

ФЕДЕРАЛЬНОЕ АГЕНТСТВО ЖЕЛЕЗНОДОРОЖНОГО ТРАНСПОРТА
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высшего образования
Иркутский государственный университет путей сообщения
Сибирский колледж транспорта и строительства

МЕТОДИЧЕСКИЕ УКАЗАНИЯ К ПРАКТИЧЕСКИМ ЗАНЯТИЯМ
(очной и/или заочной формы)
ОГСЭ.03 Иностранный язык в профессиональной деятельности
для обучающихся по специальности 23.02.07 Техническое обслуживание и ремонт двигателей,
систем и агрегатов автомобилей 3 курса

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Учебно-методические указания к практическим занятиям
предназначены для обучающихся 3х курсов колледжа, обучающихся по специальности 23.02.07
Техническое обслуживание и ремонт двигателей, систем и агрегатов автомобилей

Учебно-методические указания к практическим занятиям
состоят из заданий, упражнений и текстов по истории автомобилестроения, по развитию
различных средств городского транспорта, по двигателям и основным компонентам и
механизмам автомобиля, а также включены сведения и задания по материалам, применяющихся
по инструкциям по технике безопасности при ремонте и вождении автомобиля. В
заключительной части учебно-методических указаний к практическим занятиям предложен
краткий грамматический справочник.

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Пояснительная записка.

Учебная дисциплина «Иностранный язык в профессиональной деятельности» относится к общему гуманитарному и социально-экономическому циклу основной профессиональной образовательной программы и является обязательной для изучения студентами СПО. Раздел состоит из четырех тем, нашедших отражение в данном учебно-методическом пособии для практических занятий обучающихся - *The history of building of cars, Means of transport, Motor car components, Engines*. Каждая тема состоит из лексических и грамматических упражнений, текстов и диалогов, а также послетекстовых упражнений. Работа над языковым материалом начинается с введения и закрепления лексики, а для ее активизации предложены различные типы упражнений. В конце пособия предложены таблицы по рассматриваемому грамматическому материалу. К данному пособию прилагается терминологический словарь.

В результате освоения раздела студенты должны уметь:

- общаться (устно и письменно) на иностранном языке на профессиональную тематику;
- переводить (со словарем) иностранные тексты строительной направленности;
- пересказать текст, опираясь на план и используя вводные фразы;
- выделить основную мысль текста и высказать ее на английском языке;
- задавать все виды вопросов;
- употреблять нужное грамматическое время в предложениях;
- рассказать о любом создателе автомобилестроения;
- рассказать о преимуществах и недостатках различных видов транспорта;
- рассказать о современных средствах транспорта,
- рассказать о различных двигателях.

В результате освоения раздела студенты должны знать:

- лексический и грамматический минимум, необходимый для чтения и перевода (со словарем) иностранных текстов по данной специальности ;
- значение и уместность употребления различных английских аффиксов;
- сложные времена английского глагола в действительном и страдательном залоге.

Для проверки полученных знаний и умений по каждой теме проводится контрольная работа, по темам *Motor cars components, Engines* студенты выполняют задания по самостоятельной работе в виде докладов и презентаций.

Наименование тем	Кол-во часов	Усвоенные компетенции
Основные компоненты и механизмы автомобиля	22	ОК 01ОК 02 ОК 03ОК 04 ОК 05 ОК 09

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Инструменты и меры безопасности при проведении ремонтных работ на автомобильном транспорте.	6	ОК 01ОК 02 ОК 03ОК 04 ОК 09
Оборудование при охране труда на транспорте.	12	ОК 01ОК 02 ОК 03ОК 04 ОК 08 ОК 09
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Практическая работа 1. «Основные компоненты и механизмы автомобиля». The main components and mechanisms of the car.

Цель: изучить лексику по теме «Основные компоненты и механизмы автомобиля», повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

1. Изучите лексический материал по теме:

TYPES OF CARS

vehicle ['vi:ɪkl] – транспортное средство

automobile ['ɔ:təməbi:l] – автомобиль (AmEn)

car ['kɑ:] – автомобиль, машина

Estate [ɪ'steɪt] универсал

Convertible – кабриолет

Four wheel drive – автомобиль повышенной проходимости

Limousine – лимузин

Lorry – грузовик

Pickup\ pickup truck – пикап

Saloon – седан

Racing car - гоночный автомобиль

Sports car – спортивный автомобиль

Hatchback – хэтчбэк

Task 1. Match the following types of cars with the definition:

Electric car

Sports car

A convertible

Hatchback

Limousine

Estate

Salon

- 1) a passenger car that can be driven with or without a roof in place.
- 2) a large luxurious often chauffeur-driven sedan that usually has a glass partition separating the driver's seat from passenger compartment.
- 3) a car with a door across the full width at the back end that opens upwards to provide easy access for loading.
- 4) a car having a closed body and a closed boot separated from the part in which the driver and passengers sit.
- 5) a car with a long body, a door at the rear, and space behind the back seats.
- 6) a low-built car designed for performance at high speeds,
- 7) often having a roof that can be folded back

Task 2 . Find cars which fit the descriptions.

Which car(s)...

1. has /have lots of room for passengers ?
2. is/ are good for driving n bad roads ?
3. is/ are not suitable for large families?
4. is/ are perfect for hot, sunny weather?
5. has/ have low fuel consumption?
6. is/ are ideal for small parking spaces?
7. has/ have only one passenger seat ?
8. is / are good for transporting things?

PARTS OF A CAR

Bonnet\hood – капот Bumper – бампер Headlights – фары Wing mirror – зеркало Exhaust pipe – выхлопная труба Tyre – шина Wheel – колесо Wind screen – лобовое стекло Wiper – стеклоочиститель Wing\fender – крыло Sunroof – люк Indicator – поворотник	Still – порог Wheel arch – колесная арка Wheel trim – колёсный колпак Ratrol cap – крышка бензобака Lego – логотип Door – дверь Number plate – номерной знак Rear bumper – задний бампер Rear window – заднее стекло Door handle – дверная ручка Badge – значок Side window – боковое стекло Aerial - антенна
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Task 3. Complete the sentences

1. Put you suitcase into the
3. You use to remove water or snow from the windscreen.
4. Switch theon when it's getting dark.
5. This is the front part of a car which covers the engine.....
6. This is a pipe at the back of a car through which waste gas releases.

7. There are four of them in a car.....
8. This is a part of a roof that can be opened.....
9. This is the window in front of a car.....
10. These are the lights on a car that show in which direction it is turning.
11. This is an official sign on the front and back of the car with numbers and letters.

Parts of a car. The Interior.

Accelerator – педаль газа

Sun visor- солнезащитный козырек

Air vent- вентилятор

Steering wheel- руль

Airbag- подушка безопасности

Seat belt- ремень безопасности

Brake pedal- педаль тормоза

Rear-view mirror- зеркало зад. вида

Car seat- сиденье

Ignition- зажигание

Clutch pedal- сцепление

Hands-free telephone- беспроводная гарнитура

Cup holder- подстаканник

Handbrake - ручной тормоз

Dashboard - приборная панель

Glove compartment- бардачок

Door handle- дверная ручка

Gearstick - рычаг коробки передач

Door tray - дверной карман

Horn- гудок

Task 4. Complete the sentences.

1. This is the object in a car that makes a loud warning noise.
2. Look into the when you want to see what is behind you.
3. A wheel that you turn to control the car.
4. The pedal you press to change gear or shift
5. The pedal you press with your foot to make the car move faster
6. The pedal you press to stop the car
7. In the event of a collision, the..... stops the driver of the car from hitting his or her chest on the steering wheel.
8. The part of a car that contains some of the controls used for driving and the devices for measuring speed and distance.
9. Remember to fasten your in the back too.
10. A is a component of an automobile located on the interior just above the windshield.

Task 5:

engine oil pressure gauge • rev counter • coolant temperature gauge • fuel gauge • speedometer • voltmeter

Which instrument:

- 1) shows you how fast the car is travelling ?
- 2) warns you if the engine lubrication system gets too hot ?
- 3) shows that you are indicating to turn left or right ?
- 4) shows you how often the engine is turning over ?
- 5) shows you how much petrol you have in the tank ?

6) indicates the voltage of the car's electrical system?

Task 6. Read and translate the text

The **dashboard** is also called **dash** or **instrument panel**. It is a control panel placed in front of the driver, housing instrumentation and controls for operation of the vehicle.

On the dashboard we can find the steering wheel and the instrument cluster.

The instrument cluster contains gauges such as a revcounter, a speedometer, an odometer and fuel gauge. There are also indicators such as gearshift position, seat belt warning light, parking-brake-engagement warning light and an engine-malfunction light. The indicators for low fuel, low oil pressure, low tire pressure and faults in the airbag (SRS) system are also placed there. Some vehicles also have systems like heating and ventilation controls and vents, lighting controls, audio equipment and automotive navigation systems also included on the dashboard, different styles and different designs.

On the most modern cars, the top of a dashboard contain vents for the heating and air conditioning system which can be switched in any direction you need, towards the passenger's seat or to the ceiling. There are also speakers for an audio system or surround system.

A glove compartment is commonly located on the passenger's side. There may also be an ashtray and a cigarette lighter which can provide a power outlet for other low-voltage appliances.

Answer the following questions:

1. Where is situated the gearstick?
2. What are the "hazard lights"?
3. When do we use the satellite navigation system (GPS)?
4. What is the rev counter?

jack – домкрат

parking brake – парк. тормоз

tighten - затягивать

hub cap – колесный колпак

lug nut – гайки

spare tire – запасное колесо

loosen – ослабить

lift - поднимать

Task 7. Put these steps for changing a tire in the right order.

