МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ

Федеральное государственное бюджетное образовательное учреждение

высшего образования

«Забайкальский государственный университет»

(ФГБОУ ВО «ЗабГУ»)

Факультет: историко-филологический

Кафедра: иностранных языков

**УЧЕБНЫЕ МАТЕРИАЛЫ**

**для студентов заочной формы обучения**

*(с полным сроком обучения)*

по дисциплине «Иностранный язык»

наименование дисциплины (модуля)

Направление подготовки

 11.03.02 Инфокоммуникационные технологии и системы связи

код и наименование специальности

Профиль "Оптические системы и сети связи"

 (уровень прикладной бакалавриат)

Общая трудоемкость дисциплины (модуля) – 7 зачетных единиц (252 ч.)

Форма текущего контроля в семестре – контрольная работа.

Курсовая работа (курсовой проект) (КР, КП) – нет.

Форма промежуточного контроля в семестре – зачет.

Каждое контрольное задание пред­лагается в четырех вариантах. Вы должны выполнить один из вариантов в соответствии с последними цифрами сту­денческого шифра:

студенты, шифр которых оканчивается на 1, 2, 3 выполняют вариант № 1;

студенты, шифр которых оканчивается на 4, 5, 6 выполняют вариант № 2;

студенты, шифр которых оканчивается на 7,8 выполняют вариант № 3;

студенты, шифр которых оканчивается на 9 или 0 выполняют вариант № 4;

**КОНТРОЛЬНОЕ ЗАДАНИЕ 2**

Для того чтобы правильно выполнить задание 2, необ­ходимо усвоить следующие разделы курса английского языка:

1. Видо-временные формы глагола: активный залог — формы Indefinite (Present, Past, Future); формы Continuous (Present, Past, Future); формы Perfect (Present, Past, Future)

2. Модальные глаголы: а) выражающие возможность: can (could), may и эквивалент глагола сап — to be able; b) выражающие долженствование: must, его эквиваленты to have to, to be to,
should.

3. Неопределенные и отрицательные местоимения

4. Функции слова it

Используйте следующие образцы выполнения упраж­нений.

ОБРАЗЕЦ ВЫПОЛНЕНИЯ 1 (К УПР. I)

|  |  |
| --- | --- |
| Lobachevsky's geometry had **revolu­tionized** mathematics and the philosophy of science. | Геометрия Ло­бачевского *произве­ла коренное* *изме­нение* в математике и философии нау­ки. |
| **had** revolutionized - Past Perfect Active от глагола to **revolutionize.** |

**ВАРИАНТ 1**

Перепишите следующие предложения; подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык

1. Soviet chemical science is successfully solving many complex problems.

2. Radio astronomy has given mankind efficient means for penetration into space.

3. He doesn’t miss practical classes.

II. Перепишите и письменно переведите предложения на русский язык, обращая внимание на перевод неопреде­ленных и отрицательных местоимений

1. At some of the London Underground stations there are lifts, others have escalators.

2. Any student of our group can speak on the history of London.

3. No park in London is as popular as Hyde Park.

III. Перепишите следующие предложения; подчеркни­те в каждом из них модальный глагол или его эквивалент. Переведите предложения на русский язык

