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«СЕВЕРО-КАВКАЗСКИЙ ФЕДЕРАЛЬНЫЙ УНИВЕРСИТЕТ» (СКФУ)
ПЯТИГОРСКИЙ ИНСТИТУТ (ФИЛИАЛ) СКФУ
Колледж Пятигорского института (филиал) СКФУ

Методические указания

по выполнению практических работ
по дисциплине «**ИНОСТРАННЫЙ ЯЗЫК В ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ**»
для студентов направления подготовки/специальности
09.02.07 ИНФОРМАЦИОННЫЕ СИСТЕМЫ И ПРОГРАММИРОВАНИЕ

Пятигорск 2022

Методические указания для практических работ по дисциплине «*Иностранный язык в профессиональной деятельности*» составлены в соответствии с требованиями ФГОС СПО. Предназначены для студентов, обучающихся по специальности 09.02.07 Информационные системы и программирование.

Пояснительная записка

Настоящие указания предназначены для учащихся колледжа по специальности среднего профессионального образования 09.02.07 Информационные системы и программирование. Дисциплина входит в общий гуманитарный и социально – экономический цикл профессиональной подготовки.

В результате освоения учебной дисциплины обучающийся должен **уметь:**

общаться (устно и письменно) на иностранном языке на профессиональные и повседневные темы;
переводить (со словарем) иностранные тексты профессиональной направленности;
самостоятельно совершенствовать устную и письменную речь, пополнять словарный запас;
В результате освоения учебной дисциплины обучающийся должен **знать:**

лексический (1200-1400 лексических единиц) и грамматический минимум, необходимый для чтения и перевода (со словарем) иностранных текстов профессиональной направленности

Раздел. 1. Путешествие по Англии

Тема.1.1 Путешествие по Англии

Практическое занятие 1.

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочтите и переведите текст:

Travelling across England

England, undoubtedly, is the country, to visit in which there is a wish to the majority of tourists. It attracts them with a certain closeness from the outside world, difference from the others, not island, the states. Even the name "Foggy Albion" already gives any riddle. England

London really is the center of England, her heart and the center of people. Tourists, making systematic research of Britain, first of all pay attention to London. In it there is a majority of English sights known to the world, such as the Tower, Big Ben, Westminster abbey, the British museum, the Trafalgar Square. And the Queen, and her monarchical family it is possible to write down safely in sight of England and London.

Birmingham in which the population makes about one million people goes the following in the list of the large cities. In Birmingham it is necessary to visit a cathedral, the museum, art gallery, the Town hall. Also the local Botanical garden, the center of sea living creatures, the bird's reserve and a zoo enjoys popularity at tourists.

Cambridge and Oxford as the youth from all over the world gathers here in hope are familiar to much to arrive in prestigious college. Manchester is certainly familiar to admirers of soccer and local teams "Manchester United" and "Manchester City". Legendary Cambridge

I. Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с текстом, и выучите их:

undoubtedly, to the majority of tourists, pay attention to, her monarchical family, the center of sea living creatures, two picturesque lake islands, the oldest topiarny garden in the world, the most grandiose residence, Queen Elizabeth's board of I.

Практическое занятие 2.

II. С помощью словаря переведите следующие словосочетания и составьте с ними собственные предложения, не прибегая к помощи текста:

with a certain closeness, her heart and the center of people, to enjoy architectural perfection, to the majority of tourists, to arrive in prestigious, the bird's reserve and a zoo enjoys popularity at tourists.

III. Догадайтесь о значении данных слов и выражений, обращая внимание на фонетическое и графическое сходство:

to visit, tourists, the center of England, systematic, her monarchical family, the British museum, the museum, art gallery, the most grandiose residence, the well-known York cathedral.

VI. Прочтите первый, второй и третий абзацы и выпишите все глаголы с предлогами, обозначающими движение, время действия, место действия.

V. Прочтите первый, второй и третий абзацы и найдите 2-3 существительных и прилагательных, имеющих приблизительно одинаковое значение и выпишите их.

VI.Выберите из приведенных предложений те, которые содержат:

Present Perfect, Present Simple Passive, Past Simple Passive, Past Simple.

Is, attracts, will be, issued, was based, is located, should be noted

Тема 1.2. Лондон. Интересные места Лондона.

Практическое занятие 3

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Прочтите и переведите текст:

LONDON

London is the capital of Great Britain, its political, economic and commercial centre. It is one of the largest cities in the world and the largest city in Europe. Its population is about 8 million.

London is situated on the river Thames. The city is very old. It has more than 20 centuries old history. Traditionally it is divided into several parts, the City, Westminster, the West End and the East End. They are very different from each other.

The City is the oldest part of London, its financial and business centre. Numerous banks, offices and firms are concentrated here. Few people live in the City but over a million come to work here. There are two places of interest in the City: St. Paul’s Cathedral and the Tower of London. St. Paul’s Cathedral was built in the 17th century by the architect Christopher Wren. The Tower of London was built in the 15th century. It was used as a fortress, a palace and a prison. Now it’s a museum.

Westminster is the aristocratic official part of London. There are Buckingham Palace where

the Queen lives and the Houses of Parliament along the north bank of the Thames.
The clock tower of the Houses of Parliament is famous for its big hour bell known as «Big Ben». Westminster Abbey is the place where the coronation of nearly all kings and queens has taken place. Many of them are buried here as well as some other famous people of the country.
The West End is the richest and most beautiful part of London. The best hotels, restaurants, shops, clubs, parks and houses are situated there. There are many tourists there from different countries of the world.
Trafalgar Square is the geographical centre of London, it was named in the memory of Admiral Nelson's victory in the battle of Trafalgar in 1805. The tall Nelson's Column stands in the middle of the square.
The East End is an industrial district of London. There are many factories there. It is densely populated by working class families.
Answer the questions:
What is the capital of Great Britain?
Is London a big city?
What is London's population?
On what river does London stand?
Into what parts is London divided?
Why is the City called the business centre of London?
What places of interest does Westminster include?
Who was buried in Westminster Abbey?
What is the West End famous for?
Why is the central square in London named Trafalgar Square?

Практическое занятие 4

Переведите на английский язык, употребляя глагол to be в Present или Past Simple:

1. Я ученик. 2. Он летчик. 3. Она доктор. 4. Мы школьники. 5. Вы рабочие.

6. Ты рабочий.7. Они ученики. 8. Я дома. 9. Он в школе. 10. Она в кино? 11. Мы в парке. 12. Они в театре? 13.Она молодая? 14. Он старый. 15. Она не старая. 16. Они сильные. 17. Она больна. 18. Вы больны? 19. Он болен? 20. Я не болен. 21. Я был болен вчера. 22. Она не была больна. 23. Мы были в кино. 24. Они не были в кино. 25. Они не в школе. 26. Они дома.

27. Вы были в парке вчера? 28. Он был в школе вчера? 29. Он был рабочим. 30. Она была учительницей.

№ 2

Вставьте глагол to be в Present, Past или Future Simple:

1, My father ... a teacher. 2. He ... a pupil twenty years ago. 3.... a doctor when I grow up. 4. My sister ... not ... at home tomorrow. 5. She ... at school tomorrow.

6. ... you ... at home tomorrow? 7,... your father at work yesterday? 8. My sister ... ill last week. 9. She ... not ill now. 10. Yesterday we... at the theatre. 11. Where ... your mother now? — She ... in the kitchen. 12. Where ... you yesterday? — I ... at the cinema. 13. When I come home tomorrow, all my family ... at home.

14. ... your little sister in bed now? — Yes, she ... 15. ... you... at school tomorrow?

— Yes I ... . 16. When my granny... young, she ... an actress.

17. My friend K ,,. in Moscow now.

18. He ... in St. Petersburg tomorrow. 19. Where ... your books now? -- They ... in my bag.

Тема 1.3 Достопримечательности страны.

Практическое занятие 5

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины.

Прочтите и переведите текст:

The United Kingdom of Great Britain and Northern Ireland is the official name of the state that is geographically situated on the British Isles. People of this country are sometimes confused about its name. On official occasions they call it the United Kingdom and in everyday speech it is shortened to the UK. In speaking or writing, where it is not particularly formal or informal, they use Britain.

To avoid this confusion of the terms The United Kingdom, Great Britain and England, we should bear in mind the following: Great Britain is the geographical name of the largest island in the British Isles which comprises England, Wales and Scotland.

The island of Ireland is mainly occupied by the Irish Republic (or Eire) and the remaining part of the island is occupied by Northern Ireland. Great Britain and Northern Ireland form the UK.

The UK is situated off the north-western coast of Europe between the Atlantic Ocean and the North Sea. It is separated from the continent by the English and the Strait of Dover. Channel The UK is also washed by the Irish Sea, the St George's Channel and the North Channel. Surrouding the British Isles by the water has been an important protection against the invaders throughout the English history. The UK consists of four parts and every part has its national emblem: England – the red rose, Scotland – the thistle, Wales – the daffodil

and the leek, Northern Ireland – the shamrock. The capitals of four parts are London, Edinburgh, Cardiff and Belfast. The Island of Great Britain can be divided into two main regions: Lowland Britain and Highland Britain. Lowlands comprise southern and eastern England. Highlands include Scotland, Wales, the pennines, the Lake District and the southern peninsula of Britain. Many rivers are flowing through Great Britain, such as the longest Severn with its tributaries, the swiftest Spey, the busiest Thames. All parts of Great Britain are worth seeing. The population of the UK is over 60 million people. The official language is English, but some people continue speaking their mother tongue: Scottish in Western Scotland, Welsh in northern and central Wales, and Irish in Northern Ireland. The flag of the UK is made up of three crosses of the patron saints: the upright red against a white background – St George of England, the white diagonal against a blue background – St Andrew of Scotland, the red diagonal against a white background – St Patrick of Northern Ireland. The English people have the habit of naming their national flag "the Union Jack".

The UK is a constitutional monarchy. The Head of the state is the Queen two reigns with the support of Parliament.

For a long time the UK has succeeded in remaining one of the important commercial centres of the world. Nowadays the UK doesn't depend upon economics and undustrial manufacturing of other countries.

VII. Find in the text English equivalents for these words and the word combinations:

Расположено в стороне от, отделяется от континента, важная защита против, на протяжении всей истории, южный полуостров, протекают через (по), самая оживлённая, родной язык, белый фон.

Тема 2.1. Заказ места в гостинице.

Практическое занятие 6

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочтите и переведите диалог:

At the hotel.

Receptionist: Good evening, gentlemen. What can I do for you?

M.: I have booked accommodation for Mr. Martin from the tenth of May.

R.: Just a moment, sir. I'll check the reservation. Will you spell the name, please?

M.: O.K. M-a-r-t-i-n.

R.: Right. We can give Mr. Martin a nice single room with private bath on the 3rd floor. Fill in this check-in card, please: full name, address, nationality, occupation, date and place of birth.

Martin: What is the number of the room?

R.: 315. The porter will help you with the luggage and take you to your room. Here's the key to your room.

Martin: Thank you very much.

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

date and place of birth, the porter, the luggage, take you to your room, a key.

1. What can I do for you? – Чем я могу быть полезен?
2. to book accommodation – заказывать жильё;
3. Just a moment – минуточку;
4. I'll check the reservation. – Я проверю заказ;
5. to spell the name – назвать фамилию по буквам;
6.a single room – одноместный номер; check-in card – регистрационный бланк;

Какие из этих предложений могут быть сказаны администра-тором:

1. What can I do for you?
2. We can give Mr. Martin a nice single room with private bath on the 3rd floor.
3. The porter will help you with the luggage and take you to your room.
4. Fill in this check-in card, please: full name, address, nationality, occupation, date and place of birth.
5. Here's the key to your room.

Выучить диалог «At the hotel» наизусть.

Тема 2.2. Покупка билета на самолет

Практическое занятие 7

Образовательная цель: добиться прочного усвоения знаний по теме.

Развивающая цель: научить анализировать, правильно употреблять термины.

Прочтите и переведите диалог:

Buying a plane ticket.

Ticket clerk: Next please. Hello. How can I help you?

Larry: I'd like to buy a ticket to London.

Ticket clerk: Would you like one way or round trip?

Larry: Round trip.

Ticket clerk: When will you be leaving?

Larry: When does the next plane leave?

Ticket clerk: In about two hours.

Larry: I'd like a ticket for that flight please.

Ticket clerk: First class or coach?

Larry: Coach.

Ticket clerk: OK, let me check availability. I am sorry. Tickets for that flight are sold out.

Larry: How about the one after that?

Ticket clerk: Let me see. Yes, that one still has seats available. Would you like to reserve a seat for you?

Larry: Yes, please.

Ticket clerk: That'll be 120 dollars.

Larry: OK.

Ticket clerk: Thank you, here's your change.

1. Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с текстом, и выучите их:

United Kingdom, an island, to surround, surrounding, thistle, daffodil, leek, shamrock, a peninsula, to flow, a tributary, to be worth, a patron saint, a background, to succeed in, to depend upon, to manufacture.

Практическое занятие 8

1. С помощью словаря переведите следующие словосочетания и составьте с ними собственные предложения, не прибегая к помощи текста:

To be separated from, to be washed by, to consist of, can be divided into, to be flowing through, to be worth, to be made of, the habit of naming, to depend upon.

2.Обратите внимание на реалии страноведческого и библиографического характера, знание которых способствует пониманию текста:

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

a ticket, to leave, a trip, a flight, a coach, availability, reserve a seat, your change.

1. How can I help you? – Чем я могу Вам помочь?
2. I'd like – мне хотелось бы; a flight - авиарейс;
3. one way or round trip – в один конец или поездка в оба конца;
4. let me check – позвольте мне проверить;
3. to be sold out (to sell out – распродать) – распроданы;

Прочитать диалог и заполнить пропуски, используя слова и словосочетания из диалога «Buying a plane ticket»:

1. The dialogue is between ····· and ····· .
2. Larry would like ····· to London.
3. There is no plane ticket ···· ····.
4. Ticket clerk would like ···· a seat ····.
5. The plane ticket costs ····.

Тема 2.3. Прибытие в страну

Практическое занятие 9

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Переведите и заполните анкету:

Customs Declaration

Full name_____
Citizenship_____
Arriving from_____
Country of destination_____
Purpose of visit_____
(business, tourism, private, ets.)

My luggage (including hand luggage) submitted for Customs inspection consists of_____pieces.

With me and in my luggage I have:
I. Weapons of all descriptions and ammunition
II. Narcotics and appliances for the use thereof
III. Antiques and objects of art (paintings, drawings, icons, sculptures, ets.)
IV. Russian rubles, Russian State Loan bonds, Russian lottery tickets_____
_____
Currency other than Russian rubles (bank notes, exchequer bills, coins), payment voucher (cheques, bills, letters of credit, ets.). Securities (shares, bonds, ets.) in foreign currencies, precious metals (gold, silver, platinum, metals of platinum group) in any form or condition, crude and processed natural precious stones (diamonds, brilliants, rubies, emeralds, sapphires andpearls), jewellery and other articles made of precious metals and precious stones, and scrap thereof, as well as property papers:

Description	Amount / quantity		For official use
	In figures	In wards	
US Dollars			
Pounds Sterling			
French Francs			
Deutschemarks			

Russian rubles, other currency, payment voucher, valuables and any objects belonging to other persons.
I am aware that, in addition to the objects listed in the Customs Declaration, I must submit for inspection: printed matter, manuscripts, films, video and sound recordings, postage stamps, pictorial matter, ets., as well as items not for personal use.
I also declare that my luggage sent separately consists of_____pieces.
(Date)_____200___ Owner of luggage_____
(signed)

Практическое занятие 10

Переведите на английский язык, употребляя глагол to be в Present или Past Simple:

1. Я ученик. 2. Он летчик. 3. Она доктор. 4. Мы школьники. 5. Вы рабочие.