- a) Lower the car to the ground fully and remove the jack.
- b) Apply the parking brake and put car into "Park" position.
- c) Tighten the nuts by your hand and the wrench.
- d) Lower the car using the jack.
- e) Place the jack under the frame near the tire that is going to be changed.
- f) Remove the hub cap and loosen the nuts by turning them counterclockwise with a wrench.
- g) Find a flat, stable and safe place to change your tire.
- h) Pump or crank the jack to lift the tire off the ground.
- i) Raise the jack until it lifts and supports the car
- j) Remove the tire and place the flat tire under the vehicle as a safety precaution.
- k) Place the spare tire on the hub properly and put on the lug nuts.
- l) Tighten the nuts as much as possible.
- m) Finish tightening the nuts and replace the hubcap.
- n) Put the old tire in your trunk and take it
- o) Remove the nuts completely.
- p) Place a heavy object such as rock, concrete, spare wheel in front of the front and back tires.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.

Task 8. Match the words (1-5) with definitions (A-E).

1- Jack

2- Wrench

3- Spare tire

4- Tighten

5- Nut

A- a metal cap used to attach a wheel to a car

B- a car device for raising heavy objects off the ground especially vehicles like cars and trucks

C- to turn something so that it moves closer to another object

D- also known as a spanner, a tool for holding and turning objects

E- an extra tire kept for emergencies

MOTOR CARS COMPONENTS

Task 1. Read and translate the text, try to focus on its essential facts and choose the most suitable heading given below for each paragraph.

- 1) Engine
- 2) Suspension System
- 3) Integral Chassis Frame and Body
- 4) Motor Car Components
- 5) Transmission and Drive Lines

Motor Car Structure

A structure of vehicle has to fulfil a number of requirements. The prime purpose of the vehicle structure is to provide a location for all the necessary vehicle systems and components. The purpose of the vehicle will also dictate the size and weight of the vehicle systems and components and therefore the structure will be designed accordingly. The main structural components of a motor car are engine, chassis and body. Chassis embraces transmission (clutch, gear-box, propeller shaft, main shaft, differentials, final drive shafts or half-shafts), drive lines (frame, front and rear axles, suspension and wheels) and steering systems (wheel steering and brake steering).

The usual source of power for a motor car is an internal combustion engine. A petrol (gasoline) engine has traditionally been the most popular for light passenger vehicles. The engine in heavy vehicles is usually a large capacity diesel, the main requirements for which are an ability to produce high levels of pulling power, reliability, and low fuel consumption.

The power of the engine is transmitted through the transmission and drive lines to the drive wheels. For the rear-wheel drive (RWD) layout, the rear wheels act as the driving wheels. Spacing out the main components in this layout makes each unit accessible but a drawback is the intrusion of the transmission components into the passenger compartment. The compactness of the front-wheel drive (FWD) layout has made it very popular on modern cars, especially on small cars. The arrangement of four-wheel drive (4WD) is safer because it distributes the drive to all four wheels and during acceleration it reduces the risks of wheel spin.

The suspension system involving springs, shock absorbers and linkages serves a dual purpose: contributing to the vehicle's handling for good active safety and driving pleasure, and keeping vehicle occupants comfortable and reasonably well isolated from road bumps, vibrations, etc.

Most modern cars are built an integral chassis frame and body. This frameless or integral arrangement provides a stiff light construction to the motor car, which is particularly suitable for mass-produced vehicles. A suitable designed body shell can withstand various frame stresses. A lightweight unitary construction contains relatively light vehicle systems and components and provides sufficient space for a driver and passengers.

Task 2. Agree or disagree with the following statements.

1. To provide a location for all the necessary vehicle systems and components is the prime purpose of the vehicle structure. _____
2. The usual source of power for a motor car is a diesel. _____
3. The front wheel drive layout is rather compact. _____
4. Most of the modern cars are designed with an integral chassis frame and body.

5. A small passenger vehicle with a light unitary construction doesn't provide sufficient space for a driver and passengers. _____

Task 3. Translate the following words.

1	engine		21	gearbox	
2	chassis		22	propeller shaft	
3	body		23	drive shafts	
4	petrol (gasoline) engine		24	half-shafts	
5	capacity		25	front and rear axles	
6	pulling power		26	suspension	
7	reliability		27	layout	
8	low fuel consumption		28	rear-wheel drive	
9	transmission		29	front-wheel drive	
10	drive lines		30	four-wheel drive	
11	steering systems		31	accessible	
12	clutch		32	to intrude	
13	to distribute		33	shock absorbers	
14	To reduce wheel spin		34	linkages	
15	springs		35	wheel steering	
16	vehicle's handling		36	brake steering	
17	to isolate		37	integral chassis	

				frame and body	
18	stiff		38	suitable	
19	to withstand		39	unitary	
20	to locate		40	sufficient	

Task 4. Match the adjectives in column A with the nouns in column B to form meaningful phrases and then identify them at the sentence level in the text..

A		B	
1	dual	a	space
2	necessary	b	source
3	unitary	c	systems
4	sufficient	d	vehicles
5	structural	e	components
6	usual	f	purpose
7	heavy	g	wheels
8	high	h	arrangement
9	rear	i	levels
10	integral	j	construction

Task 5. Decide which of the verbs on the left collocate with the nouns on the right and then identify the word combinations at the sentence level in the text.

1	to fulfill	a	drive
2	to provide	b	risks
3	to transmit	c	requirements
4	to distribute	d	structure
5	to reduce	e	systems and components
6	to withstand	f	location
7	to design	g	vehicle
8	to locate	h	power
9	to serve	i	stresses
10	to handle	j	purpose

Task 6. Try to enrich your vocabulary:

a) Find words in the text which have the same meanings as the following words:

To perform, some, most important, aim, to construct, integral, enough, major, parts, motor, big, disadvantage, embrace, different;

b) Find words in the text whose meanings are opposite to the meanings of the following words:

External, heavy, low, passive, old, frameless, unsuitable, unusual;

c) *Replace the words in italics with the words with similar meanings:*

1. A structure of a vehicle should *perform some* requirements.
2. This vehicle provides *enough* space for a driver and passengers.
3. The *major structural parts* of a motor car are engine, chassis, and body.
4. The rear-wheel drive has *a disadvantage*.
5. The integral chassis frame and body can withstand *different* frame stresses.

Task 7. *Complete the sentences : change the word in capitals at the end of each sentence to form a word that fits suitably in the blank space..*

1. The frameless arrangement is for mass-produced vehicles SUIT.
2. The unitary structure has sufficient space for a and passengers DRIVE.
3. In the rear-wheel drive layout each unit is ACCESS.
4. The suspension system involves shock ABSORB.
5. This integral Provides a stiff light construction to the motor car ARRANGE.

Task 8. *Insert the words at the sentence level: fill in the blanks with the missing words (the first word of each word is given).*

1. This car provides s... space for vehicle's occupants.
2. Besides p... shaft, transmission embraces m... shaft and half-shafts.
3. S.... is a component of the drive lines.
4. Steering system embraces w.... steering and b.... steering.
5. One of the requirements for the engine is low f.... c.... .
6. The most popular engine for light passenger vehicles is a p.... engine.
7. The s..... system involves springs, shock absorbers, etc.
8. The passengers are isolated from road b.... .
9. This body shell can w..... frame stresses.
10. This frameless arrangement is rather s..... .

Task 9. *Fill in the blanks to streamline the use of the Present Simple and Present Perfect. The words in brackets are given to help you .*

1. The operation usually By this structure (to fulfill).
2. The engineer already the components (to arrange).
3. As a rule, the engine high levels of pulling power (to produce).
4. This suspension system always vehicles occupants comfortable (to keep).
5. Lately, most cars With integral chassis frame and body (to build).

Task 10. *Make up sentences according to the models to practice the use of tenses.*

Model A: *Как правило она работает в офисе.*

As a rule, they work in the office.

1. Как правило, мы выполняем много заданий.
2. Назначение транспортного средства обычно определяет его размер и вес.
3. Небольшое пассажирское транспортное средство обычно использует легкий несущий кузов.
4. Шасси включает трансмиссию, ходовую часть и системы управления.
5. Устройство полного привода снижает риск буксования колес.

Model B: *Легкие несущие кузова используются в небольших автомобилях.*

Lightweight unitary constructions are used in small passenger vehicles.

1. Все системы и компоненты автомобиля размещаются в несущем кузове.
2. Пружины, амортизаторы и направляющий аппарат входят в систему подвески.
3. Большинство современных автомобилей проектируются с несущим кузовом.
4. Риск буксования колес

уменьшается при наличии устройства полного привода. 5. Высокие тяговые показатели обеспечиваются мощными дизельными двигателями.

Task 11. Translate the text into English. Mind the words and phrases given.

To be fitted – быть оснащенным;

Sidelights – габаритные фонари;

Headlights – фары;

Poor visibility – плохая видимость;

To turn – поворачивать;

Windscreen wipers and washers – стеклоочистители;

Horns – сигналы;

Central locking – централизованное закрывание дверей;

To achieve – достигать;

Acceptable emission level – требуемый уровень выхлопных газов.

The motor car electrical /electronic equipment

A modern motor car has a considerable number of electrical and electronic systems. It is fitted with certain lights, sidelights and headlights to be used in darkness and in poor visibility. Indicators, or flashers, are used to inform others of the direction in which a motor car is turning. Brake lights are required during the application of the brakes. There are a lot of other items which are operated electrically, such as windscreen wipers and washers, horns, heaters, audio systems, conditioning systems, central locking, etc.

The modern motor vehicle uses electronically controlled systems to operate many of the electrical items which were once controlled by simple on/off switches. Lately, electronically controlled engine systems have become common to achieve good performance and acceptable emission levels.

To operate the motor car electrical and electronic equipment electrical power is needed. It comes from a generator which is driven from the engine. Since certain items may be needed when engine is not running, a battery or accumulator is fitted. The battery is charged by the generator when the engine is running.

Task 12. Agree or disagree with the following statements and add some more information if needed.

1. A motor car uses side lights and headlights only in darkness. 2. Brake lights are not required during the application of the brakes. 3. Windscreen wipers and washers are operated electrically. 4. Modern cars use electronically controlled systems to achieve acceptable emission levels. 5. A motor car is fitted with an accumulator.

Task 13. Divide the following words or phrases into five groups, those which describe or belong to a) engine; b) transmission; c) drive lines; d) steering system; e) body.