1. One object may be larger than another one, but it may weigh less.

2. Mass can also be defined as a measure of inertia.

3. Man-made satellites had to use solar cells as a source of power.

4. Plastics should be reinforced by different kinds of fibres (to reinforce - усиливать, укреплять).

 IV. Переведите предложения на русский язык, обращая внимание на разные значе­ния слова IT

1. It is hot in summer.

2. The term “engineering” is used in many specialities. It has many meanings.

3. Is it necessary to study the languages?

 4. It is proved that light needs time to travel any distance.

V. Прочитайте и устно переведите на русский язык текст

Radio systems

Radio systems used for [communications](http://en.wikipedia.org/wiki/Telecommunications) will have the following elements. With more than 100 years of development, each process is implemented by a wide range of methods, specialized for different communications purposes. Each system contains a [transmitter](http://en.wikipedia.org/wiki/Transmitter). This consists of a source of electrical energy, producing [alternating current](http://en.wikipedia.org/wiki/Alternating_current) of a desired [frequency](http://en.wikipedia.org/wiki/Frequency) of oscillation. The transmitter contains a system to [modulate (change)](http://en.wikipedia.org/wiki/Modulation) some property of the energy produced to impress a signal on it. This modulation might be as simple as turning the energy on and off, or altering more subtle properties such as amplitude, frequency, phase, or combinations of these properties. The transmitter sends the modulated electrical energy to a tuned [resonant](http://en.wikipedia.org/wiki/Resonance) [antenna](http://en.wikipedia.org/wiki/Antenna_%28radio%29); this structure converts the rapidly changing alternating current into an [electromagnetic wave](http://en.wikipedia.org/wiki/Electromagnetic_radiation) that can move through free space (sometimes with a particular [polarization](http://en.wikipedia.org/wiki/Polarization_%28waves%29)).

Electromagnetic waves [travel through space](http://en.wikipedia.org/wiki/Radio_propagation) either directly, or have their path altered by reflection, refraction or diffraction. The intensity of the waves diminishes due to geometric dispersion (the [inverse-square law](http://en.wikipedia.org/wiki/Inverse-square_law)); some energy may also be absorbed by the intervening medium in some cases. [Noise](http://en.wikipedia.org/wiki/Signal_noise) will generally alter the desired signal; this [electromagnetic interference](http://en.wikipedia.org/wiki/Electromagnetic_interference) comes from natural sources, as well as from artificial sources such as other transmitters and accidental radiators. Noise is also produced at every step due to the inherent properties of the devices used. If the magnitude of the noise is large enough, the desired signal will no longer be discernible; this is the fundamental limit to the range of radio communications.

The electromagnetic wave is intercepted by a tuned receiving [antenna](http://en.wikipedia.org/wiki/Antenna_%28radio%29); this structure captures some of the energy of the wave and returns it to the form of oscillating electrical currents.

**ВАРИАНТ 2**

1. Перепишите следующие предложения, подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык

 1. Today scientists are still looking for the substance as a source of energy.

 2. Could you speak English a year ago?

 3. The Mendeleyev system has served for almost 100 years as a key to discovering new elements.

II. Перепишите и письменно переведите предложения на русский язык, обращая внимание на перевод неопреде­ленных и отрицательных местоимений

1. Some 350 people attend a yachting school in Tallinn.
2. Does he know any foreign language?
3. Any exhibit of this museum is valuable.

III. Перепишите следующие предложения; подчеркни­те в каждом из них модальный глагол или его эквивалент. Переведите предложения на русский язык

1. Energy can exist in many forms and each form can be transformed into the other.
2. The computers should become an integral part of the orga­nization of industrial processes of all types.
3. These metal parts had to be subjected to X-ray examination.
4. The chemists may use the reactor to analyse various sub­stances fortheir exact composition.

IV. Переведите предложения на русский язык, обращая внимание на разные значе­ния слова IT

 1. The main building was completed in 1985. It houses the library.

 2. It is necessary for all the students to know the fundamental laws of mechanics

 3. It often rains in autumn and snows in winter.

 4. It is necessary to find new sources of cheap energy.

 V. Прочитайте и письменно переведите на русский язык текст

Teleprinter

A teleprinter is a now largely obsolete [electromechanical](http://en.wikipedia.org/wiki/Electromechanics) [typewriter](http://en.wikipedia.org/wiki/Typewriter) that can be used to communicate typed messages from [point to point](http://en.wikipedia.org/wiki/Point-to-point_%28telecommunications%29) and [point to multipoint](http://en.wikipedia.org/wiki/Point-to-multipoint_communication_%28telecommunications%29) over a variety of communications channels that range from a simple electrical connection, such as a pair of wires, to the use of [radio](http://en.wikipedia.org/wiki/Radio) and [microwave](http://en.wikipedia.org/wiki/Microwave) as the[transmission medium](http://en.wikipedia.org/wiki/Transmission_medium). They could also serve as a [command line](http://en.wikipedia.org/wiki/Command_line_interface) [user interface](http://en.wikipedia.org/wiki/User_interface)to early [mainframes](http://en.wikipedia.org/wiki/Mainframes) and [minicomputers](http://en.wikipedia.org/wiki/Minicomputers), sending typed data to the computer with or without printed output, and printing the response from the computer. Teleprinters are still widely used in the Aviation industry ([AFTN](http://en.wikipedia.org/wiki/Aeronautical_Fixed_Telecommunication_Network) and [airline teletype system](http://en.wikipedia.org/wiki/Airline_teletype_system)).