6. Ты рабочий.7. Они ученики. 8. Я дома. 9. Он в школе. 10. Она в кино? 11. Мы в парке. 12. Они в театре? 13.Она молодая? 14. Он старый. 15. Она не старая. 16. Они сильные. 17. Она больна. 18. Вы больны? 19. Он болен? 20. Я не болен. 21. Я был болен вчера. 22. Она не была больна. 23. Мы были в кино. 24. Они не были в кино. 25. Они не в школе. 26. Они дома.

27. Вы были в парке вчера? 28. Он был в школе вчера? 29. Он был рабочим. 30. Она была учительницей.

№ 2

Вставьте глагол to be в Present, Past или Future Simple:

1, My father ... a teacher. 2. He ... a pupil twenty years ago. 3.... a doctor when I grow up. 4. My sister ... not ... at home tomorrow. 5. She ... at school tomorrow.

6. ... you ... at home tomorrow? 7,... your father at work yesterday? 8. My sister ... ill last week. 9. She ... not ill now. 10. Yesterday we... at the theatre. 11. Where ... your mother now? — She ... in the kitchen. 12. Where ... you yesterday? — I ... at the cinema. 13. When I come home tomorrow, all my family ... at home.

14. ... your little sister in bed now? — Yes, she ... 15. ... you... at school tomorrow?

— Yes I ... . 16. When my granny... young, she ... an actress.

17. My friend K ,,. in Moscow now.

18. He ... in St. Petersburg tomorrow. 19. Where ... your books now? -- They ... in my bag.

Тема 2.4. На вокзале. Поездка в автобусе.

Практическое занятие 11

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины.

Прочитайте и выучите диалоги:

At the railway station.

1. ─ Yes, sir.

─ First class return to Glasgow.

─ Day return?

─ No. I’m going for the weekend.

─ A weekend return is J 7.66, sir.

─ Thank you.

─ Thank you, sir.

─ Could you tell me which platform the 13 train leaves from?

─ Yes, platform 5.

─ Thank you.

2. ─ Porter, sir.

─ Yes⋯ would you take this bag to platform 5, please?

— Glasgow train, sir.

— That’s right.

— Very good, sir.

3.— Which platform for Motherwell, please?

— Platform 14, right up and down, underground level.

— When does the next train leave, please?

— 10.30, from Glasgow Central.

— When does it get in?

— You will be in Motherwell at 11.15. It takes roughly about half an hour to get there.

— Do I have to change?

— No you needn’t. It is a short distance.

— How much is the ticket?

— Single or return?

— Both.

— One single costs 20 dollars. The normal return ticket costs double the single fare but.

— You can buy a day return, which is cheaper.

— Thank you very much.

— It’s my pleasure.

4. — When does the London train leave, please?

— At 9.25. Platform 3.

— What time does it reach London?

— You should be there at 11.30, but you may be a bit late.

—Do I have to change?

— Yes. You change at Lewes and East Croydon.

5.— I want a ticket to Bern, second-class, please.

— Single or return?

— Return, please.

— Sixty-five pounds, please. Five pounds change, thank you.

— Could you tell me what time the next train is?

– At 8 o’clock, platform 12. If you hurry you’ll just catch it.

– Thanks.

Практическое занятие 12

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

the weekend, a short distance, one single, cheaper, to be a bit late, the next train.

1. First class return to··· - билет первым классом до··· .
2. Day return? – Отъезд и возвращение в один день?
3. Porter, sir. – Нужен носильщик, сэр?
4. Glasgow train, sir. – поезд на Глазго, сэр?
5. Which platform for·····? – С какой платформы отправляется поезда на ···· .
6. Right up and down, underground level. – направо вверх и вниз, подземный уровень.
7. When does the next train leave, please? – Когда отправляется следующий поезд?
8. Do I have to change? – Мне нужно будет пересаживаться на другой поезд?
9. Single or return? – в одну или в обе стороны?
10. It’s my pleasure. – Рад был помочь.
11. What time does it reach ····? – В какое время он прибывает в····
12. Both – туда и обратно.

Выучить один из диалогов наизусть по теме: «At the railway station».

Раздел 3. Поездка за границу

Тема 3.1. В гостинице.

Практическое занятие 13

Образовательная цель: научить применять знания в решении практических задач..
Развивающая цель: прививать уменья и навыки учебной работы.

Прочтите и переведите диалог:

At the hotel.

Hotel guest: Hello. Is that room service?

Hotel clerk: Yes, sir. What can I do for you?

Hotel guest: This is room25. I’m leaving very early tomorrow morning. I must be at the

airport at 8. I'd like to book a taxi, if possible.

Hotel clerk: Certainly, sir. What time is convenient for you?

Hotel guest: I really don't know. How long will it take me to get to the airport?

Hotel clerk: About an hour, I guess.

Hotel guest: Then, will you book a taxi for 6.30?

Hotel clerk: All right, sir.

Hotel guest: Can I have breakfast in my room, please?

Hotel clerk: Surely. What kind of breakfast would you like?

Hotel guest: Something very light:: some toasts, jam and coffee.

Hotel clerk: Very good. What time shall I serve breakfast?

Hotel guest: At 6 o'clock sharp, please.

Выучить диалог «At the hotel.» наизусть и рассказать в паре с другом.

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

Waiter, melon, mushroom, bun, dish, chips, spiced, cream, sour-cream, pineapple, mustard-pot, salmon, noodle soup, delicious, tasty, toast, pastry, pie, tray, beans, a bill.

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

A transfer, which one, to get off, on the next stop, cross the street, except number 12, downtown buses stop, miss the library, a passenger, the next stop, move to the rear.

1. Can I take any bus that stops here? – мне подходит любой из автобусов, которые здесь останавливаются;

2. You can take any bus except number 12. – вы можете сесть на любой из них за исключением номера 12;

3. They are supposed to run according to the schedule that you can see over there. – считается, что они придерживаются расписания, которое висит вон там;

4. In fact the buses don't always run on schedule. – но фактически автобусы не всегда ходят по расписанию;

5. What are the usual intervals between the bus arrivals? – через какие интервалы обычно прибывают автобусы;

6. About every fifteen minutes. – примерно каждые 15 минут;

7. Will you accept a dollar bill? – принимаете ли вы однодолларовые купюры?

8. Only exact change is accepted coins or tokens. – принимаются только монеты без сдачи или жетоны от метро;

9. Stand back from the door. – отойдите от дверей;

Move to the rear. – продвиньтесь;

Let the passengers off. – не мешайте пассажирам при выходе;

10. I'm afraid of missing····· – боюсь, как бы мне не пропустить (остановку у) ⋯.

11. to be on Third Avenue. – на третьем авеню;

12. Move along, please. – продвигайтесь пожалуйста;

There are many people waiting to get on. – много народу ждет у входа;

That's it. – хватит.

I'm closing the door. – я закрываю дверь;

Another bus will be along in about five minutes. – через пять минут прибудет другой автобус;

Тема 3.2. В ресторане

Практическое занятие 14

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Найдите в словаре русские эквиваленты следующих слов и выражений, которые понадобятся Вам для работы с диалогом, и выучите их:

Waiter, melon, mushroom, bun, dish, chips, spiced, cream, sour-cream, pineapple, mustard-pot, salmon, noodle soup, delicious, tasty, toast, pastry, pie, tray, beans, a bill.

С помощью словаря переведите следующие слова и словосочетания, составьте с ними собственные предложения, не прибегая к помощи диалога:

1. What can I do for you? – Что я могу для вас сделать?

2. Have you booked the table? – to book a table – заказывать столик;

3.roast potatoes – жареный картофель;

4. stewed fruit – тушеные фрукты;

5.the first course – первые блюда;

6. the second course – вторые блюда;

7. the steak well done – хорошо прожаренный бифштекс;

8. the steak underdone – бифштекс с кровью;

9. cauliflower – цветная капуста;

10. canteen – столовая на предприятиях или в учебных заведениях; школьный буфет;

11. hors d'oeuvre – закуска; добавочное блюдо; kipper – сельдь холодного копчения; spinach – шпинат;

12. customer – заказчик, клиент, (здесь) – посетитель;

Прочтите и переведите диалог:

At the restaurant

Waiter: Good evening, sir. Welcome to The Knight's Asylun.

What can I do for you? Have you booked the table?

Mr. Berton: Yes, I phoned you yesterday evening. The name is Berton.

Waiter: Yes, sir. Are you alone? (Looking down the list before him). Oh, no, excuse me, the table for two.

Mr. Berton: My wife will be here fairly soon.

Waiter: Here you are, please. Would you like this table?

Mr. Berton: Oh, no. My wife is fond of sitting by the window and staring at the passes by.

Waiter: This way, sir. It's the right place for your wife.

Mr. Berton: Well, thank you. It seems pretty…for my wife. Not for me, I mean. But the view is wonderful.

Mrs. Berton: Peter! (A middle- aged perfectly dressed woman is coming to Mr. Brerton.). I'm sorry, I'm late.

Mrs. Berton: Better late than never.

Mrs. Berton: Please, don't grumble! I've just visited my hairdresser. Besides ladies have the right to be late. Gentlemen – never.

Mr. Berton: Yes, you're right. Do you like the place?

Mrs. Berton: Oh, I'm awfully pleased!

Waiter: Here's the menu. What would you like to start with, madam?

Mrs. Berton: Wait a minute. … It's funny enough, but I'm hungry as a bear. And the dishes

in your menu look so appetizing··· Well, I'd like to begin with baked mushrooms and melon.

Waiter: And you, sir?

Mr. Berton: As for me, I would like to begin with something more interesting. What can you say about your steaks?

Waiter: Oh, they're really delicious today! What vegetables would you like with the steaks? Fried tomatoes with spiced sour-cream, cauliflower or French beans?

Mr. Berton: So, two steaks with fried tomatoes. I prefer steaks well done. What else? A nice portion of roast potatoes.

Mrs. Berton: Waiter, the same for me, please!

Mr. Berton: Waiter, the same for me, please!

Mrs. Berton: Let's forget about it!

Waiter: Anything to drink?

Mr. Berton: A bottle of French red wine, two cups of strong coffee···

Mrs. Berton: And orange juice, please!

Mr. Berton: Of course! How could I forget!

Waiter: Please, wait a moment. (The waiter goes out. In a few minutes he appears again with a tray with dishes). Here you are.

Mrs. Berton: Seems and smells fantastic!

Mr. Berton: Great!

Waiter: Good appetite! Enjoy yourselves. What would you like for dessert?

Mrs. Berton: Vanilla ice- cream mixed with bits of chocolate and pineapples, a nice slice of apple pie for me and··· (looks at her husband). Absolutely nothing for my husband, I suppose.

Mr. Berton: Good gracious! You're right, dear!

Will you please bring me the bill, waiter?

Waiter: Certainly, sir.

Какие из этих предложений могут быть сказаны официантом:

Here's the menu. Welcome to The Knight's Asylun. The name is Berton. Better late than never. As for me. What can you say about your steaks?

What can I do for you? I phoned you yesterday evening. Have you booked the table? Here you are, please. Would you like this table? It's the right place for your wife. I'm sorry, I'm

late. Would you like this table? What would you like to start with, madam? What vegetables would you like with the steaks? Waiter, the same for me, please! A bottle of French red wine, two cups of strong coffee.

Fried tomatoes with spiced sour-cream, cauliflower or French beans? **:** Anything to drink? And orange juice, please! **:** Good appetite! Enjoy yourselves. Vanilla ice- cream mixed with bits of chocolate and pineapples, a nice slice of apple pie for me and··· Certainly, sir. What would you like for dessert? Here you are.

.

Тема 3.3. В агентстве по прокату машин.

Практическое занятие 15

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

CAR RENTAL -АРЕНДА АВТОМОБИЛЯ

СЛОВА ДЛЯ ЗАПОМИНАНИЯ		
car		автомобиль
rate		таоисЬ
fuel		топливо
sasolin		бензин (амеоиканский
oetrol	*	бензин (бпитанский
diesel		лизель
tank		бак
ensine		двигате ь
wheel		колесо
tvre		шина
oil		масло
trunk		багажник
hood		капот
burrmer		бампеп
headlis		(Ьапы
oarkins		паоковка
collisio		столкновение
pump		колонка, насос

ПОЛЕЗНЫЕ ВЫРАЖЕНИЯ

car rental / аренда автомобилей
car insurance / страховка автомобиля
driving license /водительские права
rental agreement / соглашение об аренде
car repair / ремонт автомобилей
car accident / авария
speed limit / ограничение скорости
gas station / бензозаправочная станция
petrol station / бензозаправочная станция
no parking / парковка запрещена
flat tire / спущенная шина

Примеры:
I'd like to rent a car. / Я бы хотел арендовать автомобиль.
Fill it up, please, / Полный бак, пожалуйста.
It doesn't work, / Это не работает.
1 have a flat tire, / / У меня спущена шина.
There's something wrong with my car. / С моей машиной что-то не так.
Бензозаправочные станции в разных англоязычных странах называются по- разному: Gas station — в США, Канаде, на Карибских островах; Petrol station — в Великобритании и некоторых странах Британского содружества; service station — в Австралии; petrol pump, petrol bunk — в Индии.
Также и сам бензин в США и Канаде называется gasoline (gas), а в Великобрйтании и странах Содружества — petrol.

СИТУАЦИЯ ОБЩЕНИЯ
Hello, may I help you? /— Здравствуйте, могу я вам помочь?
Hello. I'd like to rent a car, please. /— Здравствуйте. Я хотел бы арендовать машину.
Yes, no problem, sir. II — Да, нет проблем, сэр.
What's rate? /— Каков тариф?
60 dollars per day. / — 60 долларов в день.
And I'd like to have an insurance, II — Ия хотел бы иметь страховку.
OK, the insurance costs 6 dollars per day. / Хорошо, страховка стоит 6 долларов в день.
OK, I'll take it. /— Хорошо, я беру ее.

Скажите сами:
Здравствуйте, могу я вам помочь?
Hello. I'd like to rent a car, please.
Да, нет проблем, сэр.
Каков тариф?
60 dollars per day.
И я хотел бы иметь страховку.
OK, the insurance costs 6 dollars per day.
Хорошо, я беру ее.

Тема 3.4. На фирме.

Практическое занятие 16

Образовательная цель: научить применять знания в решении практических задач..

Развивающая цель: научить анализировать, аргументировать, развивать речь.

Preliminary Discussion

— Well, Mr. R., you've studied our offer and seen our samples, haven't you? What's your final decision?

— We like samples 5 and 8, they suit us. The quality is excellent and we think the goods will go down well in our market if the prices are reasonable.

— You are right. We've been selling the goods for two years and very successfully. Sample 8 is our latest modified model. Are you going to place a big order?

— Yes, 20 pieces for prompt delivery and 28 pieces for delivery in four equal lots of 12 per month within 4 months of signing the contract.

— We are quite able to meet the dates. We have a big stock. Do you prefer CAF terms?

— Yes, no insurance. And you remember my remark, don't you, Mr. F.? I said: If the prices are competitive. We would like you to give us a discount of 5%.

— That's too much. As a special concession to a new customer we can give you a 3, 5% discount. And payment by an irrevocable confirmed L/C which you will open right after signing the contract.

— Good, it's a deal. We'll be able to sign the contract this week, I think.

Используйте данное упражнение для составления диалогов

Make up a dialogue between representatives of two different firms using the following words and expressions:

деловое свидание договоренность/понимание дать/получить полномочия сделать что-л. быть знакомым с ...

Мы имеем честь представлять .. Этот документ должен идти за подписью директора.

Какая сумма отводится на эти цели? Могли бы вы ввести нас в курс дела относительно ... ?

У вас есть какие-нибудь предложения?

Вас удовлетворяют наши условия . ?

Можем ли мы считать, что ? Это надо обсудить.

Возможны варианты.

Я вам перезвоню по этому вопросу,

нанести визит

На него можно положиться.