Rear axle, capacity, clutch, pulling power, propeller shaft, wheels, springs, suspension, shock absorber, half-shafts, integral arrangement, gearbox, differentials, linkages, stiff light construction, main shaft, frame, front axles, wheel steering, diesel, brake steering, internal combustion, petrol, fuel consumption, gasoline, rear-wheel drive.

Task 14. Match each word with its correct definition

Clutch, gearbox, axle, suspension, transmission

1. The part of the vehicle that takes power from engine to the wheels.
2. A metal box that contains the gears of the vehicle.
3. A piece of equipment in a vehicle that you press with your foot when you change gear.
4. The equipment that makes a vehicle move smoothly when it goes over bumps on the ground.

5. A metal bar that connects a pair of wheels on a car or other vehicle.

Task 15. Read the sentences, point out the Subjunctive Mood, the modal verbs and their equivalents. Give the Russian equivalents.

1. They have to provide the necessary tools. 2. This structure should to fulfil a number of requirements. 3. The structure must contain all the systems and components. 4. They are able to arrange all the components. 5. The suspension system is to keep the vehicle occupants comfortable. 6. Being rather stiff the frameless or integral arrangement can withstand various frame stresses. 7. The four-wheel drive is to reduce the risks. 8. I wish we were isolated from road bumps of wheel spin. 9. It would be desirable to install a diesel in this vehicle. 10. The front-wheel drive is designed to be rather compact.

Task 16. Make up your own sentences according to the models.

Model A: *He can drive this motor car. He must drive this motor car.
He is able to drive this motor car. He has to drive this motor car.*

1. He can arrange these components. 2. He can provide the proper model design. 3. He must provide the proper model design. 4. The four-wheel drive arrangement must distribute the drive to all four wheels. 5. She must handle the vehicle very carefully.

Model B: *This motor car hasn't a petrol engine.
I wish this car had a petrol engine.*

1. This vehicle hasn't a diesel. 2. This car hasn't sufficient space for a driver and passengers. 3. This motor car hasn't a four-wheel drive layout. 4. This automobile hasn't a good suspension system. 5. This vehicle hasn't a stiff light construction.

Task 17. Ask questions and use the words in *Italics* in your answers. The words in brackets will help you.

1. A motor car contains the following components: *engine, chassis, and body* (what components). 2. The power of the engine is transmitted *through the transmission and drive lines* to the wheels (how). 3. The usual source of power for a motor car is *internal combustion engine* (what). 4. A large capacity diesel should fulfil the following requirements: *an ability to produce high levels of pulling power, reliability, and low fuel consumption* (what requirements). 5. *Spacing out the main components* in the rear-wheel drive layout makes each unit accessible (what).

Task 18. Translate the following sentences from Russian into English.

1. Главные структурные компоненты автомобиля: двигатель, шасси и кузов.
2. Источник энергии для автомобиля – двигатель внутреннего сгорания.
3. Шасси состоит из трансмиссии, ходовой части и системы управления.
4. Трансмиссия включает сцепление, коробку передач, карданную передачу, главную передачу и приводные валы или полуоси.
5. Ходовая часть вмещает раму, передний и задний мосты, подвеску, колеса.
6. Энергия двигателя передается через трансмиссию и ходовую часть к ведущим колесам.
7. Системы управления состоят из рулевого управления и тормозной системы.
8. Большинство современных автомобилей сконструированы с несущим кузовом.

Task 19. Make a summary of the text using the following phrases:

1. The title of the text is.....
2. The text is about The text deals with.....

3. The text covers such points as.....first....second.....third.....
4. It should be underlined that.....
5. In conclusion, I may say that
6. To my mind.... In my opinion.....

Types of motor car body

The main purpose of a motor car body is to provide comfortable accommodation for a driver and passengers. With the introduction of unitary constructions, the body has become the main structure onto which all other vehicle elements are attached. Therefore, the body is both a load-bearing structure and a comfortable location for the occupants. One can distinguish between some body types of a motor car, such as saloon, estate, hatchback, coupe, convertible, etc.

Saloon is a fully enclosed body with either two or four passenger doors. The common shape of the saloon body is based on three “boxes”: the front box forms the engine compartment, the centre section is the container for the occupants and the rear box is a storage space, called a boot (trunk) for the luggage.

Estate (station wagon) has the roofline extended to the rear of the body to enlarge floor area for the carriage of luggage or goods. The rear door enables bulky or long objects to be loaded easily. Stronger suspension springs are fitted in the rear to support the extra load.

The hatchback design is usually based on a saloon body but with the boot or trunk area blended into the centre section of the body therefore the hatchback is halfway between a saloon and an estate car.

Coupe is usually two-door type intended for two people: a driver and one passenger. Some coupe models are designed ‘2+2’ but the back area is more suitable for children or for occasional adult use.

Convertible, also called cabriolet or drop-head-coupe, can be changed into an open car by either removing a rigid roof or lowering a collapsible fabric roof.

The majority of mass-produced cars have a pressed steel body, although aluminium bodies are being used increasingly due to their lighter weight. Another common practice is to mould body panels from GRP (glass-reinforced plastics, often referred to as fiberglass). Other materials are also now used, such as carbon fibre, to produce body panels and structures.

Практическая работа 2. «Двигатели». Engines.

Цель: изучить лексику по теме «Двигатели», повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

1. Изучите лексический материал по теме:

ENGINES

Task 1. Read and translate the text, try to focus on its essential facts and choose the most suitable heading given below for each paragraph.

- 1) Engine Classification According to the Types of Ignition, Engine Cycle, Valve Location, Cooling
- 2) Reciprocating Engines
- 3) Identification of a Given Engine
- 4) Rotary Engines
- 5) Spark-Ignition Engines
- 6) Invention and Development of the internal Combustion Engine
- 7) Compression-Ignition Engines
- 8) Different Kinds of Fuel Used in Engines

An Internal Combustion Engine

An internal combustion (IC) engine is an engine in which combustion of the fuel takes place in a confined space, so that expanding gases provide mechanical power and produce motion. The invention and development of the internal combustion engine in the 19th century had a profound impact on human life. The first commercially successful internal combustion engine was created by a Frenchman, Etienne Lenoir in 1860. It ran on coal gas, but worked on a cycle of operations, which did not include compression of the gas before ignition: as a result, it was not very efficient. Although various forms of internal combustion engines had been developed before the 19th century, their widespread adoption in a variety of applications began with the commercial drilling and production of petroleum. Generally using fossil fuel (mainly petroleum), these engines appeared in almost all vehicles in the late 19th century. The most significant distinction between modern internal combustion engines and the early designs is the use of compression and, in particular, in cylinder compression.

Modern internal combustion engines can be classified in a number of different ways. According to the type of ignition, they can be divided into spark-ignition (SI) and compression-ignition (CI) engines. Depending on the engine cycle, they are four-stroke cycle and two-stroke cycle ones. A four-stroke cycle engine has four piston movements over two engine revolutions for each cycle. A two-stroke cycle engine has two piston movements over the revolution for each cycle. In accordance with the valve location, the internal combustion engines are called I-head engines if valves are in head (overhead

valve), and L-head engines if valves are in block (flat head). According to the type of cooling, engines can be classified as air-cooled engines and liquid-cooled engines (water-cooled engines).

Basic design divides engines into reciprocating and rotary ones. A reciprocating engine has one or more cylinders in which pistons reciprocate back and forth. The combustion chamber is located in the closed end of each cylinder. Power is delivered to a rotating output crankshaft by mechanical linkage with the pistons. Reciprocating engines are classified on the base of position and number of cylinders. These are single-cylinder engine, in-line engine, V-type engine, opposed-piston engine, and radial engine. A single-cylinder engine has one cylinder and piston connected to the crankshaft. In-line engine cylinders are positioned in a straight line, one behind the other along the length of the crankshaft. In V-type engine, two banks of cylinders are at an angle with each other along a single crankshaft. In V-type engine, two banks of cylinders are at an angle with each other along a single crankshaft, allowing for a shorter engine block. Opposed-cylinder engine has two banks of cylinders opposite to each other on a single crankshaft. These engines are often called flat engines. Engines of two different cylinder arrangements have been classified as W-type engines in the technical literature. An opposed-piston engine has two pistons in each cylinder with the combustion chamber in the centre between the pistons. Radial engines are engines with pistons positioned in a circular plane around a circular crankshaft. The connecting rods of the pistons are connected to a master rod, which in turn, is connected to the crankshaft.

A rotary engine is made of a large non-concentric rotor with a built-in gearwheel, moving around a stationary block (stator). The moving combustion chambers are formed by the corners of the rotor sliding against the inner surface of the non-rotating block (housing). A number of experimental engines have been tested using this concept, but the only design that has ever become common in an automobile is the Wankel engine which has one, two, and three rotors.

By method of fuel input, spark-ignition engines are divided into four types: carbureted engines in which air and fuel are mixed to facilitate the combustion process; multipoint port fuel injection engines in which one or more injections at each cylinder intake; throttle body fuel injection engines in which injectors upstream in intake manifold; gasoline direct injection engines in which injectors are mounted in combustion chambers with injection directly into cylinders.

By method of fuel input, compression-ignition engines are divided into three types: direct injection engines in which fuel is injected into the main combustion chamber; indirect injection engines in which fuel is injected into the secondary combustion chamber; homogeneous charge compression ignition engines in which well-mixed fuel and oxidizer (typically, air) are compressed to the point of auto-ignition.

Besides, different kinds of fuel are used in engines: diesel oil, motor oil, naphtha; kerosene or benzol-oil mixtures; gas, natural gas methane; alcohol ethyl, methyl; dual fuel. There are several engines that use a combination of two or more fuels.

Several or all of these classifications can be used at the same time to identify a given engine. Thus, a modern engine might be called a reciprocating, spark-ignition, four-stroke cycle, I-head, water-cooled, gasoline, multipoint port fuel injection automobile engine.

Task 2. *Agree or disagree with the following statements.*

1. The first commercially successful internal combustion engine was very efficient.
2. The most significant distinction between modern internal combustion engines and the early designs is the use of compression and, in particular, in-cylinder compression.
3. Depending on the engine cycle, engines are four-stroke cycle and five-stroke cycle ones.
4. In accordance with the valve location, the internal combustion engines are called I-head engines if valves are in head (overhead valve), and L-head engines if valves are in block (flat head).
5. Radial engines are often called flat engines.