The modern descendants of these devices, known as [computer terminals](http://en.wikipedia.org/wiki/Computer_terminal), are fully electronic and usually use a display screen instead of a printer. Sometimes, these terminals are referred to as TTYs, although this term more correctly refers to teleprinters. Variations called [Telecommunications Devices for the Deaf](http://en.wikipedia.org/wiki/Telecommunications_devices_for_the_deaf) (TDDs) are still used by the [hearing impaired](http://en.wikipedia.org/wiki/Hearing_impaired) for typed communications over ordinary telephone lines.

The teleprinter evolved through a series of inventions by a number of engineers, including [Royal Earl House](http://en.wikipedia.org/wiki/Royal_Earl_House), [David E. Hughes](http://en.wikipedia.org/wiki/David_E._Hughes), [Edward Kleinschmidt](http://en.wikipedia.org/wiki/Edward_Kleinschmidt), [Charles Krum](http://en.wikipedia.org/wiki/Charles_Krum), [Emile Baudot](http://en.wikipedia.org/wiki/Emile_Baudot) and [Frederick G. Creed](http://en.wikipedia.org/wiki/Frederick_G._Creed). A predecessor to the teleprinter, the [stock ticker machine](http://en.wikipedia.org/wiki/Ticker_tape), was used as early as the 1870s as a method of displaying text transmitted over wires. A specially-designed [telegraph](http://en.wikipedia.org/wiki/Telegraphy) typewriter was used to send [stock exchange](http://en.wikipedia.org/wiki/Stock_exchange) information over telegraph wires to the ticker machines. There were at least some major types of teleprinter networks: broadcast systems such as weather information distribution and "news wires". See [Associated Press](http://en.wikipedia.org/wiki/Associated_Press), [National Weather Service](http://en.wikipedia.org/wiki/National_Weather_Service), [Reuters](http://en.wikipedia.org/wiki/Reuters), and United Press (later [UPI](http://en.wikipedia.org/wiki/UPI)); "Loop" systems, where anything typed on any machine on the loop printed on all the machines. Police departments used such systems to interconnect precincts.

**ВАРИАНТ 3**

1. Перепишите следующие предложения, подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык

1. The reactor is fast becoming a major source of heat and electricity.

2. Scientists have found ways of measuring the sizes and posi­tions of bodies in the Universe.

3. They tested this new machine last week.

II. Перепишите и письменно переведите предложения на русский язык, обращая внимание на перевод неопреде­ленных и отрицательных местоимений

1. No student of that group studies Spanish.
2. Some five hundred people were present at the meeting.
3. Have you any books on chemistry?

III. . Перепишите следующие предложения; подчеркни­те в каждом из них модальный глагол или его эквивален­ты. Переведите предложения на русский язык

1. The application of digital (цифровой) computers should include all forms of automatic control in science and industry.
2. Laser light can be used to transmit power of various types.
3. These new materials had to withstand much higher temper­atures than metals.
4. Ethylene gas may be obtained by cracking petroleum.

 IV. Переведите предложения на русский язык, обращая внимание на разные значе­ния слова IT

1.It is necessary to study foreign languages.

2. It is a new subject. We shall study it for two years.

3. Unlike many other big cities, it isn’t very noisy.

 4. The successes in chemistry made it possible to obtain a lot
of new materials.

V. Прочитайте и письменно переведите на русский язык

Electric telegraph

The electric telegraph was an important invention and scientific leap for early communication development. It helped to revolutionize long-distance communication in the 1800’s. The electric telegraph was useful throughout wars and during battle, but was also used in news and recreational areas. It was also faster than most previous means of transmission. The electric telegraph was crucial for our development in the areas of communication.

The electric telegraph is a type of telegraph that utilizes an electric current to send pulses of electricity, via a wire, between the sender and the receiver. A buzzer on the receiving end transforms the electric pulses into an audible noise. Aided by the invention of the electromagnet, the electrical telegraph was the first efficient means of long distance communication. In 1835, Samuel Morse produced the first practical model of the electrical telegraph to be used, and also invented the language of Morse Code. This code is essentially a random pattern applied to letters and words to invoke meaning, meant to compliment his device. Not long after this, he developed an apparatus that could translate the pulses into markings on a strip of paper. Morse and his associates begin to privately fund the spread of this innovative device, and by 1851 railroad companies were using this device to dispatch trains (Bellis). The electrical telegraph was spreading rapidly, and was depended on solely for all rapid long-distance communication. Electric telegraph was used for military, local newspapers and everyday life. It gave the military a way to communicate with one another using specialized coded messages know as Morse code.