... назначен управляющим
appointment
understanding
to give/receive authority to do smth to be familiar with ...
We have the honour to represent...
This document must go over the director's signature.
What amounts will be allowed for the purpose?
Could you put us in the picture about...
Have you got any proposals to make? Are you happy with our terms of... ? Can we take that... ?
It's a matter for the discussion.
There may be alternatives.
I'll call you back concerning the
subject.
to pay a visit
He is a person you can rely on.
... appointed to be Manager
Imagine a telephone conversation between two managers and retell it using Indirect Speech.

Вчера мы получили телеграмму этой фирмы.
Разрешите вам напомнить ... обсудить (изменить) создавшееся положение.
Нет причин для беспокойства. Поясните свою мысль конкретнее. Мы бы просили вас ...
Я в этом совершенно уверен,
The cable of the firm reached us yesterday.
May 1 remind you ... to discuss (to improve) the situation.
There is no reason to worry.
Would you be more specific, please. We would request you to ...
I'm quite positive about it
стремиться к соглашению Вы не пожалеете.
Что касается вашего предложения ... Я понимаю, что вы имеете в виду. Это вам решать.
Здесь мы договорились.
Что мы будем делать дальше?
В конце концов...
Обязательно

to seek agreement You won't regret it. Regarding your offer... I see your point.
It's up to you to decide. We are with you here. What do we do next?
In the end... by all means

Используйте данные выражения для составления диалогов,обратите внимание,что выражения справа не соответствуют левым.

Translate into Russian the expressions on the left and react to the statements in a polite manner using the suggestions given on the right.
It goes contrary to our plans.
It's next to impossible.
I'm sorry to say no.
We are eager for lunch.
It was hard talks, but it's all over now! My secretary will fix you up with all you need.
We've captured a big contract to supply ...
We all have to adjust to new situations. Our arrangement will operate immediately.
Perhaps we can settle for ...
May I trouble you to consider our plan.
Жаль, что ...
Не наша вина ...
Что поделаешь ...
Время прощаться.
(Благодарность за участие і переговорах.)
Вы очень любезны.
Какая удача!
Попытаемся ...
Всегда готовы помочь. Само собой! Хорошо! Сделаем все возможное

Воспроизведите диалог в группах:

M r. G r e y: Good morning, Mr. Brown. Take a seat, please. What can I do for you?
M r. B: Well, as a matter of fact, I have a proposition to put before you. I think you know well the firm I represent.
Mr. Grey: Oh, yes, but I've never had the pleasure of doing any business with your firm.
M r. B: Well, our company has branches all over Australia and New Zealand. So we'd like to get into touch with a good shipping company in London, such as yours. The idea is that you should act as our agents and handle all our business on this side.
M r. G r e y: And what about terms of payment and the other essential conditions?
M r. B: Well, we propose to allow you a 2% commision on all business transacted; no doubt we shall come to an understanding on that point. You would have to attend to the shipment of all goods and arrange for the prices to include c. i. f. or, in some cases, f. o. b. We are accustomed to paying by bills at three months. What do you think about it?

Раздел 4. Формы организации бизнеса

Практическое занятие 17

Тема 4.1. Формы организации бизнеса.

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

BUSINESS TELEPHONE CONVERSATION

LOCK: Hello! Is that "Intersport"?
SECRETARY: Yes. Secretary speaking. Who's calling?
LOCK: Lock of Brown and Sons Company. I'd like to speak to the President, please. Is he available?
SECRETARY: Mr Petrov is on another line. Can you hold on?
LOCK: Certainly.
PETROV: Petrov speaking.
LOCK: Hello, Mr Petrov. It's Lock. Our delegation is coming to Moscow next week.
PETROV: Glad to hear that. When will they arrive?
LOCK: On Monday.
PETROV: That's good. And what do you think of our offer?
LOCK: Our people are still studying your offer and catalogues. But we think, your prices are too high, you know.
PETROV: Well, we can meet next week and discuss the prices.
LOCK: Agreed. See you next week.

Составьте из данных слов диалог:

акционерное общество
общество с ограниченной ответственностью
общество с неограниченной (полной) ответственностью
предприятие, не имеющее статуса юридического лица и функционирующее лишь на основе гражданской правосубъектности собственника дочерняя компания
акция, пай
покупать акции, вступать в пай
акционер, пайщик
акционерный капитал, основной
капитал, фонды
фондовая биржа
облигации, боны, таможенная
закладная
держатель облигаций, бон совместное предприятие подавать заявление о подписке (на ценные бумаги)
протокол о намерениях парафировать
переданное имущество полученные доходы
номинальная стоимость акций ценные бумаги юридическое лицо
(joint) stock company, public company
limited [limitid] company (corporation), limitedliability company, (Ltd, Corp., inc.)
general partnership (...and Co) sole proprietorship
associated company, branch company
share [Jea], stock (ам.) to take stock in stockholder (joint) stock
stock exchange (market) bond
bondholder
joint venture [’ventja]
to tender
inventions protocole to initial

transferred property
the obtained (profits) income nominal
cost of shares
valuable papers, stiff
person

Переведите на английский язык:

учредитель
учредительное собрание учредительная конференция учредительный договор
сторона, подписавшая договор подписка
организовать подписку подписчики
извещение о предстоящей подписке вклад, инвестиция предварительный взнос
временное удостоверение представитель голосование большинство голосов покрыть подпиской ...% акций
устав
заявление о регистрации общее собрание акционеров
наблюдательный совет расчетный счет
справка финансирующего банка о кредитоспособности участника
Министерство внешнеэкономических связей
Министерство финансов Торгово- промышленная палата
founder, constitutor constituent assembly constitutive conference _ company agreement signatory
subscription, engagement[A] to arrange (organize) subscription, engagement subscribers (to) notification about the coming subscription, engagement deposit [di'pszit], investment preliminary premium, contribution, (payment) installment
temporary certificate
representative
voting
majority
to pay off... per cent of shares by subscription
charter, regulations
a check-in application
the overall stockholder’s assembly
supervisory council account
financing bank’s certificate about the partner’s solvency
Ministry for Foreign (External)
Economic Relations
the Finance Ministry
Chamber of Commerce and Industry

Практическое занятие 18

Товарищества
Товарищество Partnership — это компания, организованная двумя или более лицами, занимающаяся бизнесом с целью получения прибыли. Партнеры несут неограниченную ответственность по обязательствам товарищества всем своим

имуществом.
Доходы товарищества не облагаются налогом на прибыль. Вместо этого партнеры товарищества облагаются налогом по ставкам подоходного налога для физических лиц. В настоящее время практика организации фирмы в форме товарищества не является очень распространенной. В основном это — семейные предприятия, адвокатские конторы, консалтинговые фирмы и т. п. Компании
В Великобритании существуют следующие основные типы компаний:
Private Limited Company — это частная акционерная компания с ограниченной ответственностью закрытого типа. Число акционеров может достигать 50. Ее акции не могут предлагаться для продажи населению. Минимальный размер акционерного капитала для таких компаний не устанавливается. После их названия ставятся буквы Ltd. (Limited), означающие ограниченную ответственность.
В случае ликвидации компании ответственность членов компании по ее долгам соответствует долям внесенных ими капиталов.
Public Limited Company — открытое акционерное общество с бграниченной ответственностью (после названия такой компании ставятся буквы PLC.).
Такие компании должны иметь довольно большой уставной фонд. Они имеют право продавать свои акции и другие ценные бумаги населению и обязаны обеспечивать информацию о своей деятельности.
В случае ликвидации компании ответственность членов компании по ее долгам соответствует величине их пакета акций.
В США акционерная компания с ограниченной ответственностью называется корпорацией — Corporation. После названия корпорации ставятся буквы Corp. или Inc. (Incorporated), означающие, что компания зарегистрирована как корпорация.
ТЕКСТ
Business is the production, distribution, and sale of goods and services for the benefit of the buyer and the profit of the seller. In the modern world the control of production is largely in the hands of individual business people or entrepreneurs, who organize and direct industry for gaining profits.
The main forms of business organization are described below.
Individual Proprietorship (Sole Trader or Sole Proprietor)
This is the simplest way of starting a business. You are self-employed and fully responsible for all the aspects of the management of your business.
In this form of organization the owner himself is responsible for success or failure of his business. Any line of business is open to an owner.
Although this form of small business has its advantages, it has certain drawbacks, too. In the first place the single owner is seldom able to invest as much capital as can be invested by a partnership or a corporation. If single owners are able to invest large amounts of capital, they run great risk of losing it all because they are personally liable for all the debts of their businesses. This is called unlimited liability. Partnership
Two or more people starting a business together can set up a partnership. All partners are responsible for the debts of the partnership and profits and losses are shared between them. The agreement to form an association of this nature is called a partnership contract and may include distribution of profits, fiscal responsibilities, and a specific length of time during which the partnership is in effect.
Public and private companies
A company is usually formed for the purpose of conducting business that is separate from its

owners, the shareholders. The main difference is between public and private companies. Private companies cannot sell shares to or raise funds from the general public.
Public companies can sell their shares to the general public (which they usually do through a stock exchange). A company continues to exist despite changes in its owners. A company can hold assets; it can sue, and it can be sued. The profits are distributed to the members as dividends on their shareholding. Losses are borne by the company. The management of the company is carried out by a board of directors. Private limited companies are often local family businesses and are common in the building, retailing and clothing industries.
A private company can be formed with a minimum of two people becoming its shareholders. They must appoint a director and a company secretary. If the company goes out of business, the responsibility of each shareholder is limited to the amount that they have contributed; they have limited liability. Such a company has Ltd. (Limited) after its name.
Many large businesses in the UK are Public Limited Companies (PLC), which means that the public can buy and sell their shares on the stock exchange. Marks & Spencer, British Telecom and the National Westminster Bank are the examples of public limited companies.
In the US, businesses take the same basic forms. American companies have abbreviations Inc. and Corp.
Other types of companies are:
holding company, a company that owns another company or other companies and which is sometimes referred to as the parent company (most public companies operate through a number of companies controlled by the group's holding company); subsidiary company, a company controlled by a holding company, usually because the holding company owns (or indirectly owns through another subsidiary) more than 50 per cent of the subsidiary company's shares;
associated company, which is a company over which another company has substantial influence; for example it owns between 20 per cent and 50 per cent of its shares.
Словарь
individual proprietorship индивидуальное владение sole trader индивидуальный предприниматель (ИНН) sole proprietor [pra'praiata] единичный владелец self-employed занятый собственным делом, не работающий по найму advantage преимущество
drawback ['dro:baekj недостаток to be liable for smth. быть ответственным за что-л. entrepreneur [’опЦэрге’пэ:] предприниматель distribution распределение benefit выгода profit прибыль control управление
fiscal responsibility финансовая ответственность in effect в действии widespread широко распространенный family enterprises семейные предприятия purpose [’paipas] цель consulting firm консалтинговая фирма shareholders акционеры to raise funds собирать денежные средства general public население
building industry строительная промышленность retailing розничная продажа clothing industry швейная промышленность assets авуары
to sue [sju:] предъявлять судебный иск to be sued повергаться судебному преследованию board of directors совет директоров abbreviation аббревиатура, сокращение associated company дочерняя компания holding company холдинговая компания subsidiary company компания-филиал parent company материнская компания shares акции

Тема 4.2. На выставке

Практическое занятие 19

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Переведите и текст

National and international exhibitions

Very many national and international specialized exhibitions are held every year in different countries of our world. From year to year the number of companies and countries participating in such exhibitions is growing. The scope of exhibitions is also getting larger. The present exhibitions include a wide range of showpieces showing the important achievements in different fields of science, industry and agriculture of different countries. These exhibitions are usually crowded with different visitors, with their different interests and demands. The participants of these exhibitions can negotiate with their customers, sale their goods and purchase the goods they need.
A national or an international exhibition is a way to advertise the products of a company. Such exhibitions usually have their mottoes, for example: people and environment, economical cooperation, technical progress and so on. The international exhibitions fasten the friendship among different nations and countries.

Перепишите предложения, употребив пассивный залог.

1. His parents gave him a car. - A car_____
2. They told him the truth (правду). – He_____
3. He showed me his books. - His books _____
4. They build new houses every month. - New houses_____
5. They asked him some questions. – He_____
6. She has typed all the letters. -7 All the letters_____
7. They are showing a new film at our cinema. - A new film_____
8. Helen won the contest (победила в соревновании). - The contest_____
9. The USA bought Alaska from Russia in 1867. - Alaska _____
10. Virus Bering first visited Alaska in 1741. – Alaska_____

Перепишите предложения, употребив пассивный залог.

1. His parents gave him a car. - A car_____
7. They told him the truth (правду). – He_____
8. He showed me his books. - His books _____
9. They build new houses every month. - New houses_____
10. They asked him some questions. – He_____
11. She has typed all the letters. -7 All the letters_____
7. They are showing a new film at our cinema. - A new film_____
11. Helen won the contest (победила в соревновании). - The contest_____

12.The USA bought Alaska from Russia in 1867. - Alaska _____
13.Virus Bering first visited Alaska in 1741. – Alaska_____

Переведите на английский:

Очень много национальных и международных специализированных выставок ежегодно проводится в различных государствах мира. Из года в год количество фирм и государств, участвующих в таких выставках, растет. Объемы выставляемых экспонатов также становятся все больше. Современные выставки включают в себя широкий спектр экспонатов, демострирующих достижения в различных областях науки,
Промышленности и сельского хозяйств разных государств.
Данные выставки обычно широко посещаемы различными посетителями со всевозможными интересами и потребностями. Участники таких выставок могут вести переговоры со своими клиентами, продавать свои товары и приобретать необходимую им продукцию Национальные и международные выставки являются средством представить продукцию компании. Такие выставки обычно имеют свои девизы, наприме р «люди и окружающая среда», «промышленная кооперация», «технический прогресс» и так далее. Международные выставки укрепляют дружбу между разными народами и странами.

1. Переведите текст.

AT THE EXHIBITION

CHARMA: Good morning, Mr Somov.
SOMOV: Good morning, Mr Charma. I'm glad to see you. Have you been to our pavilion?
CHARMA: Yes, we've just seen your display. It's wonderful. Your latest models of argicultural equipment are particularly good.
SOMOV: Have you seen them in operation?
CHARMA: Yes, we have. Does the equipment go for export?
SOMOV: Yes, we've sold it to many companies.
CHARMA: Your agricultural equipment meets our requirements. Our government is paying much attention to the development of the agricultural sector of our economy so the demand for the equipment will be high.
SOMOV: Fine. If you are really interested in our equipment we can set up a joint venture for the production of agricultural equipment in your country. It'll be mutually beneficial.
CHARMA: An excellent idea!
SOMOV: Then let's continue our talks in the Director's office and discuss the matter in detail there.

2. Расскажите о перфектных временах, способе образования повествовательных, вопросительных, отрицательных форм перфектных времен. Поясните с какой целью используются перфектные времена.

3. Ответьте на вопросы.

Yes *No*

1.Have you got one or more television sets at home? _____ _____

2.How much television do you watch during the week? _____

a)up to one hour c) two to three hours

b)one to two hours d) more than three hours

3.Do you do your homework with the television on? _____ _____

4.Do you eat meals in front of the television? _____ _____

5.Do you usually watch the same programmes as your parents? _____

6.What is your favorite programme? _____

7.Who usually controls the television?

Is it you, your father or your mother? _____

8.What do you do after school apart from homework?

_____

Дополните следующие разделительные вопросы:

1. Physics, chemistry, mathematics and biology are called sciences,_____?
2.The word *physics* is derived from the Greek word meaning 'nature',_____?
3.Such words are not (aren't) used in everyday English,_____?
4.Children are taught metric units in English schools,_____?
5.Milk is sold in pints and litres,_____?
6.The metric system of weights and measures is used only in scientific contexts in the USA,_____?
7.These workers are not paid by the hour,_____?
8.Eggs in England are sold by the dozen,_____?