Task 3. *Read, transcribe and translate the international words, mind the stress.*

Mechanical _____
gas _____
commercial _____

compression _____
transport _____
automobile _____
mixture _____
modern _____
cylinder _____
technical _____
petroleum _____
location _____
cycle _____
engineering _____
concept _____
injection _____
method _____

Task 4. Analyze the following words with different suffixes and divide them into two groups – nouns and adjectives.

Internal, combustion, development, successful, efficient, commercial, mixture, different, ignition, distinction, mechanical, injector, classification, motion, invention, operation, compression, production, application, significant, different.

Task 5. Divide the following terms into two groups, those which belong to a) spark-ignition engines; b) compression-ignition engines.

Gasoline direct injection engines, homogeneous charge compression-ignition engines, multipoint port fuel injection engines, throttle body fuel injection engines, indirect injection engines, carbureted engines, direct injection engines.

Task 6. Match each word with its correct definition.

Rotary engine, radial engine, in-line engine, W-type engine

1. This engine is made of a block (stator) built around a large non-concentric rotor and crankshaft.
2. Cylinders are positioned in a straight line, one behind the other along the length of the crankshaft in this engine.
3. Pistons are positioned in a circular plane around a circular crankshaft in this engine.
4. Air and fuel are mixed to facilitate the combustion process in this engine.
5. This is an engine of two different cylinder arrangements.

Task 7. Read and translate the text.

Petrol cars and electrical cars.

People have been using cars for ages. Nowadays, the main competition seems to be between petrol cars and electric cars. The main difference between these two cars is the technology that powers the cars to run. Petrol driven cars are built using internal combustion engines that use petrol as fuel, whereas electric cars run on battery power that is recharged.

A petrol combustion engine works on the principle of combustion, or the mixing of fuel with air to release gasses that cause the vehicle parts to move. The heat energy produced inside the engine is transmitted to propel the outside mechanical parts. These parts transmit the movement across the chassis to finally move the wheels accordingly. Petrol cars used to be fitted with carburetors and now use fuel injection systems. An electric car is fitted with batteries that rechargeable. The batteries are placed across the entire system in a balanced way to manage equivalent weight dispersion and are connected with cables. These batteries power the mechanical parts to move.

Both petrol and electric technologies work on different principles. However, certain important comparisons can be made in terms of the rate of conversion between a petrol engine and electric batteries which shows higher efficiency in the case of electric batteries. Moreover, the petrol combustion process produces a lot of smoke and dust, while electric batteries do not produce such pollutants. The energy transmission is better in electric battery driven vehicles when compared with petrol vehicles resulting lesser wastage and transmission loss.

Electric battery car technology is still being developed by the engineers. Though people argue in favour or against electric cars, the emerging situation demands to move away from petrol cars. More and more research and process improvements should be done to bring advancements in the technology. It can help people to save the environment from pollution.

Task 8. Find the equivalents of these words in the text.

1. Приводить в движение внешние механические части

2. вся система _____
3. распределение веса _____
4. загрязняющее вещество _____
5. высказывать аргументы за и _____ против
6. износ _____
7. двигатели внутреннего сгорания _____
8. бензиновый двигатель _____
9. системы топливного зажигания _____
10. процесс бензинового сгорания _____

Task 9. Agree or disagree with the following statements .

1. Petrol cars are better than electric cars.
2. Both the petrol and electric technologies work on the same principles.
3. The petrol combustion process produces a lot of smoke and dust, while electric batteries do not produce such pollutants.
4. Petrol cars should be completely replaced with electric cars.
5. Petrol cars have more disadvantages in comparison with electric cars/

Task 10. Fill in the table.

<i>Noun</i>	<i>Verb</i>
conversion	
	to produce
transmission	
	to develop
movement	
	to connect
connection	
	to expand
exploration	
	to combine

Task 11. Tick (✓) the sentences which are true.

1	Different internal-combustion engines are created by engineers.	
2	A petrol engine has traditionally been used in light passenger vehicles.	
3	The power of engine is being transmitted through transmission and drive lines to the drive wheels.	
4	Most modern cars are built with the integral chassis frame and body.	
5	The internal-combustion engines are used in automobiles, locomotives, marines, aircrafts, and others.	

Task 12. Make up your own sentences with the Passive Voice according to the model.

Model: In the 19th century engineers developed various forms of internal combustion engines. In the 19th century various forms of internal combustion engines were developed by engineers.

1. Etienne Lenoir created the first internal combustion engine in 1860.
2. Designers use engines in automobiles, locomotives, submarines, aircrafts, and others.
3. We usually use gasoline, diesel oil or fuel oil in automobiles.
4. A single combustion process causes two power strokes at the same time.
5. The scientists have classified engines of two different cylinder arrangements as W-type engines.

Task 13. Fill in the blanks to streamline the use of the Passive Voice. The words in brackets are given to help you.

1. Yesterday this letter to our British partners (to send).
2. The engines of a new type.... at Russian automobile plants next year (to produce).
3. This type of engine ... for new model of the car recently (to test).
4. Every year the modern designs of the automobiles by the engineers and scientists at the international conferences (to discuss).
5. Such common fuel as gasohol consisting of 90%gasoline and 10% alcohol also in IC engines (use).

Task 14. Make up sentences according to the model to practice the use of the Passive Voice.

Model: Современные двигатели внутреннего сгорания классифицируются по различным параметрам.

Modern internal combustion engines are classified in a number of different types.

1. В двигателе карбюраторного типа сжатия топливовоздушная смесь поступает в цилиндры и поджигается системой зажигания.
2. В технической литературе современный двигатель называют бензиновым двигателем, четырехтактным двигателем, поршневым двигателем, двигателем с турбонагревателем, двигателем с искровым зажиганием, двигателем с V-образным расположением цилиндров, двигателем с верхним расположением клапанов, двигателем с водяным охлаждением, двигателем с распределенным впрыском топлива.
3. В двигателях с непрямым впрыском топлива топливо впрыскивается в отдельную дополнительную камеру сгорания.
4. В бензиновых двигателях с прямым впрыском топлива форсунки расположены в камерах сгорания и топливо впрыскивается непосредственно в цилиндры.
5. В двигателях с распределенным впрыском топлива топливо попадает в каждый цилиндр через впускные клапаны.

Task 15. Ask questions and use the words in italics in your answers. The first words will help you.

1. The first internal combustion engine ran on *coal gas*.
What fuel _____?
2. *Etienne Lenoir* created the first commercially successful internal combustion engine.
Who _____?
3. A four-stroke cycle engine involves *four* piston movements over two engine revolutions for each cycle.
How many _____?
4. *Power* is delivered to a rotating output crankshaft by mechanical linkage with the pistons.
What _____?
5. Oppose-cylinder engines are often called *flat engines*.
How _____?

Task 16. Make a summary of the text using the following phrases.

1. The title of the text is..... .
2. The text is about..... The text deals with
3. The text covers such points as....first.....second.....third..... .
4. It should be underlined that..... .
5. In conclusion, I may say that..... .
6. To my mind..... . In my opinion..... .

The Wankel Engine

The most successful rotary engine is the Wankel engine. German engineer Felix Wankel first conceived his rotary engine in 1924 and finally received a patent for it in 1929. He worked through the 1940s to improve the design. Considerable effort went into designing rotary engines in the 1950s and 1960s. They were of particular interest because they were running smoothly and quietly, and because of the reliability resulting from their simplicity. The Company NSU, where Wankel worked at that time, then licensed the concept to companies around the world, which continued to improve the design. Among the manufacturers signing licensing the agreements to develop Wankel engines were the automobile companies of Europe, America, Japan, Russia, and other countries.

The Wankel engine is a type of an internal combustion engine in which the four strokes of a typical Otto cycle occur in the space between a three-sided symmetric rotor and the inside of a housing. Its four-stroke cycle is generally generated in a space between the inside of an oval-like epitrochoid-shaped housing and a roughly triangular rotor. In the basic single-rotor Wankel engine, the oval-like epitrochoid-shaped housing surrounds a rotor which is triangular with bow-shaped flanks. It has a disk that looks like a triangle with bulging sides rotating inside a cylinder shaped like a figure eight with a thick waist. Intake and exhaust are through ports in the flat sides of the cylinder. The spaces between the sides of the disk and the walls of the cylinder form combustion pockets. During a single rotation of the disk, each pocket alternately grows smaller, then larger because of the contoured outline of the cylinder. This provides compression and expansion. The engine runs on a four-stroke cycle. The expansion phase of the Wankel cycle is much longer than that of the Otto cycle.

The Wankel engines have some advantages. They are considered to be simpler and contain far fewer moving parts. For instance, they have no valves or complex valve trains. Moreover, since the rotor is geared directly to the output shaft, there is no need for connecting rods, a conventional crankshaft, crankshaft balance weights, etc. The elimination of these parts makes a Wankel engine not only much lighter, but it also completely eliminates the reciprocating mass of a piston engine with its internal strain and inherent vibration due to repeated acceleration and deceleration, producing not only a smoother flow of power but also the ability to produce more power by running at higher rpm. Though the Wankel engine has about 50% fewer parts and about a third the bulk and weight of a reciprocating engine, its main advantage is that advanced pollution control devices are easier to design for it than for the conventional piston engine. Besides, higher engine speeds are made possible by rotating instead of reciprocating motion, but this advantage is partially offset by the lack of torque at low speeds, leading to greater fuel consumption. Moreover, the shape of the Wankel combustion chamber and the turbulence induced by the

moving rotor prevent localized hot spots from forming, thereby allowing the use of fuel of very low octane number without preignition or detonation, a particular advantage for hydrogen cars. The simplicity of design and smaller size of the Wankel engine also allows for savings in construction costs, compared to piston engines of comparable power output.