**ВАРИАНТ 4**

Перепишите следующие предложения; подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык

1. Quantum mechanics has greatly influenced the nuclear theory.

2. The problem of the structure of matter is constantly occu­pying the minds of many scientists.

3. The scientist wrote this article not long ago.

II. Перепишите и письменно переведите предложения на русский язык, обращая внимание на перевод неопреде­ленных и отрицательных местоимений

1. Any monument in Volgograd has its own history.
2. Nobody knew anything about this experiment.
3. The names of some streets and squares are living history of
the heroic city.

III. Перепишите следующие предложения; подчеркни­те в каждом из них модальный глагол или его эквивалент. Переведите предложения на русский язык.

1. Heat can be divided into three different types.
2. A great number of plastics should find their applications in the electrical industry.
3. Chemical means had to be used for the separation of com­pounds into their elements.
4. The existence of an X-ray laser in the future may be possi­ble.

IV. Переведите предложения на русский язык, обращая внимание на разные значе­ния слова IT

1. It is ten o'clock.

2. It has become evident that ecological problems can be solved only on the global level.

3. It is difficult to speak English.

 4. Itis necessary to obtain accurate data on the possibility of
living and working in space.

 V. Прочитайте и письменно переве­дите текст

Earlier teletype machines

Earlier teletype machines had three rows of keys and only supported upper case letters. They used the 5 bit [baudot code](http://en.wikipedia.org/wiki/Baudot_code%22%20%5Co%20%22Baudot%20code) and generally worked at 60 words per minute. Teletypes with ASCII code were an innovation that came into widespread use in the same period as computers began to become widely available.

Speed, intended to be roughly comparable to [words per minute](http://en.wikipedia.org/wiki/Words_per_minute), was the standard designation introduced by [Western Union](http://en.wikipedia.org/wiki/Western_Union) for a mechanical teleprinter data transmission rate using the 5-bit [baudot code](http://en.wikipedia.org/wiki/Baudot_code%22%20%5Co%20%22Baudot%20code) that was popular in the 1940s and for several decades thereafter. Such a machine would send 1 start bit, 5 data bits, and 1.42 stop bits. This unusual stop bit time was actually a rest period to allow the mechanical printing mechanism to recycle. Since modern computer equipment cannot easily generate 1.42 bits for the stop period, common practice is to either approximate this with 1.5 bits, or to send 2.0 bits while accepting 1.0 bits receiving.

For example, a "60 speed" machine is geared at 45.5 [baud](http://en.wikipedia.org/wiki/Baud) (22.0 [ms](http://en.wikipedia.org/wiki/Millisecond) per bit), a "66 speed" machine is geared at 50.0[baud](http://en.wikipedia.org/wiki/Baud) (20.0 ms per bit), a "75 speed" machine is geared at 56.9 baud (17.5 ms per bit), a "100 speed" machine is geared at 74.2 baud (13.5 ms per bit), and a "133 speed" machine is geared at 100.0 baud (10.0 ms per bit). 60 speed became the [*de facto*](http://en.wikipedia.org/wiki/De_facto) standard for [amateur radio](http://en.wikipedia.org/wiki/Amateur_radio) [RTTY](http://en.wikipedia.org/wiki/Radioteletype) operation because of the widespread availability of equipment at that speed and the U.S. [Federal Communications Commission](http://en.wikipedia.org/wiki/Federal_Communications_Commission) (FCC) restrictions to only 60 speed from 1953 to 1972. Telex, [news agency](http://en.wikipedia.org/wiki/News_agency) wires and similar services commonly used 66 speed services. There was some migration to 75 and 100 speed as more reliable devices were introduced. However, the limitations of HF transmission such as excessive error rates due to multipath distortion and the nature of ionospheric propagation kept many users at 60 and 66 speed. Most Teletype [sound effects](http://en.wikipedia.org/wiki/Sound_effect) in existence today are at 60 speed, and mostly of the Model 15.