Выучите и воспроизведите диалог в парах

Marie: I've only seen reproductions of Van Gogh's paintings.
Martin: How you can see the real ones here.
Gisela: There's such a long queue to get into the exhibition.
Mike: Yes. I'm surprised how many people are here to see his paintings.
Gisela: I like his portraits.
Marie: And you Mike?
Mike: I like his night scenes.
Martin: Yes, I like the «Starry, Starry Night.»
Mike: And the night cafe scenes.
Martin: Four adults for the Van Gogh exhibition.
Ticket Agent: That's £40.
Mike: Let's leave our jackets in the cloakroom.
Martin: And I'll put my camera in a locker. I can't take pictures in here anyway.
Gisela I hope the guide speaks slowly.
На выставке:

Мари: Раньше я видела лишь репродукции картин Ван Гога.
Мартин: Сейчас Вы можете увидеть оригиналы.
Гизела. На выставку такая большая очередь.
Майк: Да. Я удивлен, что так много людей хотят посмотреть его картины.
Гизела: Мне нравятся его портреты.
Мари: А тебе, Майк?
Майк: Мне нравятся его ночные пейзажи.
Мартин: Да, мне нравится «Звездная, звездная ночь».
Майк: И сюжет с ночным кафе.
Мартин: Четыре для взрослых на выставку Ван Гога.
Кассир: Это стоит 40 фунтов.
Майк: Давайте сдадим куртки в гардероб.
Мартин: Я оставлю свой фотоаппарат в камере хранения. Все равно я не смогу здесь фотографировать.
Гизела: Надеюсь, экскурсовод будет говорить медленно.

Тема 4.3. Виды компаний в США и Великобритании.

Практическое занятие 20

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите диалог:

A VISIT TO THE PLANT

TAYLOR: We like your plant, Mr Ivanov. It's quite modern. IVANOV: Glad to hear that, the plant is really new. We built it only 2 years ago.
TAYLOR: By the way, how long did it take you to construct it?
IVANOV: Three years, though it's one of the biggest plants here.
TAYLOR: You produce very good compressors, they are easy to operate and reliable.
IVANOV: That's right. Our compressors are in great demand in the world market. We export them to many countries of the world. Last year was particularly good. Our total sales increased to ... roubles.
TAYLOR: Incidentally, in what way did you use the profit?
IVANOV: We invested heavily to improve the quality. We increased the salaries and wages. We also arranged a number of training courses for the technical personnel.
TAYLOR: We'd like to establish business relations with you. We are going to place a large order.
IVANOV: We'll be glad to cooperate with you.

Товарищества
Товарищество Partnership — это компания, организованная двумя или более лицами,

занимающаяся бизнесом с целью получения прибыли. Партнеры несут неограниченную ответственность по обязательствам товарищества всем своим имуществом.
Доходы товарищества не облагаются налогом на прибыль. Вместо этого партнеры товарищества облагаются налогом по ставкам подоходного налога для физических лиц. В настоящее время практика организации фирмы в форме товарищества не является очень распространенной. В основном это — семейные предприятия, адвокатские конторы, консалтинговые фирмы и т. п. Компании
В Великобритании существуют следующие основные типы компаний:
Private Limited Company — это частная акционерная компания с ограниченной ответственностью закрытого типа. Число акционеров может достигать 50. Ее акции не могут предлагаться для продажи населению. Минимальный размер акционерного капитала для таких компаний не устанавливается. После их названия ставятся буквы Ltd. (Limited), означающие ограниченную ответственность.
В случае ликвидации компании ответственность членов компании по ее долгам соответствует долям внесенных ими капиталов.
Public Limited Company — открытое акционерное общество с бграниченной ответственностью (после названия такой компании ставятся буквы PLC.).
Такие компании должны иметь довольно большой уставной фонд. Они имеют право продавать свои акции и другие ценные бумаги населению и обязаны обеспечивать информацию о своей деятельности.
В случае ликвидации компании ответственность членов компании по ее долгам соответствует величине их пакета акций.
В США акционерная компания с ограниченной ответственностью называется корпорацией — Corporation. После названия корпорации ставятся буквы Corp. или Inc. (Incorporated), означающие, что компания зарегистрирована как корпорация.

ТЕКСТ
Business is the production, distribution, and sale of goods and services for the benefit of the buyer and the profit of the seller. In the modern world the control of production is largely in the hands of individual business people or entrepreneurs, who organize and direct industry for gaining profits.
The main forms of business organization are described below.
Individual Proprietorship (Sole Trader or Sole Proprietor)
This is the simplest way of starting a business. You are self-employed and fully responsible for all the aspects of the management of your business.
In this form of organization the owner himself is responsible for success or failure of his business. Any line of business is open to an owner.
Although this form of small business has its advantages, it has certain drawbacks, too. In the first place the single owner is seldom able to invest as much capital as can be invested by a partnership or a corporation. If single owners are able to invest large amounts of capital, they run great risk of losing it all because they are personally liable for all the debts of their businesses. This is called unlimited liability. Partnership
Two or more people starting a business together can set up a partnership. All partners are responsible for the debts of the partnership and profits and losses are shared between them. The agreement to form an association of this nature is called a partnership contract and may include distribution of profits, fiscal responsibilities, and a specific length of time during

which the partnership is in effect.
Public and private companies
A company is usually formed for the purpose of conducting business that is separate from its owners, the shareholders. The main difference is between public and private companies. Private companies cannot sell shares to or raise funds from the general public.
Public companies can sell their shares to the general public (which they usually do through a stock exchange). A company continues to exist despite changes in its owners. A company can hold assets; it can sue, and it can be sued. The profits are distributed to the members as dividends on their shareholding. Losses are borne by the company. The management of the company is carried out by a board of directors. Private limited companies are often local family businesses and are common in the building, retailing and clothing industries.
A private company can be formed with a minimum of two people becoming its shareholders. They must appoint a director and a company secretary. If the company goes out of business, the responsibility of each shareholder is limited to the amount that they have contributed; they have limited liability. Such a company has Ltd. (Limited) after its name.
Many large businesses in the UK are Public Limited Companies (PLC), which means that the public can buy and sell their shares on the stock exchange. Marks & Spencer, British Telecom and the National Westminster Bank are the examples of public limited companies.
In the US, businesses take the same basic forms. American companies have abbreviations Inc. and Corp.
Other types of companies are:
holding company, a company that owns another company or other companies and which is sometimes referred to as the parent company (most public companies operate through a number of companies controlled by the group's holding company); subsidiary company, a company controlled by a holding company, usually because the holding company owns (or indirectly owns through another subsidiary) more than 50 per cent of the subsidiary company's shares;
associated company, which is a company over which another company has substantial influence; for example it owns between 20 per cent and 50 per cent of its shares.

Практическое занятие 21

Словарь
individual proprietorship индивидуальное владение sole trader индивидуальный предприниматель (ИНН) sole proprietor единичный владелец
self-employed занятый собственным делом, не работающий по найму advantage преимущество
drawback недостаток to be liable for smth. быть ответственным за что-л. entrepreneur предприниматель distribution распределение benefit выгода profit прибыль control управление
fiscal responsibility финансовая ответственность in effect в действии widespread широко распространенный family enterprises семейные предприятия purpose consulting firm консалтинговая фирма shareholders акционеры to raise funds собирать денежные средства general public население
building industry строительная промышленность retailing розничная продажа clothing industry швейная промышленность assets авуары

to sue [sju:] предъявлять судебный иск to be sued повергаться судебному преследованию board of directors совет директоров abbreviation аббревиатура, сокращение associated company дочерняя компания holding company холдинговая компания subsidiary company компания-филиал parent company материнская компания shares акции

Поставьте предложения в вопросительную и отрицательную формы:

1. Physics is a study of non-living things.
2. The science deals with changes in composition.
3. These dictionaries are very useful.
4. He can spell all these words.
5. This was the teacher's last question.
6. She knows the answer to this question.
7. The lesson is over.
8. The teacher speaks English to the students.
9. Tom answered the teacher's question correctly.
10. Alice spoke loudly.

Перепишите предложения, употребив пассивный залог.

1. His parents gave him a car. - A car_____
2. They told him the truth (правду). – He_____
3. He showed me his books. - His books _____
4. They build new houses every month. - New houses_____
5. They asked him some questions. – He_____
6. She has typed all the letters. -7 All the letters_____
7. They are showing a new film at our cinema. - A new film_____
8. Helen won the contest (победила в соревновании). - The contest_____
9. The USA bought Alaska from Russia in 1867. - Alaska _____
10. Virus Bering first visited Alaska in 1741. – Alaska_____

Раздел 5. Наука и Технологии.

Тема 5.1. Наука и технологии.

Практическое занятие 22

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст:

TECHNOLOGY

Technology means the use of people’s inventions and discoveries to satisfy their needs. Since people have appeared on the earth they have had to get food, clothes, and shelter. Through the ages, people have invented tools, machines, and materials to make work easier.

Nowadays, when people speak of technology, they generally mean industrial technology. Industrial technology began about 200 years ago with the development of the steam engine, the growth of factories, and the mass production of goods. It influenced different aspects of people's lives. The development of the car influenced where, people lived and worked. Radio and television changed their leisure time. The telephone revolutionized communication.

Science has contributed much to modem technology. Science attempts to explain how and why things happen. Technology makes things happen. But not all technology is based on science. For example, people had made different objects from iron for centuries before they learnt the structure of the metal. But some modern technologies, such as nuclear power production and space travel, depend heavily on science.

Дайте ответы на вопросы:

1. What is science?
2. What is technology?
3. Are they interconnected?
4. Is all technology based on science?
5. What modern technologies depend heavily on science?
6. When did industrial technology begin?
7. When was a steam engine invented?
8. Who invented the steam engine?
9. When was radio invented?
10. Who invented the radio?
11. When was television invented?
12. Who invented the television?
13. When was a telephone invented?
14. Who invented the telephone?
15. When was the first car invented?
16. When was the first digital computer invented?
17. Who invented the first digital computer?
18. What famous scientists do you know?
19. What famous inventors do you know?
20. What scientific field are you interested in? Why?

SCIENCE

The word science comes from the Latin word- scienna -which means knowledge • Science covers the broad field of knowledge that deals with facts and the relationship among these facts.

Scientists study a wide variety of subjects. Some scientists search for us to the origin of the universe and examine the structure of the cells living plants and animals. Other researchers Investigate' why we act way we do, or try to solve complicated mathematical problems. Scientists use systematic methods of study to make observations and Meet facts. They develop theories that help them operand unity facts, scientific theories consist of general principles or laws that attempt to - plain how and why something happens or has happened. A theory is considered to become a part of scientific knowledge if it has been test- d experimentally and proved to be true.

Scientific study can be divided into three major of groups: the natural, social, and technical sciences. As scientific knowledge has grown and become more complicated, many new fields of science have appeared. At the same time, the boundaries between scientific fields have become less and less clear. Numerous areas of science overlap each other and it is often hard to tell where one science ends and another begins. All sciences are closely interconnected.

Science has great influence on our lives. It provides the basis of modern technology the tools and machines that make our life and work .easier. The discoveries and inventions of scientists also help shape our view about ourselves and our place in the universe.

Закончите предложения;

What is Science?
The word “science” comes from
Science covers
The Fields of Science Research
Scientists search for
The scientists examine
The scientists investigate
The scientists solve
Different Groups of Sciences
Sciences can be divided into
Scientific knowledge has become
Different sciences overlap
All sciences are interconnected
Science and Technology Science provides
Technology means
Industrial technology began
Science and technology influence

Тема 5.2.Современные технологии.

Практическое занятие 23

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Переведите текст

Television in Modern Life (1)
A Scotsman, John Logie Baird, transmitted the first television picture on 25 October 1925. The first person on television was a boy who worked in the office next to Baird's workroom in London.
In 1927 Baird send pictures from London to Glasgow. In 1928 he sent pictures to New York and also produced the first colour TV pictures.

A first-rate colour TV set and a video cassette recorder have become an ordinary thing in the household today.
Modern television offers the viewers several programmes on different channels. Such as:
Soap opera: a programme often on two or three times a week, which follows the lives of a group/community of people. The stories are often exciting, dramatic and hard to believe.
Quiz show or Game show: individuals, teams or families who answer questions or play different games against each other. The winner gets a prize, e.g. a car, a holiday, money.
Chat show: a programme where a presenter talks to famous people about their lives and careers, sometimes there is music as well.
Documentary: a film with factual information, often analyzing a problem in society.
A series: a number of programmes about the same situation or the same characters in different situations. This may be a comedy series or a drama series.
Current affairs programme: a programme about today's social/political problem.
In addition to regular newscasts you can see plays and films, operas and ballets, and watch all kinds of contests, quizzes, and sporting events. You can also get a lot of useful information on the educational channel. A good serial (perhaps, a detective story or a screen version of a classical novel) can keep the whole family in front of the telly for days, and don't we spend hours and hours watching our favourite football or hockey team in an important international event?
Television most definitely plays a very important part in people's lives. But is this a good thing or a bad one? Haven't we become lazier because of television? Don't we go out less often than we used to? Don't we read less?
We tend to view more and listen less, as time goes on. Take, for example, meetings between famous people in various walks of life. We like seeing the people taking part in these discussions. Merely hear their voices is not quite the same thing.
We also like to watch television programmes dealing with animals and birds and all kinds of living things in their natural surroundings, as well as to watch sporting events in actual progress. Above all, we love seeing dramatic entertainments of all kinds; the plays of many leading dramatists; dramatised versions of the works of famous novelists; lovely one-act plays, comic turns, and amusing episodes of all sorts.
We can hear symphony concerts, operas and oratorios and popular melodies all transmitted with lifelike clarity. We have an opportunity of hearing well-informed talks on archeology, history, geography, science and technology. We hear critics talking about new books, films, plays, works of art. We hear living poets reading their own poems.

Практическое занятие 24

Телевидение в современной жизни (1)
Шотландец, Джон Логи Берд, передал первую телевизионную картинку 25 октября 1925 года.
Первым человеком, которого показали по телевидению, был мальчик, работавший в офисе рядом с рабочим помещением Берда в Лондоне.
В 1927 году Берд передал телеизображение из Лондона в Глазго. В 1928 году он передал изображение в Нью-Йорк и также создал первое цветное телеизображение.
Первоклассный цветной телевизор и видеомагнитофон стал сегодня обычной вещью в доме.
Современное телевидение предлагает зрителям несколько программ на различных

каналах. Такие, как:
Мыльная опера: программа, которая выходит два-три раза в неделю и прослеживает жизнь группы/сообщества людей. Это часто волнующие, драматические и маловероятные истории.
Телевикторина или игра-шоу: отдельные лица, команды или семьи отвечают на вопросы или играют в различные игры друг против друга. Победитель получает приз, например, машину, возможность отдохнуть или деньги.
Ток-шоу: программа, где ведущий разговаривает с известными людьми об их жизни и карьере; иногда в них звучит также и музыка.
Документальный фильм: фильм с фактической информацией, часто с анализом какой-то проблемы в обществе.
Сериал: ряд программ об одной и той же ситуации или тех же самых героях в различных ситуациях. Это может быть комедийный или драматический сериал.
Программа о текущих событиях: программа о текущих социальных или политических событиях.
В дополнение к регулярным последним известиям, Вы можете увидеть пьесы и фильмы, оперу и балет, и посмотреть все виды соревнований, викторин и спортивных событий. Вы можете также получить много полезной информации по образовательному каналу. Хороший сериал (возможно, детективная история или экранизация классического романа) может держать целое семейство перед телевизором весь день; а разве мы не сидим часами, смотря, как наша любимая футбольная или хоккейная команда играет в важном международном матче?
Телевидение определенно играет очень важную роль в жизни людей. Но хорошо ли это или плохо? Разве мы не стали более ленивыми из-за телевидения? Разве мы не выходим реже, чем мы это делали раньше? Разве мы не читаем меньше?
Мы имеем тенденцию с течением времени смотреть больше и слушать меньше. Возьмем, например, встречи знаменитых людей различных слоев общества. Мы любим смотреть, как эти люди принимают участие в этих обсуждениях. Просто слушать их голоса — не совсем то же самое.
Мы любим также смотреть телевизионные программы, рассказывающие о животных и птицах и всех видах живых существ в их естественной среде, а также следить за происходящими спортивными соревнованиями. Больше всего мы любим смотреть разные драматические произведения; пьесы многих ведущих драматургов; драматизированные версии работ известных романистов; прекрасные одноактные пьесы, комические сценки и разные забавные эпизоды.
Мы можем слушать симфонические концерты, оперы и оратории, популярные мелодии, которые передаются с очень четким изображением. Мы имеем возможность слушать информативные беседы по археологии, истории, географии, науке и технике. Мы слушаем критиков, которые рассказывают о новых книгах, фильмах, пьесах, произведениях искусства. Мы слушаем современных поэтов, читающих свои собственные стихи.