The Wankel engine has also some disadvantages. The design of the Wankel engine requires numerous sliding seals and a housing that is typically built as a sandwich of cast iron and aluminum pieces that expand and contract by different degrees when exposed to heating and cooling cycles in use. These elements led to a very high incidence of loss of sealing, both between the rotor and the housing and also between the various pieces making up the housing. Besides, the shape of the Wankel combustion chamber prevents preignition, it also leads to incomplete combustion of the air-fuel charge, with the remaining unburned hydrocarbons released into the exhaust. One more disadvantage of the Wankel engine is the difficulty of expanding the engine to more than two rotors. The complex shapes of the rotor, housing, and output shaft and the way they fit together requires that engines with more than two rotors use an output shaft made of several sections assembled during the assembly of the rest of the engine. While this technique has been used successfully in Wankel powered racing cars, it negates a great deal of the relative simplicity and lower cost of the Wankel engine construction.

Because of their compact, lightweight design, Wankel rotary engines have been installed in a variety of vehicles and devices such as automobiles and racing cars, aircraft, go-karts, personal water craft, and auxiliary power units. The simplicity of the Wankel makes it ideal for macro, mini, micro, and micromini engine designs.

Task 17. Fill in the table.

<i>Infinitive</i>	<i>Past Indefinite</i>	<i>Participle II</i>	<i>Participle I</i>
	decided		
to build			
		drawn	
to be			
			doing
	saw		
to open			
		begun	
to grow			
	wanted		
to lit			
			stopping

Task 18. Read and translate the text.

The first trams.

The very first tram was on the Swansea and Mumbles Railway in south Wales, UK; it was horse-drawn at first, and later moved by steam and electric power. The Mumbles Railway Act was passed by the British Parliament in 1804, and the first passenger railway (similar to streetcars in the US some 30 years later) started operating in 1807. The first streetcars, also known as horse cars in North America, were built in the United States and developed from city stagecoach lines and omnibus lines that picked up and dropped off passengers on a regular route without the need to be pre-hired. These trams were an animal railway, usually using teams of horses and sometimes mules to haul the cars, usually two as a team. Occasionally other animals were put to use, or humans in emergencies.

The first streetcar line, developed by Irish-American John Stephenson, was the New York and Harlem Railroad's Fourth Avenue Line which ran along the Bowery and Fourth Avenue in New York City. Service began in 1832. It was followed in 1835 by New Orleans, Louisiana, which has the oldest

continuously operating street railway system in the world, according to the American Society of Mechanical Engineers.

The first electric street tramway in Britain, the Blackpool Tramway, was opened on 29 September 1885 using conduit collection along Blackpool Promenade. Since the closure of the Glasgow Corporation Tramways 1962, this has been the only first-generation operational tramway in the UK.

Task 19. Write down all the numerals and dates from the text by words.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Task 20. Find English equivalents in the text.

1. южный Уэльс _____
2. запряженная лошадьми _____
3. паровая и электрическая тяга _____
4. начала существование _____
5. постоянный маршрут _____
6. тащить за собой машину (вагон) _____
7. протянуться вдоль _____

Task 21. Complete the sentences from the text.

1. The very first tram was _____ at first, and later moved by _____.
2. The first streetcars were built _____ and also known as _____.
3. Stagecoach lines and omnibus lines were _____, usually using teams of _____ to haul _____.
4. According to the _____ New Orleans, Louisiana have the _____ in the world.
5. Since 1962 the _____ Tramway has been the only _____.

Task 22. Define Tense form of verbs.

1. was passed
2. started
3. were built
4. was followed
5. has
6. has been
7. was opened

Task 23. Make up a few questions on the topic.

Task 24. Write a report on first trams in Irkutsk.

Task 25. Read and translate the statements, then point out advantages and disadvantages of using trams.

Pros and cons of tram systems.

1	Unlike buses, trams give off no exhaust emissions at point of use. Compared to motorbuses the noise of trams is generally perceived to be less disturbing. However, the use of solid axles with wheels fixed to them produces a characteristic loud, high frequency noise often referred to as a "squeal."	
2	Trams can cause speed reduction for other transport modes (buses, cars) when stops in the middle of the road do not have pedestrian refuges, as in such configurations other traffic cannot pass whilst passengers alight or board the tram.	
3	The trams' stops in the street are easily accessible	
4	They can use overhead wire set to be shared with trolleybuses (a three wire system).	
5	Tram infrastructure occupies urban space at ground-level, sometimes to the exclusion of other users, including cars.	
6	The opening of new tram and light rail systems has sometimes been accompanied by a marked increase in car accidents, as a result of drivers' unfamiliarity with the physics and geometry of trams.	
7	Trams can adapt to the number of passengers by adding more cars during rush hour (and removing them during off-peak hours). No additional driver is then required for the trip in comparison to buses.	
8	The capital cost is higher than for buses, even if a tramcar usually has a much higher lifetime than a bus.	
9	Trams can run on renewable electricity without the need for very expensive and short life batteries.	
10	In the event of a breakdown or accident, or even road works and maintenance, a whole section of the tram network can be blocked.	
11	Passenger comfort is normally superior to buses because of controlled acceleration and braking and curve easement. Rail transport such as used by trams provides a smoother ride than road use by buses.	
12	Because the tracks are visible, it is easy for potential riders to know where the routes are.	
13	Light rail vehicles are often heavier per passenger carried than heavy rail and monorail cars, as they are designed with higher durability (which means more mass) to survive collisions, since they cannot swerve to avoid oncoming objects in emergencies.	

Практическая работа 3. «Инструменты и меры безопасности при проведении ремонтных работ на автомобильном транспорте». Tools and safety measures during repair work on road transport.

Цель: изучить лексику по теме «Инструменты и меры безопасности при проведении ремонтных работ на автомобильном транспорте», повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

1. Изучите лексический материал по теме:

TOOLS AND MEASURES OF SAFETY IN REPAIRING OF AUTOMOBILES

Task 1. Read and translate the following text into Russian. Try to remember as much as you can.

Safety rules

- Don't smoke while you're working on your car — for obvious reasons!
- Never work on your vehicle unless the *parking brake* is on, the *gearshift* is in Park or Neutral, and the engine is shut off.
- Be sure that the parts of the engine you're working on are cool so that you don't get burned. If you're doing a job that calls for a warm engine, be very careful.
- Never jack a vehicle up unless the wheels are blocked.
- Use insulated tools for electrical work.
- Before using a wrench or *ratchet* on a part that's "stuck". *Pull on wrenches rather than push them whenever possible.*
- Take off your tie, scarf, rings, long necklaces, and other jewelry. If they get caught on parts, they — and you — can be damaged.
- Tie back long hair. If your hair accidentally gets caught in a moving fan or belt, you can literally be scalped.
- If you're working with toxic chemicals, such as *coolant*, cleaners, and the like, keep them away from your mouth and eyes. Wash your hands thoroughly after using them, and either store toxic chemicals safely away from pets and children.

- Know that gasoline is extremely dangerous. Not only because it is toxic and flammable, but the vapor in an *empty* can is explosive enough to take out a city block. If you must keep a small amount of gasoline on hand for a chain saw, always store it in a ventilated gasoline can designed specifically for that purpose.
- Work in a well-ventilated area to avoid breathing in carbon monoxide if you have to run the engine, or breathing in toxic fumes from chemicals and gasoline. If possible, work outdoors. If you must work in your garage, be sure to keep the garage door open and move the vehicle as close to the door as possible.
- Use a work light in dark areas.
- Keep a fire extinguisher handy.

Learn the following words by heart:

work on the car – работать с авто

obvious reason – очевидная причина

parking brake – ручной тормоз

gearshift is in Park or Neutral – передача выключена или в нейтральном положении

the engine is shut off – двигатель выключен

to get burned – обжечься

jack – домкрат

to jack a vehicle up – поднять авто на домкрат

insulated tools – инструменты с надежной изоляцией

wrench – гаечный ключ

ratchet – трещотка

parts that are “stuck” – прикипевшие детали

pull on – тянуть

push – толкать

necklace – ожерелье

jewelry – украшения

damage – повреждение

to get caught – попадать, застревать

fan – вентилятор

belt – ремень

coolant – антифриз

cleaner – стеклоочиститель

thoroughly – тщательно

store – хранить

dangerous – опасный

toxic – ядовитый

flammable – огнеопасный, легковоспламеняющийся

can – канистра

vapour – пар

empty – пустой

explosive – взрывчатый

purpose – цель

to avoid – избегать

breath in – вдыхать

carbon monoxide – угарный газ

fume – дым

fire extinguisher – огнетушитель

Task 2. Answer the following questions:

1. Why mustn't you smoke while you are working on your car?
2. Why should the parts of the engine you are working on be cool?
3. What should you take off when working on your car? Why?
4. What toxic chemicals do you know? What are the safety precautions when working with them?

5. Why is gasoline dangerous?
6. What should we do in order not to breath in carbon monoxide when repairing you car?

Task 3. Cross the word that doesn't belong to the group.

1. ring, tie, necklace, earring;
2. ratchet, spanner, wrench, wheel;
3. van, omnibus, plane, lorry
4. coolant, cleaner, soap, thinner
5. jack, engine, air filter, battery

Task 4. Translate into English:

Двигатель выключен, прикипевшие детали, антифриз, хранить, работать с авто, очевидная причина, поднять авто на домкрат, гаечный ключ, толкать, повреждать, вентилятор, ремень, стеклоочиститель, передача на нейтральном положении, канистра, избегать, угарный газ, огнетушитель, легковоспламеняющийся, ядовитый, домкрат.

Task 5. Find the equivalents to the verbs in the left column

to avoid	блокировать
to understand	использовать
to be burned	избегать
to jack up	вдыхать
to block	хранить
to use	тянуть
to pull on	понимать
to push	обжечься
to keep away from	поднимать на домкрат
to store	толкать
to breath in	беречь от

Task 6. Compose your own sentences using the words given in the ex. 5

Task 7. Complete the following sentences:

1. Never jack a vehicle up until the wheels are...
2. If you must keep a small amount of gasoline on hand, always store it in...
3. If you are working with toxic chemicals, such as ..., keep them away from your mouth and eyes.
4. Use ... for electrical work.
5. Never work on your vehicle unless...

