматических, смысловых).   |
| 1-3   | Контрольные, тестовые задания выполнены не плохо, сделана основная часть (более 50% и до 75%),. Однако допущено достаточно типовых ошибок (лексических, грамматических, смысловых). |
| 0     | Контрольные, тестовые задания выполнены очень слабо, менее чем на половину, допущено более 50 % ошибок (лексических, грамматических, содержательных).                               |