Questions:
1. Why do we prefer to see things on the screen, and not only to hear voices , speaking about them over the radio?
2. For what do we like to watch TV programmes about animals and birds, travels and travelling?

3. Why do we like to watch sporting events in actual progress?
4. What dramatic entertainments can we see on the TV screen?
5. What makes TV musical programmes so fascinating?
What lectures and well-informed talks can be heard?

Vocabulary:
newscast — последние известия (передаваемые по радио, телевидению)
walk of life — общественное положение; занятие, профессия
turn — очередной номер программы, выход; интермедия, сценка
amusing — забавный, занимательный, занятный
show — шоу
daily — ежедневный
weekly — еженедельный
monthly — ежемесячный
news — новости
current affairs programme — программа о текущих событиях
special report — специальный репортаж
life footage — прямой эфир
documentary — документальный фильм
children's programme — программа для детей
cartoon — мультфильм
educational programme — образовательная программа
weather report, forecast — прогноз погоды
variety show — эстрадная программа
quiz programme — викторина
feature film — художественный фильм
thriller — триллер, остросюжетный фильм
western — вестерн
serial — сериал
soap opera — мыльная опера
commercial — телевизионная реклама
videoclip — видеоклип
broadcast — транслировать
telecast — передавать телепрограмму
life broadcast, show programme — программа, идущая в прямом эфире
broadcast speech, interview, discussion — транслируемая речь, интервью, дискуссия
appear on the programme — появляться в программе
cover something — охватывать, давать материал
sound track — фонограмма
test card — сетка
close-up — крупный план
caption — титр
still — кадр

Тема 5.3. Михаил Ломоносов - выдающийся физик.

Практическое занятие 25

Образовательная цель: научить применять знания в решении практических задач..
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Mikhail Vasilyevich Lomonosov Russian: November 19 [O.S. November 8] 1711 – April 15 [O.S. April 4] 1765) was a Russian polymath, scientist and writer, who made important contributions to literature, education, and science. Among his discoveries was the atmosphere of Venus and the Law of Mass Conservation in chemical reactions. His spheres of science were natural science, chemistry, physics, mineralogy, history, art, philology, optical devices and others. Lomonosov was also a poet and influenced the formation of the modern Russian literary language.

Physicist
Catherine II of Russia visits Mikhail Lomonosov in 1764. 1884 painting by Ivan Feodorov
In 1756, Lomonosov tried to replicate Robert Boyle's experiment of 1673.[17] He concluded that the commonly accepted phlogiston theory was false. Anticipating the discoveries of Antoine Lavoisier, he wrote in his diary: "Today I made an experiment in hermetic glass vessels in order to determine whether the mass of metals increases from the action of pure heat. The experiments– of which I append the record in 13 pages– demonstrated that the famous Robert Boyle was deluded, for without access of air from outside the mass of the burnt metal remains the same".

That is the Law of Mass Conservation in chemical reaction, which was well-known today as "in a chemical reaction, the mass of reactants is equal to the mass of the products." Lomonosov, together with Lavoisier, is regarded as the one who discovered the law of mass conservation.

He stated that all matter is composed of corpuscles – molecules that are "collections" of elements – atoms. In his dissertation "Elements of Mathematical Chemistry" (1741, unfinished), the scientist gives the following definition: "An element is a part of a body that does not consist of any other smaller and different bodies ... corpuscle is a collection of elements forming one small mass." In a later study (1748), he uses term "atom" instead of "element", and "particula" (particle) or "molecule" instead of "corpuscle".

He regarded heat as a form of motion, suggested the wave theory of light, contributed to the formulation of the kinetic theory of gases, and stated the idea of conservation of matter in the following words: "All changes in nature are such that inasmuch is taken from one object insomuch is added to another. So, if the amount of matter decreases in one place, it increases elsewhere. This universal law of nature embraces laws of motion as well, for an object moving others by its own force in fact imparts to another object the force it loses" (first articulated in a letter to Leonhard Euler dated 5 July 1748, rephrased and published in Lomonosov's dissertation "Reflexion on the solidity and fluidity of bodies", 1760).

Практическое занятие 26

Поставьте глагол в скобках в Present Simple/

1. -... your brother (live) in Moscow?
-No, he (not). He (live) in Kiev.
2. There... a policeman at the door.
3.-... you (like) reading books?
-Yes, I.... I (like) to read very much.
4. She... pretty and friendly.
5. There... some mistakes in your dictation.
6. Where... the nearest bus stop, please?
7.-... the shops open at 8 o'clock?
-No, they... closed.
8. It (sound) interesting.
9. You... a teacher, aren't you?
10. The Hays (seem) to be a really happy family.
11. When it... cold, we (put on) warm clothes.
12 .... that hotel expensive?

Выберите и вставьте требуемый по смыслу глагол из приведенных в скобках.

Предложения переведите.

1. Economics _____ *(is/ are)* the scientific study of the way in which wealth _____ *(is/are)* produced and used.

2.Science _____ *(deal/deals)* with the changes and properties of living and non-living things.

3.Biology, physics and chemistry _____ *(is/are)* natural sciences.
4.Mathematics _____ *(include/ includes)* algebra and geometry as well as arithmetic.
5.Physics _____ *(is/are)* an exact science.
6.Physics _____ *(do not/does not)* deal with changes in composition which chemistry studies.
7.This course _____ *(is/are)* an introduction (введение), through theory and, experimentation, to motion
8. Physics _____ *(is/ are)* difficult to learn.
9. These hypotheses _____ *(are/is)* subject to verification.
10. This course _____*(introduce, introduces -вводит*) the student to the practice and language of art (искусство).

Тема 5.4. Михаил Ломоносов - первый русский профессор химии.

Практическое занятие 27

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст

In 1730, at nineteen, Lomonosov went to Moscow on foot, because he was determined to study. Not long after arriving, Lomonosov obtained admission into the Slavic Greek Latin Academy by falsely claiming to be a priest's son. That initial falsehood would nearly get him expelled from the academy a few years later when discovered.

Lomonosov lived on three kopecks a day, living off only black bread and kvass, but he made rapid progress scholastically. After three years in Moscow he was sent to Kiev to study for one year at the Kyiv-Mohyla Academy. He quickly became dissatisfied with the education he was receiving there, and returned to Moscow several months ahead of schedule, resuming his studies there.[10] He completed a twelve-year study course in only five years, graduating at the top of his class. In 1736, Lomonosov was awarded a scholarship to Saint Petersburg State University. He plunged into his studies and was rewarded with a two-year grant to study abroad at the University of Marburg, in Germany.

hemist and Geologist
Lomonosov was the first person to record the freezing of mercury. Believing that nature is subject to regular and continuous evolution, he demonstrated the organic origin of soil, peat, coal, petroleum and amber. In 1745, he published a catalogue of over 3,000 minerals, and in 1760, he explained the formation of icebergs.[13]

In 1763 he published On The Strata of the Earth - his most significant geological work. Lomonosov was proud to restore the ancient art of mosaics. In 1754, in his letter to Leonhard Euler, he wrote that his three years of experiments on the effects of chemistry of minerals on their colour led to his deep involvement in the mosaic art. In 1763, he set up a glass factory that produced the first stained glass mosaics outside of Italy. There were forty mosaics attributed to Lomonosov, with only twenty-four surviving to the present day. Among the best is the portrait of Peter the Great and the Battle of Poltava, measuring 4.8 × 6.4 meters.

Supply some, any, no, where required
I. ... pupils went to the river ... to the woods. 2. ... of my friends live in Moscow. 3. ... have
you ... English dictionaries? 4. Is there ... ink in the inkstand? Yes, there is ... 5. Bring ... chalk,
please. 6. There is ... chalk in the box. 7. Is there ... milk in the jug? Yes, there is....

Choose the correct variant
1. Before you ____, don't forget to lock the door.
-are leaving -will leave -leave -shall leave
2. Please do not speak to anyone before the police ____ .
-come -are coming -'ll come, came
3. His parents will be very glad if she____ the university.
-enter -'ll enter - enters - entered
4. When you ____ my brother, you ____ him.
-'ll see; - won't recognize; - see won't recognize; -saw, recognize; -'ll see, don't recognize

We won't discuss the matter until the headmaster _____ .
-'ll arrive - won't arrive - doesn't arrive- -arrives
VI . Replace the infinitives given in brackets by the Past Simple:
1 That boy (break) my window.
2 I (drive) to work every day last year.
3 Laura (hit) that boy.
4 James (keep) the book about films.
5 We (meet) them at the same place every week.
6 You (put) that there.
7 We (sit) at the same desks.
8 An American (win) Wimbledon last year.

Put in a/an or the where necessary
1. I wrote to her but ... letter never arrived.
2. Britain is ... island.
3. What is ... name of this village?
4. Jane is ... very nice person. You must meet her.
5. Montreal is ... large city in ... Canada.
6. What is ... largest city in ... Canada?
7. "What time is it?" "I don't know. I haven't got ... watch."

Раздел 6. Выдающиеся ученые

Тема 6.1 Томас Альва Эдисон - выдающийся учёный

Практическое занятие 28

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Прочитайте и переведите текст

Thomas Edison
Thomas Edison was born in 1847. He first went to school at the age of eight and a half. But after only three months his teacher called him «stupid» and he came home crying.
From that time his mother taught him at home and he read science books by himself. He got a job sending telegraph messages. Then he started inventing things. At the age of 12 he had a job selling newspapers. He made money in a clever but simple way.
He checked the news stories first. When the news was interesting he took a lot of papers; when it was boring he took only few.
In 1877 he made a «phonograph» — the first ever sound recorder. The following year he invented the light bulb.
In 1882 New York was the first city in the world with electric lights. In 1889 he made a «kinetoscope». He also made films for his uew machine.
In 1903 he made the world's longest film (It was ten minutes long!) After more than one thousand inventions, Edison died at the age of eighty-four. In his honour they switched off

the lights all over America.

Томас Эдисон
Томас Эдисон родился в 1847 году. Впервые он пошел в школу в восемь с половиной лет. Но спустя три месяца учительница назвала его глупым, и он пришел домой весь в слезах.
С того времени мать обучала его дома, и он сам читал научные книги. Он получил работу телеграфиста. Затем он начал заниматься изобретательством. В возрасте 12 лет он работал продавцом газет. Он зарабатывал деньги умным, но простым способом. Вначале он просматривал новости. Когда новости были интересными, он брал много газет; когда скучными — мало.
В 1877 году он изобрел фонограф — первый когда-либо звучавший прибор. В следующем году он изобрел лампочку.
В 1882 году Нью-Йорк был первым городом в мире с электрическим светом. В 1889 году он создал кинескоп. Он также снимал фильмы для своего нового изобретения. В1903 году он снял самый длинный в мире фильм (он длился 10 минут!) После более чем тысячи открытий Эдисон умер в возрасте 84 лет. В его честь по всей Америке выключили свет.

Questions:
1. Thomas Edison was born in 1847, wasn't he?
2. Why did mother teach him at home?
3. What were his inventions?
4. When did Edison die?
5. What did Americans do in his honour?

Практическое занятие 29

Прочитайте и переведите текст

Thomas Edison was born in 1847. He first went to school at the age of eight and a half. But after only three months his teacher called him «stupid» and he came home crying.

From that time his mother taught him at home and he read science books by himself. He got a job sending telegraph messages. Then he started inventing things. At the age of 12 he had a job selling newspapers. He made money in a clever but simple way.

He checked the news stories first. When the news was interesting he took a lot of papers; when it was boring he took only few.

In 1877 he made a «phonograph» — the first ever sound recorder. The following year he invented the light bulb.

In 1882 New York was the first city in the world with electric lights. In 1889 he made a «kinetoscope». He also made films for his uew machine.

In 1903 he made the world's longest film (It was ten minutes long!) After more than one thousand inventions, Edison died at the age of eighty-four. In his honour they switched off the lights all over America.

Questions:

1. Thomas Edison was born in 1847, wasn't he?
2. Why did mother teach him at home?
3. What were his inventions?
4. When did Edison die?
5. What did Americans do in his honour?

Vocabulary:

to check — проверять
phonograph — фонограф
kinetoscope — кинескоп
to switch off — выключать

Тема 6.2. Томас Альва Эдисон - великий американский изобретатель.

Практическое занятие 30

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст

Thomas Alva Edison was born on February 11, 1847 in Ohio. He began to work when he was twelve years old. His first job was a newspaper boy on a train. He soon began to produce his own newspaper. It was about the size of a handkerchief. He gathered news, printed and sold the newspapers all by himself. He had a small laboratory in the baggage car of this train. There he carried out experiments. Edison kept records of all his experiments. Then Edison got lessons in telegraphy and the next five years he worked as a telegraphist in various cities of the US and Canada.
In 1877 Edison invented a phonograph. This talking machine both recorded and played back. It resembled the present day tape recorder more than a record player.
Then Edison became interested in the electric-light bulb for lightning streets and buildings. It had taken Edison and his assistants thirteen months to produce the incandescent lamp, but he already knew, that success awaited it.
Edison carried out experiments from morning till night. All his inventions were the results of his endless work. He sometimes made thousands of experiments. For months he slept no more than one or two hours a day. Yet he had time to read not only scientific books. He was fond of Shakespeare and Tom Pain. He had over 10000 volumes in his library.
Edison continued to work all through his long life. He attributed his success not so much to genius as to hard work. Edison's inventions include the phonograph, or gramophone, the megaphone, the cinematograph, the improved lamp of incandescent light, many greatly improved systems of telegraphic transmission and numerous other things.

Thomas Edison

Edison is known as one of the greatest inventors of his time. He invented so much that it is difficult to say which of his achievements is the greatest. He was an experimenter and a practical man more than a theoretician.

Edison did not have any education. He went to school only for three months. Then he left it because the teacher considered him a dull boy. His mother became his teacher. The boy loved books and his mother said that he had a wonderful memory. When he first visited a public library and saw a lot of shelves with books he decided that he would know everything in the world. He measured the shelf and decided to read a foot of books every week.

In 1868 Edison built his first patented invention - an electromagnetic device.

It is said that he planned to ask three thousand dollars for his invention, though he secretly decided he would sell it for two thousand if necessary. He was invited to a meeting of businessmen who were interested in buying his invention, but when he was asked to name the price he was very nervous and quite unable to speak.

"It is no use asking us a big price", said one of the businessmen, "we have already decided how much we will pay. Forty thousand dollars is our limit".

With this money Edison established a workshop and began his career as a professional inventor at the age of twenty one.

All his inventions were the result of hard work. He sometimes made thousands of experiments. According to his words the idea that a genius works only by inspiration was absurd. "Genius is 2 per cent inspiration and 98 per cent perspiration", he often said.