Task 8. Translate the following sentences into English:

1. Заблокируй, пожалуйста, колеса.
2. Если вам приходится работать с прогретым двигателем, будьте осторожны!
3. Вы можете обжечься.
4. Поставь машину на ручной тормоз.
5. Не курите, когда работаете с машиной.
6. Это инструменты с надежной изоляцией?
7. Бензин очень опасен.
8. Работайте в хорошо вентилируемых помещениях, чтобы избежать вдыхания угарного газа.
9. Если вам приходится работать в гараже, откройте дверь.
10. Некоторые канистры предназначены специально для хранения бензина.

Цель: изучить лексику по теме «Оборудование при охране труда на транспорте», повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

1. Изучите лексический материал по теме:

Concept of transport safety

The following terminology is used to assess transport risks, hazards and emergencies.

Road accident - A road accident that results in the loss of life, serious bodily injury, damage to vehicles and equipment, or environmental damage.

Road catastrophe are major accidents that cause numerous fatalities.

The following concepts of transport security are distinguished:

– transport security: the state of protection of transport infrastructure facilities and vehicles from acts of illegal interference (activities), is an integral part of national security.

– threat to transport security: a set of conditions and factors that threaten the vital interests of individuals, society, and the state in the field of transport. level of security: the degree of protection of the transport complex in accordance with the threats of illegal acts of interference.

– transport security zone: the object of transport infrastructure, its part (ground, underground, air, surface), the vehicle, on its part entry in accordance with the requirements of transport security, i.e. the passage of individuals (vehicles) and cargo, luggage, bags, to the movement of personal belongings or animals is a special regime.

– compliance with transport safety: this is the implementation of the established requirements of individuals in transport infrastructure facilities or vehicles.

– ensuring transport security: this is the implementation of legal, economic, organizational, and other measures consistent with the threat of acts of illegal interference by the state. The basic principles of road safety should be the following:

– continuity;

– observance of the balance of interests of an individual, society and the state;

– mutual responsibility of an individual, society and the state in the field of transport safety;

– Interaction of the subjects of transport infrastructure, state authorities, local authorities in the field of transport safety; inter-business cooperation in the field of transport security;

– integration with international safety systems;

– improvement of national standards systems in the area of transport safety;

– regulations, administrative and criminal liability for non-compliance with norms, rules and established by law, national standards and other normative legal acts in the field of transport security.

Among the measures taken by the state to ensure road safety are the following:

– a system of legal, economic, organizational, and other measures in the field of transport;

– systems of design, technical and technological solutions of a set of elements of the production environment and production processes of the transport complex;

– systems of work organization and preventive measures on labor protection, corresponding to threats of committing illegal actions in the sphere of transport. Requirements for technical means of transport security include:

- alarm systems and means;
- means of access control, search, inspection (detection, detection, recognition of objects and substances prohibited or restricted to move into the security zone of transport);
- video surveillance, audio, and video recording;
- communication, notification, collection, processing, transmission, and protection of information;
- means and systems of detection (detection and identification of potentially dangerous people).

Technical means of transport safety must be used to carry out technological processes stipulated by regulatory documents; Parameters of technological processes and elements of the production environment must be maintained at the level specified in regulatory documents. This work is carried out by means of timely scheduled and notified maintenance and repair. Technical means of ensuring road safety must be used in accordance with the following:

- according to health and safety standards, taking into account the control of the impact of means and systems of transport security on the personnel of transport security forces;
- by operational requirements and conditions. Technical means of transport safety must be certified in accordance with current national legislation. Depending on the threat level and taking into account the model characteristics of the intruder, requirements for the certification of technical means of transport security for each category of transport infrastructure object or vehicle must be defined. The functional properties, technical characteristics and composition of technical means of transport safety must comply with the category of transport infrastructure and/or vehicle, the level of threat to transport safety, the model of the offender must be taken into account and provide the ability to implement a road safety plan.

The list of road safety requirements should be divided as follows:

- a) by type of transport;
- b) for transport infrastructure facilities by types of transport at the stage of design and construction;
- c) for objects (buildings, structures, constructions), defined by the legislation on transport security, taking into account the level of security and belonging to the land adjacent to the objects of transport infrastructure in accordance with the current land legislation of Chile, not to the objects of transport infrastructure;
- d) according to the applicable national legislation or on the modes of transport for individuals going to or staying in the transport security zone. Signs of potential danger to people and signs of an act of illegal interference must be specified in the results of a sensitivity assessment of a transport infrastructure facility and/or vehicle. The road safety plan must include measures, forces, means, systems, methods, techniques, and rules to identify, detect and recognize signs of potential danger to people and illegal interference. The requirements for the protection of transport infrastructure against acts of illegal interference are as follows.
 - 1) in order to protect transport infrastructure facilities and vehicles, in accordance with current legislation, transport security units must have the right to receive, store and carry special vehicles and firearms.
 - 2) categories of employees of transport security units, who are entrusted with responsibilities for the protection of transport infrastructure facilities and vehicles against acts of illegal interference and who have the right to receive, store and carry special vehicles and firearms, are determined in accordance with the transport security plan.
 - 3) employees of transport security units, who have the right to receive, store and carry special means and firearms, in the performance of their official duties undergo periodic professional training and a medical examination in accordance with current legislation.
 - 4) the list of special means, forms, types, and models of service firearms, cartridges for them, as well as their provision with means of transport security are determined in accordance with the current legislation.
 - 5) Rules for the acquisition, storage, accounting, repair, and destruction of special means must be defined in accordance with the current national legislation.
 - 6) employees of transport security units, who have the right to receive, keep and carry special means and firearms, must undergo state fingerprint registration in compliance with the current legislation when performing their official duties.

Answer the questions:

1. What constitutes a road accident according to the provided text, and what are its potential consequences?
2. Define a road catastrophe as described in the text. How does it differ from a standard road accident?
3. Explain the concept of transport security as outlined in the text. How is it related to national security?
4. What factors contribute to the threat to transport security, and how is the level of security determined?
5. Describe the concept of a transport security zone. What measures are taken within this zone to ensure safety?
6. What does compliance with transport safety entail according to the text? How is it implemented in practice?
7. How does the text suggest ensuring transport security? What measures are recommended at the legal, economic, and organizational levels?
8. Discuss the basic principles of road safety highlighted in the text. How do they contribute to overall safety in transportation?
9. Enumerate the measures taken by the state to ensure road safety, as mentioned in the text. How do these measures address potential risks and hazards?
10. What are the requirements for technical means of transport security according to the text? How should these means be utilized to maximize safety?
11. Explain the process of certification for technical means of transport security as outlined in the text. Why is it necessary?
12. How should the list of road safety requirements be categorized according to the text? Provide examples for each category.
13. What measures are included in a road safety plan, as suggested by the text? How do these measures help in identifying and addressing potential dangers?
14. Describe the requirements for the protection of transport infrastructure against acts of illegal interference according to the text. What measures should be taken to ensure security?
15. What are the responsibilities and qualifications of employees of transport security units, as outlined in the text? How are they regulated by national legislation?

Практическая работа 5. «Инструкции и руководства при использовании приборов технического оборудования автомобиля». Instructions and manuals for the use of vehicle technical equipment devices.

Цель: изучить лексику по теме «Инструкции и руководства при использовании приборов технического оборудования автомобиля», повторить грамматический материал.

Содержание работы: тексты для чтения по данной теме, упражнения на усвоение и закрепление лексико-грамматического материала.

Задание: прочитать, перевести тексты, выписать и выучить новые лексические единицы, выполнить ряд предложенных упражнений на закрепление лексики и грамматического материала.

1. Изучите лексический материал по теме:

Task 1. Read and translate the following text into Russian. Try to remember as much as you can.

How to Use a Jack Safely

The most obvious reason to jack up a car is to change a tire, but other jobs such as inspecting brakes may also require you to get under the vehicle. (Even if you're skinny enough to squeeze yourself between the pavement and the underside of your car, you still need room to move around and manipulate tools.)

Before you attempt to jack up your vehicle, observe the following safety precautions:

- **Jacks are used only to get a vehicle off the ground. They should *never* be used to hold a vehicle in place.**
- **You must use jack stands when you work underneath your vehicle.** If you don't, you run the risk of serious injury or even death. People have been crushed to death when vehicles that were improperly secured fell on them.
- **Never jack up a vehicle without blocking the wheels to keep it from rolling.** Use bricks, wooden wedges, or metal wheel chocks to block the wheels at the opposite end of the car from the end that is to be raised.

If you find yourself faced with the job of changing a tire and you have nothing with which to block the wheels, park near the curb with the wheels turned in. This may not keep you from getting hurt if the car rolls off the jack.

- **Never change a tire on a freeway or highway.** Not only can you be seriously injured, but you can also fall prey to carjackers. *Don't exit the vehicle*; instead use a cellphone to call road service or an automobile association. If you don't have a cellphone, hang a white rag or a white piece of paper out of the driver's side window and wait for the highway patrol to rescue you.

Even if you hate cellphones, I recommend that you buy one and keep it in the vehicle for emergencies. You can find a very affordable model that just lets you call 911, road service, and those you'd want to notify in an emergency. It could save your life.

- **Always park a vehicle on level ground before you jack it up.** If you get a flat tire on a hill and, park close to the curb, turn the wheels toward the curb, and block the downside wheels securely to prevent the car from rolling.

These precautions won't eliminate the risk of changing a tire on an incline. If you can't get to level ground or wait for assistance, you change the tire at your own risk.

- **Be sure that your gearshift is in Park (or in First if you have a *manual transmission*) and that the parking brake is on before you jack up the vehicle.** The only time you don't need the parking brake on is when you have to be able to rotate a *rear* wheel or remove rear *brake drums* to inspect the brakes. In such a case, make sure that the front wheels are blocked *securely*.

If you remove a wheel and begin to work without making sure that you jacked up the car and blocked it securely, the vehicle can do a lot of damage to itself — and to you — if it falls.