Практическое занятие 31

One more famous businessman and inventor is Thomas Edison. He is credited with the foundation of the first industrial research lab, where he applied the mass production principles. He is also an acknowledged inventor of the light bulb, which lasts for a long period of time, the motion picture camera and the phonograph. He is the owner of not fewer than 1000 patents, which became the base of many major industries in the world. His first crucial development was a system of electric-power generation and distribution. His name is still associated with the appearance of fluoroscopy, telegraph and sound recordings. His advanced works became a great investment in the development of our contemporary world and his talent and hard work are invaluable.

Переведите на английский язык:

Еще один знаменитый предприниматель и изобретатель – это Томас Эдисон. Ему приписывают создание первой промышленной исследовательской лаборатории, где он применил принципы массового производства. Он также признанный изобретатель первой видео-камеры, фонографа и долговечной лампочки. Он является владельцем более 1000 патентов, которые легли в основу многих крупных индустрий в мире. Его первым важным изобретением стало развитие системы выработки электроэнергии и

ее распределения. Его имя также связано с появлением рентгеноскопии, телеграфа и звукозаписи. Его передовые работы стали огромными инвестициями в развитие современного мира, а его талант и трудолюбие являются бесценными.

Тема 6.3. Томас Альва Эдисон - великий американский предприниматель.

Практическое занятие 32

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: научить анализировать, аргументировать, развивать речь.
Прочитайте и переведите текст

One more famous businessman and inventor is Thomas Edison. He is credited with the foundation of the first industrial research lab, where he applied the mass production principles. He is also an acknowledged inventor of the light bulb, which lasts for a long period of time, the motion picture camera and the phonograph. He is the owner of not fewer than 1000 patents, which became the base of many major industries in the world. His first crucial development was a system of electric-power generation and distribution. His name is still associated with the appearance of fluoroscopy, telegraph and sound recordings. His advanced works became a great investment in the development of our contemporary world and his talent and hard work are invaluable.

Поставьте глагол в скобках в Present Continuous.
1.-Where arc our children? It's quid al home.
- They (lie) on the carpet and (draw).
2.- What you (do) now?
-I (look for) my key. I can't open the door.
3. Listen! Somebody (sing) a lovely song.
4. Why you (put on) the coat? It's sunny today.
5.Don't make so much noise. I (try) to work.
6.Why you (cry)? Is something wrong?
7.Let's go for a walk. It (not / rain) now.
8.Why you (not / hurry)? I (wait) for you.
9.1 don't speak any foreign language, but I (lean) English now.
10. We (spend) next weekend at home.
11.1 (meet) Liz tonight. She (come) from Cork.
12.He (go) to speak to his parents.

Практическое занятие 33

Переведите на английский язык:

Томас Эдисон
Томас Эдисон родился в 1847 году. Впервые он пошел в школу в восемь с половиной лет. Но спустя три месяца учительница назвала его глупым, и он пришел домой весь в слезах.

С того времени мать обучала его дома, и он сам читал научные книги. Он получил работу телеграфиста. Затем он начал заниматься изобретательством. В возрасте 12 лет он работал продавцом газет. Он зарабатывал деньги умным, но простым способом.

Вначале он просматривал новости. Когда новости были интересными, он брал много газет; когда скучными — мало.

В 1877 году он изобрел фонограф — первый когда-либо звучавший прибор. В следующем году он изобрел лампочку.

В 1882 году Нью-Йорк был первым городом в мире с электрическим светом. В 1889 году он создал кинескоп. Он также снимал фильмы для своего нового изобретения.

В1903 году он снял самый длинный в мире фильм (он длился 10 минут!) После более чем тысячи открытий Эдисон умер в возрасте 84 лет. В его честь по всей Америке выключили свет.

Questions:

1. Thomas Edison was born in 1847, wasn't he?
2. Why did mother teach him at home?
3. What were his inventions?
4. When did Edison die?
5. What did Americans do in his honour?

Vocabulary:

to check — проверять
phonograph — фонограф
kinetoscope — кинескоп
to switch off — выключать

Раздел 7. Устройство автомобиля.

Тема 7.1. Устройство автомобиля.

Практическое занятие 34

Образовательная цель: добиться усвоения системы знаний по теме.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Прочтите и переведите текст:

Components of the Automobile

Automobiles are trackless, self-propelled vehicles for land transportation of people or goods, or for moving materials. There are three main types of automobiles. They are passenger cars, buses and lorries (trucks).The automobile consists of the following components: a)the engine; b)the framework: c)the mechanism that transmits the power-engine to the wheels; d)the body.

Passenger cars are, as a rule, propelled by an internal combustion engine. They are

distinguished by the horse-power of the engine, the number of cylinders on the engine and the type of the body, the type of tpansmission, wheeelbase, weight and overall length.

There are engines of various designs. They differ in the number of cylinders, their position, their operating cycle, valve mechanism, ignition and cooling system.

Most automobile engines have six or eight cylinders, although some four-, twelve-, and sixteen-cylinder engines, are used. The activities that take place in the engine cylinder can be divided into four stages which are called strokes. The four strokes are: intake, compression, power and exhaust. «Stroke» refers to the piston movement. The upper limit of piston movement is called top dead centre, TDC. The lower limit of piston movement is called bottom dead centre, BDC.A stroke constitutes piston movement from TDC to BDC or from BDC to TDC. In other words, the piston completes a stroke each time it changes the direction of motion.

Components of the Automobile

The automobile is made up of three basic parts: the power plant, or the engine, the chassis and the body.

The engine is the source of power that makes the wheels rotate and the car move. It includes fuel, cooling, lubricating and electric systems. Most automobile engines have six or eight cylinders

The chassis includes a power train (power transmission), a running gear, steering and braking systems as well.

The power train carries the power from the engine to the car wheels.

The power transmission, in turn, contains the clutch, gearbox, propeller or cardan shaft, final drive, differential, rear axle and axle shafts. The running gear consists of a frame with axles, wheels and springs.

The body has a hood, fenders and accessories: the heater, stereo tape recorder, windshield wipers, conditioner, speedometer and so on.

Выберите и запишите термины, данные ниже, которые относятся к:
the engine (двигателю); the chassis (шасси); the body (кузову).

Fuel system, axle shaft, accessories, cooling system, frame with axles, running gear, lubricating system, steering system, heater, propeller shaft, power transmission, final drive, windshield wiper, clutch, wheels and axle shafts, gearbox, electric system, differential.

Дайте русские эквиваленты приведенных выше терминов.

Найдите в тексте ответы на вопросы:

1.What main parts is the automobile made up of?
2.What is the function of the engine?
3.What systems does the engine include?
4.What does the chassis consist of?
5.What units does the power transmission comprise?
6.What assemblies does the running gear consist of?
7.What has the body?

Закончите предложения, выбрав соответствующее по смыслу окончание.

1. The automobile is made up of...	1. a power transmission, running gear, steering and braking systems.
2. The engine is ...	2. the clutch, gearbox, propeller shaft, final drive, differential and axle shafts.
3. The engine includes ...	3. a hood, fenders and accessories.
4. The chassis consists of...	4. the engine, the chassis and the body.
5. The power transmission comprises ...	5. a frame with axles, wheels and springs.
6. The running gear consists of.. .	6. the source of power.
7. The body has ...	7. fuel, cooling, electric and lubricating systems.

Найдите в тексте английские эквиваленты предложений и запишите их.

1.Автомобиль состоит из трех основных частей: двигателя, шасси и кузова.
2.Двигатель — это источник энергии.
3.Двигатель включает в себя топливную, охлаждающую, смазывающую и электрическую системы.
4.Шасси включает в себя силовую передачу, ходовую часть, рулевую и тормозную системы.
5.Силовая передача (трансмиссия), в свою очередь, состоит из сцепления, коробки передач, карданного вала, главной передачи, дифференциала, заднего моста и полуосей.
6.Ходовая часть включает в себя раму с осями, колеса и рессоры.
7.Кузов включает в себя капот, крылья и вспомогательные аксессуары: отопитель, стеклоочистители, магнитолу, кондиционер и т. п.

Практическое занятие 35

Переведите текст.

HOW THE AUTOMOBILE LEARNED TO RUN

The automobile and the locomotive are cousins. They have the same grandmother, who lives in a museum in Paris. It has a long body on three wheels, a seat in the middle and a steam-boiler in front. It was built by a Frenchman, Nicholas Cugnot, in 1769.

Other engineers continued his work, producing various strange-looking cars. One had its steampipe in front, another at the back. One had three wheels, another had six. These queer machines were the parents of the locomotive and the automobile. They were just learning to go by themselves. Some could go as fast as six or seven miles an hour. People looked in amazement. To put a stove on wheels and expect it to take you somewhere!

In those days people traveled from one city to another in big stage-coaches. Each of them carried twenty passengers. The coachman sat on the top, driving a team of six horses. The postman sat beside him and blew a horn.

Then the first steam coaches began to roll along the same dusty roads. The steam coach had many enemies, first of all the owners of horse-drawn stage-coaches. In Britain they got the government to help them in their war against the steam coaches. Very strict rules for steam coaches were introduced. The war between the two kinds of vehicles lasted thirty years. The stage-coach won.

Введение и закрепление новой лексики:

accelerator	[ək'seləreıtə]	педаль "газа", акселератор
aerial	['eərıəl]	антенна
air conditioner	[eə][kən'dɪʃənər]	кондиционер
air-bag	[eə][bæg]	подушка безопасности
alloy wheels	['ælɔı][wi:ls]	легкосплавные диски
alternator	['ɔ:ltəneıtə]	генератор
automatic shift	[,ɔ:tə'mætık][ʃıft]	автоматическая кп
axle	['æksl]	ось
axle-pin	['æksl][pın]	чека
back-up lights	[bæk][ʌp][laıts]	фонари заднего хода
battery	['bætərı]	аккумулятор
bearing	['beərıŋ]	подшипник
belt	[belt]	ремень
blinker	['blıŋkə]	индикатор
body	['bɔdı]	кузов
bonnet	['bɔnıt]	капот
brake	[breık]	тормоз
brake lights	[breık][laıts]	стоп-сигналы
brake master cylinder	[breık]['mɑ:stə]['sılı də]	главный тормозной цилиндр

brake rotor/ disc	[breık]['rəutə]	тормозной диск
brakes	[breıks]	тормоза
breakdown	[’breɪk,daʋn]	поломка, сломаться
bumper	['bʌmpə]	бампер
caliper	['kælɪpəz]	тормозной суппорт
camber	['kæmbə]	угол развала
camshaf	['kæmʃɑ:ft]	распредвал
cap	['kæp]	крышка
carburetor	['kɑ:bjuretə]	карбюратор
caster	['kɑ:stə]	угол продольного наклона оси поворота колеса
choke	[ʧəuk]	воздушная заслонка
clutch	[klʌʧ]	сцепление
clutch plate	[klʌʧ][pleıt]	ведомый диск сцепления
cl tch release bearing	[klʌʧ][rı'li:s]['beərıŋ]	выжимной подшипник сцепления
column shift	['kɔləm][ʃıft]	подрулевой рычаг переключения передач
combustion chamber	[kəm'bʌsʧən]['ʧeımbə]	камера сгорания
compartment	[kəm'pɑ:tmənt]	отсек
connecting rod	[kə'nektıŋ][rɔd]	шатун
coolant	['ku:lənt]	охлаждающая жидкость
coolant tank	['ku:lənt][tæŋk]	расширительный бачек системы охлаждения
cowl	[kaul]	капот
crankshaft	['kræŋkʃɑ:ft]	коленвал

cylinder	['sılındə]	цилиндр
cylinder block	['sılındə][blɔk]	блок цилиндров
cylinder head	['sılındə][hed]	головка блока цилиндров
diesel	['di:zəl]	дизельное топливо
differential	[,dıfə'renʃəl]	дифференциал
distributor	[dıs'trıbjutə]	распределитель
door	[dɔ:]	дверь
door handle	[dɔ:]['hændl]	дверная ручка
door lock	[dɔ:][lɔk]	дверной замок
drum	[drʌm]	тормозной барабан
engine	['enʤın]	двигатель
engine block	['enʤın][blɔk]	блок цилиндров
exhaust	[ıg'zɔ:st]	выхлопная труба, выпуск, выхлоп
exhaust manifold	[ıg'zɔ:st]['mænıfəuld]	выпускной коллектор
exhaust system	[ıg'zɔ:st]['sıstım]	выпускная система
fan	[fæn]	вентилятор
fan clutch	[fæn][klʌʧ]	термомуфта вентилятора
fan cover	[fæn]['kʌvə]	кожух вентилятора
fast idle	[fɑ:st]['aıdl]	обороты холостого хода
fasteners	['fɑ:snəs]	крепеж
fender	['fendə]	крыло
filter	['fıltə]	фильтр
fix	[fıks]	починить

floor shift	[flɔ:][ʃıft]	напольный рычаг переключения передач
flywheel	['flaɪwi:l]	маховик
fog lights	[fɔg][laıts]	противотуманные фары
frame	[freım]	рама
fuel door	[fjuəl][dɔ:]	дверца топливного бака
fuel lines	[fjuəl][laı s]	топливопроводы
fuse	[fju:z]	предохранитель
gap	[gæp]	зазор
gas gauge	[gæs][geıʤ]	указатель уровня топлива
gas pedal	[gæs]['pedl]	акселератор, педаль газа
gas tank door	[gæs][tæŋk][dɔ:]	люк бензобака
gasket	['gæskıt]	прокладка
gauge	[geıʤ]	и мерительный прибор - указатель
gear	[gıə]	передача
gear lever	[gıə]['li:və]	рычаг переключения передач
gear shift	[gıə][ʃıft]	коробка передач, рычаг переключения передач
gear stick	[gıə][stık]	рычаг переключения передач
gearbox	['gɪəbɔks]	коробка передач
gearcase	['gɪəkeɪs]	коробка передач
grease	[gri:s]	смазка
guide	[gaıd]	направляющая планка
handbrake	['hæn(d)breɪk]	ручной тормоз
head light	[hed][laıt]	передние фары
header tank	['hedə][tæŋk]	расширительный бачек системы охлаждения

headliner	['hedˌlaɪnə]	обшивка потолка в салоне
heater	['hi:tə]	отопитель
high beam	[haɪ][bi:m]	дальний свет
hinge	[hɪnʤ]	дверная петля
hitch	[hɪʧ]	сцепное устройство
hood	[hud]	капот
horn	[hɔ:n]	звуковой сигнал - клаксон
hose	[həuz]	шланг
hub	[hʌb]	ступица
idle jet	['aɪdl][ʤet]	жиклер холостого хода
jet	[ʤet]	жиклер
lamp	[læmp]	фара в сборе
lens	[lenz]	стекло фары
lever	['li:və]	рычаг
license plate	['laɪsəns][pleɪt]	номерной знак
license plate number	['laɪsəns][pleɪt]['nʌmbə]	номерной знак
lock	[lɔk]	замок, фиксатор, блокировка
master cylinder	['mɑ:stə]['sılındə]	главный цилиндр
motor	['məutə]	мотор
mount	[maunt]	опора
mud flap	[mʌd][flæp]	брызговик
mudflap	['mʌdflæp]	брызговик
muffler	['mʌflə]	выхлопная труба
neutral	['nju:trəl]	нейтральная скорость

oil pan	[ɔıl][pæn]	поддон картера двигателя
outer rod	['autə][rɔd]	внешняя тяга
outside mirror	['aut'saıd]['mırə]	боковые зеркала заднего вида
overlap	[ˌəuvə'læp]	перекрытие (клапанов)
oxygen sensor	['ɔksıʤən]['sensə]	датчик кислорода
parking ight	['pɑ:kıŋ][laıt]	габариты
petrol cap	['petrəl]['kæp]	люк бензобака
petrol gauge	['petrəl][geıʤ]	указатель уровня топлива
pipe	[paıp]	труба
piston	['pıstən]	поршень
piston ring	['pıstən][rıŋ]	поршневое кольцо
pliers	['plaıəz]	клещи
power locks	['pauə][lɔks]	замки с электроприводом
power steering	['pauə][stıəıŋ]	усилитель рулевого управления
quarter window	['kwɔ:tə]['wındəu]	треугольное окошко
radiator	['reıdıeıtə]	радиатор
rear axle	[rıə]['æksl]	задний мост
rear light	[rıə][laıt]	задний габаритный фонар
rear window	[rıə]['wındəu]	заднее стекло
rear-view mirror	[rıə][vju:]['mırə]	зеркало заднего вида
relay	[rı'leı]	реле
reservoir	['rezəvwɑ:]	бачек
reverse	[rı'və:s]	задний ход
reversing lights	[ʀ(ə)vɛʀıŋ][laıts]	фонари заднего хода
rim	[rım]	колесный диск
rod	[rɔd]	тяга

rod end	[rɔd][end]	наконечник тяги
roof	[ru:f]	крыша
rotor	['rəutə]	бегунок
screwdriver	['skru:,draıvə]	отвертка
seal	[si:l]	сальник
shaft	[ʃɑ:ft]	вал
shift	[ʃıft]	включать передачу, передача
shift stick	[ʃıft][stık]	рычаг переключения передач
shock	[ʃɔk]	амортизатор
shock absorber	[ʃɔk][əb'sɔ:bə]	амортизатор
shoe	[ʃu:]	тормозная колодка
side mirror	[saıd]['mırə]	боковое зеркало
silencer	['saılənsə]	выхлопная труба, глушитель
sliding sunroof	[slıdıŋ]['sʌnru:]	люк
spare part	[speə][pɑ:t]	запчасть
spark plug	[spɑ:k][plʌg]	свеча зажигания
sparking plug	[spɑ:kıŋ][plʌg]	свеча зажигания
speedometer	[spı'dɔmıtə]	спидометр
splash guard	[splæʃ][gɑ:d]	брызговик
spring	[sprıŋ]	пружина
sprocket	['sprɔkıt]	шестерня
stabilizer bar	['steıbılaızə][bɑ:]	стабилизатор поперечной устойчивости
starter motor	['stɑ:tə]['məutə]	стартер
steering lock	[stıəıŋ][lɔk]	блокировка рулевого колеса

steering wheel	[stɪəɪŋ][wi:l]	рулевое колесо
stick shift	[stɪk][ʃɪft]	ручная кпп
top-lights	[stɔp][laɪts]	стоп-сигналы
strut	[strt]	амортизаторная стойка