Task 2. Learn the following words and word combinations by heart:

to change a tire – сменить шину

inspect brakes – осматривать тормоза

to get under the vehicle – забраться под машину

squeeze – втиснуться

manipulate tools – обращаться с инструментами

safety precautions – меры предосторожности

to get the vehicle off the ground – поднять машину

to hold the vehicle in place – удерживать машину

jack stands – колодки

to run the risk – рисковать

injury – ранение

secure – закреплять

to block the wheels – заблокировать колеса

brick – кирпич

wooden wedges – деревянные клинья

metal wheel chocks – металлические клинья
curb – бордюр
fall prey to carjackers
road service – дорожная служба
rescue – спасать
highway patrol – дорожный патруль
emergency – чрезвычайная ситуация
level ground – ровная горизонтальная поверхность
eliminate the risk – исключать риск
gearshift – передача
manual transmission – ручная передача
parking brake – ручной тормоз
rear wheel – заднее колесо
brake drums – тормозные (барабаны, бочки, цилиндры)
front wheels – передние колеса

Task 3. Answer the following questions:

1. What is the most obvious reason to jack up the car?
2. What must you use when you work underneath your vehicle?
3. Is it necessary to block the wheels when jacking up vehicle? Why?
4. What can you use to block the wheels?
5. What can you use to block the wheels when you have nothing with you to do that?
6. Why should you never change a tire on a freeway or a highway?
7. What can you do if you don't have the cellphone to ask for help?
8. What should you do if you get a flat tire on a hill?
9. When don't you need the parking brake on?

Task 4. Make the following sentences negative and interrogative.

1. He wants to change a tire.
2. I am going to block the wheels.
3. He suggested that I should buy a new cellphone.
4. They were asked to help with his car.
5. We can park close to the club.

Task 5. Match the following words and word combinations.

to jack up	tools
to change	a jack
to inspect	a rear wheel
to require	between the pavement and underside of the car
to get under	repairs
to squeeze oneself	brakes
to manipulate	a tire
to observe	a vehicle
to use	the car
to block	safety precautions
to rotate	a jack

Task 6. Make up your own sentences using the words and expressions in Task 13.

Task 7. Translate into English:

Металлические клинья, меры предосторожности, забраться под машину, сменить шину, заблокировать колеса, ручной тормоз, заднее колесо, закрепить, чрезвычайная ситуация, заблокировать колеса, исключить риск, спасать, обращаться с инструментами, осматривать тормоза, передние колеса.

Task 8. Translate the words in the brackets into English:

1. Use (кирпичи, деревянные и металлические клинья) to block the wheels at the opposite end of the car from the end that is to be raised.
2. Never (не меняйте шину) on a freeway or highway.
3. Not only you (можете серьезно пострадать), but you can also fall prey to carjackers.
4. Hang a white piece of paper (с водительского окна) and wait for (дорожный патруль) to rescue you.
5. If you can't get (ровную поверхность) or wait for (помощь) you change the tire at your own risk.

Task 9. Translate the following sentences into English:

1. Для того чтобы поменять шину нужно поднять машину на домкрат.
2. Чтобы осмотреть тормоза нужно забраться под машину.
3. Домкраты используются только для поднятия машины.
4. Заблокируйте колеса, чтоб машина не двигалась.
5. Никогда не меняйте шину на шоссе.
6. Если у вас спустила шина на склоне, припаркуйтесь возле бордюра.

Read and translate the following text into Russian.

STEPS TO JACK UP THE VEHICLE

1. If you're going to remove a wheel to change a tire or check your brakes, remove the *wheel cover* or hubcap (if there is one) and loosen the *lug nuts*.

2. Place the jack under the part of the vehicle that it should contact when raised. If you're using jack stands, place them near the jack.

Where you place your jack depends on whether you're planning to do a one-wheel job, such as tire changing or brake checking, or a two-wheel, whole-end repair job. Many vehicles now have special flat spots on the underside specifically for jack placement.

Never place the jack so that the weight of the vehicle rests on something that can bend, break, or give.

3. Lift the vehicle by using the jack. How you accomplish this depends on the type of jack you're using (see Figure 1-1):

- If you have a *scissor* jack, insert the rod or wrench over the knob, and then crank.
- If you have a *hydraulic* jack, place the handle into the appropriate location and pump up and down.

4. Place the jack stands under the vehicle, near where the jack is touching it (see Figure 1-2). Raise the stands until they're high enough to just fit under, and lock them in place. Lower the jack until the vehicle is resting on the jack stands.

Substituting boxes, stones, or bricks for jack stands is very dangerous.

They can slip out or break while you're under the car. A jack can do the same thing, so be sure to buy a pair of jack stands and stow them in the trunk if you're traveling out of reach of help if you get a flat tire.

5. Before you begin to work, wiggle the vehicle a little to make sure that it's resting securely on the jack stands. Then remove the jack.

6. When you're finished working, replace the jack, remove the stands, and lower the vehicle to the ground.

Task 18. Learn the following words by heart:

remove a wheel – снять (поменять) колесо

check the brakes – проверить тормоза

wheel cover – покрышка

hub – ступица

hubcap – диск
lug nut – ушковая гайка
raise – поднимать
place – размещать
depend on – зависеть от
one-wheel job – работа над одним колесом
whole-end repair job – капитальный ремонт
weight – вес
accomplish – выполнять
scissor jack – ромбовый домкрат
rod – брус
knob – рукоятка
crank – вращать
hydraulic jack – гидравлический
handle – рычаг
appropriate location – надлежащее положение
pump – качать, нажимать
touch – касаться
enough – достаточно
lower – опустить
substitute – заменять
slip out – соскользнуть
break – ломать
stow – размещать
trunk – багажник
wiggle – толкать, шатать
to make sure - убедиться
securely – надежно

Changing a tire

jack – домкрат
parking brake – парк. тормоз
tighten- затягивать
hub cap – колесный колпак
lug nut – гайки
spare tire – запасное колесо
loosen – ослабить
lift - поднимать

Task 1. Put these steps for changing a tire in the right order.

- a) Lower the car to the ground fully and remove the jack.
- b) Apply the parking brake and put car into "Park" position.
- c) Tighten the nuts by your hand and the wrench.
- d) Lower the car using the jack.
- e) Place the jack under the frame near the tire that is going to be changed.
- f) Remove the hub cap and loosen the nuts by turning them counterclockwise with a wrench.
- g) Find a flat, stable and safe place to change your tire.
- h) Pump or crank the jack to lift the tire off the ground.
- i) Raise the jack until it lifts and supports the car
- j) Remove the tire and place the flat tire under the vehicle as a safety precaution.
- k) Place the spare tire on the hub properly and put on the lug nuts.
- l) Tighten the nuts as much as possible.
- m) Finish tightening the nuts and replace the hubcap.
- n) Put the old tire in your trunk and take it
- o) Remove the nuts completely.
- p) Place a heavy object such as rock, concrete, spare wheel in front of the front and back tires.

Task 2. Match the words (1-5) with definitions (A-E).

1- Jack

2- Wrench

3- Spare tire

4- Tighten

5- Nut

A- a metal cap used to attach a wheel to a car

B- a car device for raising heavy objects off the ground especially vehicles like cars and trucks

C- to turn something so that it moves closer to another object

D- also known as a spanner, a tool for holding and turning objects

E- an extra tire kept for emergencies

Task 3. Fill in the blanks with the correct words and phrases with the words.

1 John used the to take off the hubcap.

2 to lift the car, the jack.

3 a is made of rubber.

4 the lug nuts before you jack up the car.

5 the tires so the car won't roll.

TEST 1

- | | |
|--|-----------|
| 1) A structure of a vehicle provides a _____ for all necessary vehicle systems.
a) location; b) number; c) purpose; | 1. _____ |
| 2) A motor car includes engine, chassis, and _____.
a) suspension; b) body; c) diesel; | 2. _____ |
| 3) Transmission embraces _____, gearbox, propeller shaft, etc.
a) frame; b) brakes; c) clutch; | 3. _____ |
| 4) _____ systems are wheel steering and brake steering.
a) Main; b) Major; c) Sufficient; | 4. _____ |
| 5) Drive lines include _____ front and rear axles, etc..
a) frame; b) gearbox; c) clutch; | 5. _____ |
| 6) Suspension involves _____, shock absorbers, and linkage.
a) propeller shaft; b) springs; c) capacity; | 6. _____ |
| 7) For the RWD _____, the rear wheels act as the driving wheels.
a) space; b) linkage; c) layout; | 7. _____ |
| 8) In the _____ layout each unit is accessible.
a) RWD; b) FWD; c) 4WD; | 8. _____ |
| 9) Relatively light vehicle systems and components are located in a lightweight _____ construction.
a) sufficient; b) unitary; c) usual; | 9. _____ |
| 10) The frameless arrangement provides a _____ light construction to the motor car.
a) isolated; b) driving; c) stiff; | 10. _____ |
| 11) The power of the engine _____ through the transmission and drive lines.
a) is to be transmitted; b) are to be transmitted;
c) is to transmit; | 11. _____ |
| 12) The main purpose of a motor car _____ comfortable accommodation for occupants
a) is to be provided; b) provided; c) is to provide; | 12. _____ |