Английские слова с транскрипцией на тему «Типы кузовов легковых автомобилей на английском».

hatchback	['hætbæk]	хэтчбек
micro compact car	['maɪkrəu'kmpæktk:]	малолитражный автомобиль
the versatile person	[ði:'və:sətaɪl'pə:sn]	универсал
landau	['lændɔ:]	ландо, автомобиль с открывающимся верхом
pickup truck	['pɪkʌptrʌk]	пикап
van	[væn]	фургон
minivan	[’mnvæn]	минивэн
sports car	[sp:tsk:]	спортивный автомобиль
phaeton	['feɪtn]	фаэтон
station wagon	['steɪʃənwægən]	универсал
sedan	[sɪ'dæn]	седан
cabriolet	['kæbrəle]	кабриолет
off-road car	[ɔrəudkɑ:]	внедорожник
convertible	[kən'və:təbl]	автомобиль с откидным верхом
roadster	['rəudstə]	родстер, автомобиль с открытым двухместным кузовом
two-door sedan	[tu:d:sɪ'dæn]	двухдверный седан
limousine	['lɪmu:zi:n]	лимузин

sport-utility vehicle	[spɔ:tju:'tılıtı'vi:ıkl]	внедорожник
coupe	['ku:peı]	купе, двухместный закрытый автомобиль
pickup	['pıp]	пикап
four-door coupe	[f:d:'ku:peı]	четырехдверное купе
crossover	['krsəʊvə]	кроссовер
four-door sedan	[f:d:sı'dæn]	четырехдверный седан

Тема 7.2. Карбюратор.

Практическое занятие 36

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст

TEXT: A CARBURETOR

A carburetor (American and Canadian spelling), carburator, carburettor, or carburetter (Commonwealth spelling) is a device that blends air and fuel for an internal combustion engine. It is sometimes colloquially shortened to *carb* in North America or *carby* in Australia

Carburetors have largely been supplanted in the automotive industry by fuel injection.

The carburetor was invented by an Italian, Luigi De Cristoforis, in 1876. A carburetor was developed by Enrico Bernardi at the University of Padua in 1882, for his "Motrice Pia", the first petrol combustion engine (one cylinder, 121.6 cc) prototyped on 5 August 1882.

A carburetor was among the early patents by Karl Benz as he developed internal combustion engines and their components. The world's first carburetor for the stationary engine was invented by the Hungarian engineers Jбnos Csonka and Donбt Bбnki in 1893

The carburetor works on Bernoulli's principle: the faster air moves, the lower its static pressure, and the higher its dynamic pressure. The throttle (accelerator) linkage does not directly control the flow of liquid fuel. Instead, it actuates carburetor mechanisms which meter the flow of air being pulled into the engine. The speed of this flow, and therefore its pressure, determines the amount of fuel drawn into the airstream.

Most production carbureted (as opposed to fuel-injected) engines have a single carburetor and a matching intake manifold that divides and transports the air fuel mixture to theintake valves, though some engines (like motorcycle engines) use multiple carburetors on split

heads. Multiple carburetor engines were also common enhancements for modifying engines in the USA from the 1950s to mid-1960s, as well as during the following decade of high-performance muscle cars fueling different chambers of the engine's intake manifold.

Older engines used updraft carburetors, where the air enters from below the carburetor and exits through the top. This had the advantage of never "flooding" the engine, as any liquid fuel droplets would fall out of the carburetor instead of into the intake manifold; it also lent itself to use of an oil bath air cleaner, where a pool of oil below a mesh element below the carburetor is sucked up into the mesh and the air is drawn through the oil-covered mesh; this was an effective system in a time when paper air filters did not exist.

Beginning in the late 1930s, downdraft carburetors were the most popular type for automotive use in the United States. In Europe, the sidedraft carburetors replaced downdraft as free space in the engine bay decreased and the use of the SU-type carburetor (and similar units from other manufacturers) increased. Some small propeller-driven aircraft engines still use the updraft carburetor design.

Outboard motor carburetors are typically sidedraft, because they must be stacked one on top of the other in order to feed the cylinders in a vertically oriented cylinder block.

The main disadvantage of basing a carburetor's operation on Bernoulli's Principle is that, being a fluid dynamic device, the pressure reduction in a venturi tends to be proportional to the square of the intake air speed. The fuel jets are much smaller and limited mainly by viscosity, so that the fuel flow tends to be proportional to the pressure difference. So jets sized for full power tend to starve the engine at lower speed and part throttle. Most commonly this has been corrected by using multiple jets. In SU and other movable jet carburetors, it was corrected by varying the jet size. For cold starting, a different principle was used in multi-jet carburetors. A flow resisting valve called a choke, similar to the throttle valve, was placed upstream of the main jet to reduce the intake pressure and suck additional fuel out of the jets.

A carburetor basically consists of an open pipe through which the air passes into the inlet manifold of the engine. The pipe is in the form of a venturi: it narrows in section and then widens again, causing the airflow to increase in speed in the narrowest part. Below the venturi is abutterfly valve called the throttle valve — a rotating disc that can be turned end-on to the airflow, so as to hardly restrict the flow at all, or can be rotated so that it (almost) completely blocks the flow of air. This valve controls the flow of air through the carburetor throat and thus the quantity of air/fuel mixture the system will deliver, thereby regulating engine power and speed. The throttle is connected, usually through a cable or a mechanical linkage of rods and joints or rarely by pneumatic link, to the accelerator pedal on a car or the equivalent control on other vehicles or equipment.

Fuel is introduced into the air stream through small holes at the narrowest part of the venturi and at other places where pressure will be lowered when not running on full throttle. Fuel flow is adjusted by means of precisely calibrated orifices, referred to as *jets*, in the fuel path.

II. Дайте русские эквиваленты выделенным словам

III. Ответьте на вопросы:

What is a carburetor?
Where is it used?

Who invented the carburetor?
What are the main principles of its work?
What is the main disadvantage of basing a carburetor's operation on Bernoulli's Principle?
What does a carburetor consist of?

Практическое занятие 37

Переведите предложения на русский язык, обращая внимание на термины.

1. After graduating from the college I shall become a technician.
2. I shall deal with manufacturing cars.
3. The production of the automobile comprises five phases, such as: designing, working out the technology of manufacturing processes, laboratory tests, road tests, mass production.
4. The automobile of today must have high efficiency, long service life, driving safety, ease of maintenance and be stable on the road.
5. The automobile must meet up-to-date demands, that is, it must have rapid acceleration, smooth-acting clutch, silent gearbox, dependable braking and steering systems, dependable ignition system.
6. Before the car is put into mass-production it must be subjected to laboratory and road tests.
7. Technicians should know the technology of manufacturing processes.

Прочтите и переведите интернациональные слова.

Specialist, automobile, industry, production, phase, technology, process, test, mass, fact, service, comfortable, ecological, method, type, corrosion, material, optimal, problem, mechanism, control, system.

Переведите слова, обращая внимание на значение суффиксов.

Industry — industrial; to produce — production — producer; to design — designer; technology — technological — technologically; to require — requirement; efficient — efficiency — efficiently; safe — safely — safety; to maintain — maintenance; comfort — comfortable; ecology — ecological; to resist — resistance — resistant; to operate — operation — operational; to accelerate — acceleration; to construct — construction.

Ответьте на вопросы.

1. What main parts is the automobile made up of?
2. What is the function of the engine?
3. What systems does the engine include?
4. What does the chassis consist of?
5. What units does the power transmission comprise?
6. What assemblies does the running gear consist of?
7. What has the body?

Выберите и запишите соответствующий описанию механизм.

1. Mechanism which is used to stop the car.
   a) clutch; b) brakes; c) gearbox; d) steering system.
2. Mechanism which is used to guide the car.
   a) clutch; b) brakes; c) gearbox; d) steering system.
3. Mechanism which engages or disengages the engine and the car wheels.

a) clutch; b) brakes; c) gearbox; d) steering system.
4. Mechanism which is used to change the speed of the car.
a) clutch; b) brakes; c) gearbox; d) accelerator.
5. Mechanism which is used to guide the car in one or the other directions.
a) clutch; b) brakes; c) gearbox; d) steering system.
6. Device which is designed to measure the speed of the car.
a) heater; b) windscreen; c) speedometer; d) tachometer.

Раздел 8. Двигатель

Тема 8.1. Двигатель.

Практическое занятие 38

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Прочитайте и переведите текст

Engine
An engine produces power by burning air and fuel. The fuel is stored in a fuel. The fuel tank is connected to a fuel pipe. The fuel pipe carries the fuel to a fuel pump. The fuel pump is connected to the carburettor. The fuel pump pumps the fuel into the carburettor. In the carburettor the fuel is mixed with air. The fuel and air are drawn into the engine cylinder by the piston. Then the fuel and air are compressed by the piston and ignited by the spark plug. They burn and expand very quickly and push the piston down. Then the power is produced. The burned fuel and air are expelled from the cylinder by the piston.

The flow of gases into and out of the cylinder is controlled by two valves. There is an inet valve allowing fresh fuel mixture into the cylinder and an exhaust valve which which allows the burnt gases to escape.

There are two clasic engine operating cycles:
the four-stroke cycle;
the two-stroke cycle.

The complete four-stroke cycle comprises:
the induction stroke (the piston moves downwards):
the compression stroke(the piston moves upwards);
the power stroke (the piston moves downwards);
the exhaust stroke (the pistone moves upwards).

Principle of Operation of the Four-Stroke Petrol Engine

The internal combustion engine is called so because fuel is burned directly inside the engine itself. Most automobile engines work on a 4-stroke cycle. A cycle is one complete sequence of 4 strokes of the piston in the cylinder. The operating cycle of the four-stroke petrol engine includes: inlet stroke (intake valve opens), compression stroke (both valves closed), power stroke (both valves closed), exhaust stroke (exhaust valve is opened).

To describe the complete cycle, let's assume that the piston is at the top of the stroke (top dead center) and the inlet and the exhaust valves are closed. When the piston moves down the inlet valve opens to intake a charge of fuel into the cylinder. This is called the inlet (intake) stroke. On reaching the lowest position (bottom dead center) the piston begins to move upward into the closed upper part on the cylinder, (he inlet valve is closed and the

mixture is compressed by the rising piston. This is called the compression stroke. As the piston again reaches the top dead center the spark plugs ignite the mixture, both valves being closed during its combustion. As a result of burning mixtures the both valves being closed during its combustion. As a result of burning mixtures the gases expand and great pressure makes the piston move back down the cylinder. This stroke is called the power stroke. When the piston reaches the bottom of its stroke, the exhaust valve is opened, pressure is released, and the piston again rises. It lets the burnt gas flow through the exhaust valve into the atmosphere. This is called the exhaust stroke which completes the cycle. So the piston moves in the cylinder down (intake stroke), up (compression stroke), down (power stroke), up (exhaust stroke).

The heat released by the fuel is transformed into work so that the reciprocating movement of the pistons is converted into rotary movement of a crankshaft by means of connecting rods.

1. Why is the engine called the internal combustion engine?
2. What stroke is called the inlet one?
3. What is a compression stroke?
4. What takes place in the cylinder on power stroke?
5. What takes place on the exhaust stroke?
6. By means of what is the reciprocating movement of the pistons converted into rotary movement of a crankshaft?

…… 1.It is called so because the fuel (the mixture) is burned…
a)directly inside the engine;
b)outside the engine.

…… 2. The inlet stroke is called so because during moving down the piston…
a) the inlet valve opens to intake a charge of fuel into the cylinder;
b)the inlet valve is closed and the mixture is compressed.

3.The compression stroke is a stroke
a) when the inlet valve opens to intake a charge of fuel into the cylinder;
b) when the inlet valve is closed and the mixture is compressed.

4. On power stroke
a)the spark plugs ignite the mixture, both valves are closed during its combustion;
b)the exhaust valve is opened and the residual gas flows through the exhaust valve into the atmosphere.

5.On the exhaust stroke
a)the spark plugs ignite the mixture, both valves are closed during its combustion;
b)the exhaust valve is opened and the residual gas flows through the exhaust valve into the atmosphere.

6. It is done
a)by means of pistons;
b)by means of the connecting rods.

Закончите предложения, выбрав правильный по смыслу вариант окончания.

1.The internal combustion engine is called so because fuel is burned…
a)outside the engine;
b)inside the engine.

2.On the inlet stroke.....
a)the intake valve opens;
b)the intake valve is closed;
c)the intake and the exhaust valves are closed.

2. On the compression stroke
a). the intake valve opens;
b).the intake valve is closed;
c).the intake and the exhaust valves are closed.

3. On the power stroke
a).the intake valve opens;
b)the intake valve is closed;
c)the intake and the exhaust valves are closed.

4. On the exhaust stroke
a).the exhaust valve opens;
b).the intake valve is closed;
c).the intake and the exhaust valves are closed.

Прочитайте и переведите текст

Four-stroke engine 2

The internal combustion engine is a machine that develops power from the combustion of fuel within a cylinder. The cycle of operation is as follows:

Suction Stroke- Just before the piston reaches the inner dead-centre, a valve, usually of the "poppet" type, is opened.

On its outward stroke, the piston draws into the cylinder an explosive mixture of air and fuel vapour.

Shortly before the piston reaches the outer dead-centre, the inlet valve is closed and the compression stroke begins.

Compression stroke- During this stroke, the whole of the gas in the cylinder is compressed into the free space at the head of the cylinder.

Explosion, or Working Stroke- When the compression stroke is almost complete, the explosive mixture is ignited by an electric spark or by other suitable means. The gases reach their maximum pressure almost immediately, and work is done until the piston has again reached a position just before the outer dead- centre, when a second exhaust valve is opened.