TEST 2

- | | |
|---|----------|
| <p>1. An internal combustion (IC) engine is an engine in which ____ of the fuel takes place in a confined space.</p> <p>a) melting b) combustion c) cutting</p> | 1.----- |
| <p>2. The first internal combustion engine ran on _____, but worked on a cycle of operations, which did not include compression of the gas before ignition.</p> <p>a) natural gas b) petrol c) coal gas</p> | 2.----- |
| <p>3. The most significant distinction between modern internal combustion engines and the early designs is the use of ____ .</p> <p>a) pressure b) ignition c) compression</p> | 3.----- |
| <p>4. A reciprocating engine has one or more cylinders in which pistons reciprocate _____.</p> <p>a) up and down b) back and forth c) left and right</p> | 4.----- |
| <p>5. Basic design devids engines into reciprocating and ____ ones.</p> <p>a) royal b) round c) rotary</p> | 5.----- |
| <p>6. Reciprocating engines are classified on the base of position and number of _____.</p> <p>a) pistons b) cylinders c) crankshafts</p> | 6.----- |
| <p>7. A single-cylinder engine has one cylinder and piston connected to the _____.</p> <p>a) crankshaft b) combustion chamber c) rotor</p> | 7.----- |
| <p>8. Opposed- cylinder engine has _____- banks of cylinders opposite to each other on a single crankshaft.</p> <p>a) two b) three c) four</p> | 8.----- |
| <p>9. An opposed-piston engine has _____ pistons in each cylinder with the combustion chamber in the centr between the pistons.</p> <p>a) two b) three c) four</p> | 9.----- |
| <p>10. A rotary engine is made of a large non-concentric rotor with a built-in _____, moving around a stationary block (stator).</p> <p>a) cylinder b) crankshaft c) gearwheel</p> | 10.----- |
| <p>11. The first commercially successful internal combustion engine _____ by a Frenchman, Etienne Lenoir in 1860.</p> <p>a) is created b) was created c) are created</p> | 11.----- |
| <p>12. The combustion chamber _____ in the closed end of each cylinder.</p> <p>a) am located b) are located c) is located</p> | 12.----- |
| <p>13. Power _____ to a rotating output crankshaft by mechanical linkage with the pistons in reciprocating engine.</p> <p>a) am delivered b) is delivered c) are delivered</p> | 13.----- |

to be
Simple Active

Present	Past	Future
(I) am (he, she, it) is (we, you, they) are	was (ед. ч.) were (мн. ч.)	shall be (1-е л.) will be

to have
Simple Active

Present	Past	Future
have (got) has (got)	had	shall have will have

Сводная таблица модальных глаголов и их эквивалентов

	Present	Past	Future
Долженствовани е	I must meet him.		
	I have to meet him.	I had to meet him.	I shall have to meet him.
	I am to meet him.	I was to meet him.	I'll be to meet him.
	I should meet him.		
Способность или возможность совершения действия	He can help you.	He could help you.	
	He is able to help you.	He was able to help you.	He will be able to help you.
Разрешение или возможность	I may use this device.	I might use this device	
	I am allowed to use the device.	I was allowed to use the device.	I shall be allowed to use the device.

Simple Active Tenses

Форма	Present Simple	Past Simple	Future Simple
Утвердительная	My friends study French. He speaks English.	My friends studied French at school. He spoke English at the conference.	My friends will study French at the Institute. The teacher will speak about our English exam.
Вопросительная	Do your friends study French? Does he speak English?	Did your friends study French at school? Did he speak English at the conference?	Will your friends study French at the Institute? Will the teacher speak about our English exam?
Отрицательная	My friends don't study French. He doesn't speak English.	My friends did not study French. He didn't speak English at the conference.	My friends won't study French at the Institute. The teacher won't speak about our English exam.

Progressive Active Tenses

Форма	Present Progressive	Past Progressive	Future Progressive
Утвердительно ая	The are having an English class. He is still writing an exercise.	They were having an English class when I came to see them. He was writing an exercise from 6 till 8 o'clock.	They will be having an English class tomorrow at 9 o'clock. He will be writing an exercise from 6 till 8 o'clock tomorrow.
Вопросительн ая	Are they having an English class? Is he still writing an exercise?	Were they having an English class when I came to see them? Was he writing an exercise from 6 till 8 o'clock.	Will they be having an English class tomorrow at 9 o'clock? Will he be writing an exercise from 6 till 8 o'clock tomorrow?

Отрицательная	They aren't having an English class, they are having a Russian class. He isn't writing an exercise, he is reading a book.	They weren't having an English class when I came to see them, they were having a Russian class . He wasn't writing an exercise from 6 till 8 o'clock, he was reading a book.	They will not be having an English class tomorrow at 9 o'clock, they will be having a Russian class. He won't be writing an exercise from 6 till 8 o'clock tomorrow, he'll be reading a book.
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Perfect Active Tenses

Форма	Present Perfect	Past Perfect	Future Perfect
Утвердительная	I have sent the letter.	I had already sent the letter by 6 o'clock yesterday.	I shall have sent the letter by tomorrow evening.
Вопросительная	Have you sent the letter?	Had you sent the letter by 6 o'clock yesterday?	Will you have sent the letter by tomorrow evening?
Отрицательная	I have not sent the letter yet.	I had not sent the letter by 6 o'clock yesterday.	I shall not have sent the letter by tomorrow evening.

Simple, Progressive, Perfect Tenses in Passive Voice

	Simple to be + Participle II	Progressive to be + being + Participle II	Perfect to have + been + Participle II
Present	The letter is translated	The letter is being translated	The letter has been translated
	Is the letter translated?	Is the letter being translated?	Has the letter been translated?
	The letter isn't translated	The letter isn't being translated	The letter hasn't been translated.
Past	The letter was translated	The letter was being translated	The letter had been translated
	Was the letter translated?	Was the letter being translated?	Had the letter been translated?

	The letter wasn't translated.	The letter wasn't being translated	The letter hadn't been translated?
Future	The letter will be translated Will the letter be translated? The letter won't be translated	Не употребляются.	The letter will have been Will the letter have been translated? The letter won't have been translated.

Структура специальных вопросов

Вопросительные слова	Вспомогательный глагол	Подлежащее и определение к нему	Смысловой глагол в форме инфинитива	Другие члены предложения
What Where When	do did will	you he your sister	do go return	in the evening? yesterday? home?

Таблица производных слов от some, any, no, every

Местоимения	+ thing	+body, one	+where	Употребление
some некоторый какой-то какой-нибудь несколько	something <i>что-то, что-нибудь</i>	somebody someone <i>кто-то</i> <i>кто-нибудь</i>	somewhere <i>где-то, куда-то, где-нибудь, куда-нибудь</i>	в утверд. . предл.
any 1) <i>всякий любой</i> 2) <i>какой-нибудь</i>	anything 1) <i>всё</i> 2) <i>что-то</i> 3) <i>что-нибудь</i>	anybody anyone 1) <i>всякий, 2) кто-то, кто-нибудь</i>	anywhere 1) <i>езде,</i> 2) <i>где-нибудь, куда-нибудь</i>	1) в утверд. 2) в вопросит, предл.
no, not any <i>никакой + не</i>	nothing (not anything) <i>ничто + не ничего</i>	nobody (not anybody), no one <i>никто + не</i>	nowhere not anywhere <i>нигде, нигде + не</i>	в отрицат. предл.
every <i>всякий, каждый</i>	everything <i>всё</i>	everybody everyone <i>все</i>	everywhere <i>езде, повсюду</i>	в утверд., вопросит, и отрицат. предл.

Словообразовательные аффиксы

<p>Существительные</p> <ul style="list-style-type: none"> - ion / - sion /-tion - er / -or -ing -ment -ty / -ity -ance / -ence -ness -ure / -ture 	<ul style="list-style-type: none"> - discussion, transmission, combination - writer, inspector - opening - development - activity - importance, difference - darkness - mixture
<p>Прилагательные</p> <ul style="list-style-type: none"> -ic -ive -able / -ible -ant / -ent -ous -al -ful -less -un / -in / -ir / -il / -im 	<ul style="list-style-type: none"> - democratic - progressive - valuable, accessible -resistant, different - dangerous - central - hopeful - hopeless - uncomfortable, indirect, irregular, illogical, impossible
<p>Глагол</p> <ul style="list-style-type: none"> -ize re- 	<ul style="list-style-type: none"> - to characterize - to rewrite

Irregular verbs.

<i>Infinitive</i>	<i>Past</i>	<i>Participle II</i>	<i>Translation</i>
arise	arose	arisen	возникать
awake	awoke	awaked	будить, проснуться
be	was, were	been	быть
bear	bore	born	носить, родить
beat	beat	beaten	бить
become	became	become	стать
begin	began	begun	начать
bend	bent	bent	согнуться
bind	bound	bound	связать
bite	bit	bitten	кусать
blow	blew	blown	дуть
break	broke	broken	ломать
bring	brought	brought	приносить
build	built	built	строить
burst	burst	burst	разразиться, взорваться
buy	bought	bought	покупать
catch	caught	caught	ловить, поймать
choose	chose	chosen	выбирать
cut	cut	cut	резать
deal	dealt	dealt	иметь дело
dream	dreamt	dreamt	мечтать
do	did	done	делать
draw	drew	drawn	тащить, рисовать
drink	drank	drunk	пить
drive	drove	driven	ехать
eat	ate	eaten	есть, кушать
hear	heard	heard	слушать
hit	hit	hit	ударить, попасть
hold	held	held	держать
hurt	hurt	hurt	причинять боль
know	knew	known	знать
keep	kept	kept	держать
lay	laid	laid	класть, положить
lead	laid	laid	вести
leap	leapt/leaped	leapt/leaped	прыгать
leave	left	left	оставлять
lend	lent	lent	одолжить
let	let	let	пустить, дать
lie	lay	lain	лежать
lose	lost	lost	терять
make	made	made	делать
meet	met	met	встречать
pay	paid	paid	платить
put	put	put	класть
read	read	read	читать
ride	rode	ridden	ездить верхом
ring	rang	rung	звонить
rise	rose	risen	поднимать
run	ran	run	бежать

say	said	said	говорить, сказать
see	saw	seen	видеть
sell	sold	sold	продавать
send	sent	sent	послать
set	set	set	устанавливать
shake	shook	shaken	трясти
shine	shone	shone	светить, сиять
shoot	shot	shot	стрелять
show	showed	shown/showed	показывать
sing	sang	sung	петь
sink	sank	sunk	опускаться
sit	sat	sat	сидеть
sleep	slept	slept	спать
slide	slid	slid	скользить
speak	spoke	spoken	говорить
spend	spent	spent	тратить
steal	stole	stolen	украсть
stick	stuck	stuck	втолкнуть
strike	struck	struck/stricken	ударять, бастовать
swear	swore	sworn	клясться
swim	swam	swum	плавать
take	took	taken	брать
teach	taught	taught	учить
tell	told	told	говорить
think	thought	thought	думать
throw	threw	thrown	бросить
wake	woke	woken	просыпаться, будить
wear	wore	worn	носить
weep	wept	wept	плакать
win	won	won	выигрывать
wind	wound	wound	заводить
write	wrote	written	писать

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