If the ignition takes place too late, the piston begins its outward journey before the maximum pressure is developed and power is lost.

If, on the other hand, the explosive mixture is ignited too early, the maximum pressure is reached before the piston has completed its inward journey, and engine is slowed down or even stopped.

Exhaust Stroke- The burnt gases are driven out in front of the and its return until the inlet valve again opens, when the cycle is repeated.

Тема 8.2. Сцепление.

Практическое занятие 39

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст

Clutch

The clutch is a friction device. It connects the engine to the gears in the gearbox. It is used for disconnecting the engine from the gearbox, for starting the car and for releasing the engine from the car wheels. The clutch is fixed between the flywheel of the engine and the gearbox und consists of two plates (discs): the friction disc and the pressure disc. The friction disc is situated between the flywheel and the pressure plate and has a hard-wearing material on each side.

The basic principal operation of the clutch is a frictional force acting between two discs. The clutch is controlled by the clutch pedal. When the pedal is at rest the clutch is engaged and the running engine is connected to the gearbox. When the pedal is pressed down the clutch is disengaged and the engine runs idly.

Найдите в тексте данные ниже слова и напишите их русские эквиваленты.

Friction device, clutch, gearbox, to free, to start, to release, flywheel, pressure plate, basic principle of operation, to fix, hard-wearing material, to consist of, to be controlled by, running engine, to run idly, to engage, to disengage, to press down, to be at rest

Найдите в тексте ответы на следующие вопросы:

1. What device is the clutch?
2. What units does it connect?
3. What is the clutch used for?
4. Where is the clutch placed?
5. What plates does the clutch consist of?
6. What is the basic principal operation of the clutch?
7. What is the clutch controlled by?
8. What takes place when the clutch pedal is at rest?
9. When does the engine run idly?

Закончите предложения, выбрав соответствующее логике окончание.

1. The clutch is a device connecting ....
a).the rear axle and axle shafts.
b).the gearbox and differential.
c).the engine and the gearbox.
2.The clutch is situated between ....
a).the gearbox and cardan shaft.
b).the flywheel and the gearbox.
c).the gearbox and rear axle.
3.The clutch is controlled by ....
a). the brake pedal
b). the clutch pedal.
c).the gearbox and rear axle.
4.The clutch is engaged ....
a).when the clutch pedal is pressed down.
b).when the clutch pedal is at rest.
5.The clutch is disengaged ....
a).when the clutch pedal is at rest.
b).when the clutch pedal is pressed down.

Прочтите диалог и выполните следующие за ним упражнения.

DIALOGUE

A.: What is the function of the clutch?
B.: You see, it serves three functions. It is used for freeing the engine from the gearbox, for starting the car and for freeing the engine from car wheels.
A.: Is it a friction device?
B.: Yes, of course. It is fixed between the flywheel of the engine and the gearbox and usually consists of two discs.
A.: What discs?
B.: The friction disc (driven disc) and the pressure disc.
A.: I suppose the principle of operation of clutches is a frictional force between discs. Am I right?
B.: Yes, you are. When the clutch is fully engaged the frictional force makes discs rotate at the same speed.
A.: And by what is the clutch controlled?
B:.By the clutch pedal. When it is at rest the clutch is engaged and when it is pressed down the clutch is disengaged and the engine is disconnected from the car wheels.
A.: Thank you. And what types of clutches do you know?
B.: Positive clutches and gradual engagement clutches.
A.: Thank you very much for your information.
B.: Not at all. Glad to help you.

Найдите в диалоге английские эквиваленты следующим русским терминам и выпишите их.

Функция сцепления, для отключения двигателя от коробки передач, крепится между маховиком и коробкой передач, фрикционный (ведомый) диск, нажимной диск, фрикционная сила, сцепление включено, педаль в исходном положении, педаль сцепления нажата.

Тема 8.3. Система управления. Ходовая часть.

Практическое занятие 40

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: научить анализировать, аргументировать, развивать речь.

Прочитайте и переведите текст

Chassis

The main units of the chassis are: the power transmission, the running gear and the steering mechanism. The power transmission includes the whole mechanism between the engine and the rear wheels. This entire mechanism consists of the clutch, gearbox, propeller (cardan) shaft, rear axle, final drive, differential and axle shafts.
At the front end of the car is the engine. On the back of it is the flywheel. Behind the

flywheel is the clutch. The clutch is a friction device connecting the engine with the gears of the gearbox. The main function of the gearbox is to change the speed of the car.
The power is always transmitted by the cardan shaft to the live back axle. The final drive reduces the high speed of the engine to the low speed of the driving wheels. The differential enables the driving wheels to turn at different speeds which is necessary when turning the car. The foundation of the automobile is the frame to which different chassis units are attached.
The rear axle is capable of moving up and down about the frame. The rear axle is an important part of the transmission. It carries the greater portion of the weight of the car.
The steering mechanism is designed for changing the direction of the car.
The brakes are used for stopping the car, for decreasing its speed and for holding the car position.

Найдите в тексте ответы на следующие вопросы.

1. What main units does the chassis consist of?
2. Where is the engine located?
3. Where is the flywheel fixed?
4. Where is the clutch placed?
5. What is the gearbox designed for?
6. By what shaft is the power transmitted to the back axle?
7. What does the rear axle do?
8. What is the function of the differential?
9. What purpose is the steering system designed for?
10. What is the function of the brakes?

Переведите предложения на русский язык, обращая внимание на Complex Subject.

1. Transmission, running gear and steering mechanism are known to be the main units of the chassis.
2. The clutch is known to connect the engine with the driving wheels of the car.
3. The gearbox is known to change the speed of the car.
4. The steering mechanism is known to change the direction of the car.
5. Brakes are considered to be one of the most important mechanisms of the car.

Переведите на английский язык следующие предложения (при выполнении задания вы можете обращаться к тексту).

1.Основными узлами шасси являются: трансмиссия, ходовая часть и рулевой механизм.
2.Радиатор расположен в передней части автомобиля.
3.Маховик крепится на задней части двигателя.
4.Сцепление соединяет двигатель с коробкой передач.
5.Коробка передач предназначена для изменения скорости движения автомобиля.
6.Усилие передается карданным валом.
7.Главная передача снижает высокие обороты двигателя до невысоких оборотов

ведущих колес.
8.Дифференциал позволяет ведущим колесам вращаться с разной скоростью при повороте автомобиля.
9.Рулевой механизм предназначен для изменения направления движения автомобиля.
10.Тормоза используются для остановки или снижения скорости автомобиля.

DIALOGUE

Transmission Mechanism
Teacher: Let's speak about the transmission mechanism. What main units does the transmission include?
Student:The transmission is the entire mechanism between the engine and the rear wheels. It includes the clutch, gearbox, cardan shaft, rear axle, final drive and differential.
T.:What does the clutch connect?
S.:The clutch connects the engine with the gearbox.
T.:And what does the gearbox do?
S.:The gearbox changes the speed of the car.
T.:What does the differential enable?
S.:The differential enables the driving wheels to move at different speeds when turning the car.
T.: For what purpose is the steering system used?
S.: The steering system is used for changing the direction of the
car movement.
T.: And what is the function of the brakes?
S.: Brakes are used to slow or stop the car.
T.: That's right. You know the subject very well.

Переведите текст на русский язык, пользуясь словарем.

Basic Troubles of Transmission Mechanism
The transmission of the engine torque to the driving wheels of the mitomobile must be smooth. There should be no vibration in the op- c rat ion of transmission mechanism within the range of travelling speeds.
The indications of malfunctions in the transmission mechanism components are as follows:
1.incomplete disengagement of the clutch;
2.difficult engagement or self-demeshing of gears;
3.run out and vibration of the cardan-drive shaft.

What to do in these cases:
1.Check the free travel of the clutch pedal and adjust it.
2.Check the oil level in the gearbox housing and wash breather channel.
3.Check to see that all the fastening bolts are securely tightened and that the trunnion crosses fit properly the bearings, and the bearings, in turn, the universal-joint forks.

Переведите слова на русский язык, обращая внимание на суффиксы.
to transmit - transmission; to connect — connection;

to found — foundation; to move — movement.

Переведите на русский язык интернациональные слова.
Transmission, system, mechanism, radiator, friction, automobile, cardan, portion, final, accelerator, pedal, position.

Переведите предложения на русский язык, используя приведенные в упражнении 1 слова.
1. The chassis includes the running gear, the power transmission and the steering mechanism.
2. The power transmission consists of the clutch, gearbox, cardan shaft, rear axle, final drive, differential and axle shafts.
3. The clutch connects the engine with the driving wheels.
4. The gearbox changes the speed of the car movement.
5. The steering mechanism changes the direction of the car.

Тема 8.4. Ручная и автоматическая трансмиссия

Практическое занятие 41

Образовательная цель: научить применять знания в решении практичес задач..
Развивающая цель: прививать уменья и навыки учебной работы.

Переведите текст на русский язык, пользуясь словарем.

UNDERCARRIAGE

Undercarriage parts are composed of four major systems: transmission system, driving system, steering system and brake system, whose function is to accept the power of engine in order to make car move in accordance with the driver's control. At below, let us together know these four systems in detailed.

To begin with, transmission system, in general, consists of clutch, transmission, universal gearing, main retarder, differential mechanism and the axle shaft. Clutch lies in flywheel between engine and gearbox. In the process of vehicle moving, driver can step down or loosen the clutch pedal according to need. The functions of clutch mainly include: (1) the car a smooth start (2) to interrupt the transmission of power to meet the shift (3) to prevent transmission of the overload.

Generally, transmission is divided into manual transmission (MT), automatic transmission (AT), manual/automatic transmission and stepless transmission. Main retarder is the main part of transmission system, whose functions are reducing speed and increasing torque. Normal driving of the car, the engine speed is around 2000 to 3000 r/min. If such a high speed is lowered down only by gearbox, the gearbox size will become larger. In addition, the speed reduces and the torque will increase, which result in the higher load of a gearbox and gearbox transmission. Therefore, we set a main retarder. The modern automobile main retarder widely adopts spiral bevel gears and hypoid gears. Differential mechanism is also known as the inter-wheel differential. According to the work characteristics, modern car differential usually divided into gear type differential and limited slip differential. Axle shaft is the solid shaft that transmits torque lying between differential mechanism and driving wheel.

What's more, driving system consists of car frame, axles, wheels, tries and suspension component. Its functions are: 1. Accept the power of transmission system; 2 bear the total weight of vehicle and the ground reaction force; 3. Keep the comfortable travelling; 4. ensure good handling and stability of vehicles.

Furthermore, in the essential, the brake system is the system of guaranteeing safety. Braking system has two main parts: brake control mechanism and brake.

It's well known that the undercarriage parts play an important role in the car. It just likes a base course supporting the total weight, engine, assembly or other parts. Undercarriage works well, as it generally consists of several indispensable parts, including the transmission system, drive system, steering system, and brake system. Furthermore, they serve the car distinctly.

Transmission system

As a rule, transmission system is composed of clutch, gearbox, reducer, differential, etc. Transmission system's main job is to cooperate with the engine to be normal driving. And, it's divided into mechanical transmission, hydro-mechanical transmission, static-hydraulic transmission, and electrical transmission.

No matter what type of the transmission it is, it should offer four functions - slowing down/changing speed, backing up, differential effect, as well as breaking off the transmission.

Drive system

Drive system provides a comfortable, and stable driving by tractive effort, or resisting both the impact and vibration from the ground. Additionally, it also offers stable operation with cooperation of the steering system. In general, drive system is mainly made up of tire, frame, car axle as well as the suspension. Each of them has their own duty.

For instance, car frame works as supporting and connecting other parts. Car axle is able to bear the weight or car frame. Meanwhile, it protects the differential, or reducer.

Steering system

If you hope the car makes a turn in accord with your direction, the steering system will help you. In terms of power steering, steering system is classified into mechanical steering and power steering system. Speaking of the energy source, it usually comes from the driver or motor.

Steering system generally contains steering wheel, steering axle, knuckle, steering drag link, etc.

Brake system

Brake system contains several parts, including the front/rear brake, control device, gearing, and so forth. Generally speaking, a car should be equipped with two systems - parking brake system, and service brake system. As a result, car is capable of offering safe parking and normal reduction.

As the undercarriage parts play an irreplaceable role, undercarriage parts manufacturer creates more and more innovative technologies, such as electronic stability program, electrical power assisted steering, tire pressure monitoring system, etc.

Electronic stability program makes car keep normal during making a turn or braking; electrical power assisted steering improves the stability and flexibility; drivers can get the picture of the air leakage or unstable pressure timely by the tire pressure monitoring system.

With these techniques, there is no doubt that car will provide a higher performance.

Transmission as an assembly of parts including the speed-changing gears and the propeller shaft by which the power is transmitted from an engine to a live axle. Often transmission refers simply to the gearbox that uses gears and gear trains to provide speed and torque conversions from a rotating power source to another device.

In British English, the term *transmission* refers to the whole drivetrain, including clutch, gearbox, prop shaft (for rear-wheel drive), differential, and final drive shafts. In American English, however, the term refers more specifically to the gearbox alone, and the usage details are different.

The most common use is in motor vehicles, where the transmission adapts the output of the internal combustion engine to the drive wheels. Such engines need to operate at a relatively high rotational speed, which is inappropriate for starting, stopping, and slower travel. The transmission reduces the higher engine speed to the slower wheel speed, increasing torque in the process. Transmissions are also used on pedal bicycles, fixed machines, and anywhere rotational speed and torque must be adapted.

Often, a transmission has multiple gear ratios (or simply "gears"), with the ability to switch between them as speed varies. This switching may be done manually (by the operator), or automatically. Directional (forward and reverse) control may also be provided. Single-ratio transmissions also exist, which simply change the speed and torque (and sometimes direction) of motor output.

In motor vehicles, the transmission generally is connected to the engine crankshaft via a flywheel and/or clutch and/or fluid coupling, partly because internal combustion engines cannot run below a particular speed. The output of the transmission is transmitted via driveshaft to one or more differentials, which in turn, drive the wheels. While a differential may also provide gear reduction, its primary purpose is to permit the wheels at either end of an axle to rotate at different speeds (essential to avoid wheel slippage on turns) as it changes the direction of rotation.

Conventional gear/belt transmissions are not the only mechanism for speed/torque adaptation. Alternative mechanisms include torque converters and power transformation (for example, diesel-electric transmission and hydraulic drive system). Hybrid configurations also exist.

Translate the text.

Elementary Hydraulic Systems

The simplest hydraulic system is perhaps the hydraulic shock absorber which consists of a pump (piston) and resistance. Another elementary type of system is the hydraulic weighing machine, which consists of a non-continuous pump element(piston or diaphragm) and a pressure gauge.

Other elementary systems consists of a jack, transmission line, and a pump of the non-continuous type without control gear, although valves may still be present for secondary purposes. Systems of this type are used for remote transmission of manual or pedal effort or motion, or for remote transmission of instrument indication.

The simplest best known system of this type hydraulic brake

DIALOGUE

Mike: Peter, do you remember what our teacher told us last time?
What do you know about gearboxes?
Peter: I know that the gearbox is used to change the speed of the car.
M.: And how many speeds does the gearbox provide?
P.: It can provide four forward speeds and one reverse.
M.: Into what types are the gearboxes divided according to their arrangements?
P.: They are divided into sliding-mesh type, constant-mesh type
and epicyclic type.
M.: What type is the simplest?
P.: The sliding-mesh one.
M.: Thank you very much for you help.
P.: You are welcome. Glad to help you.

Gearbox

The gearbox is placed between the clutch and the propeller shaft. I lie principal function of the gearbox is to vary the speed of the car movement to meet the road conditions. The gearbox provides four forward speeds and one reverse, as follows:

1. First or low gear;
2.Second gear;
3.Third gear;
4.Fourth or top gear;
5.Reverse gear.

There are many constructional arrangements of gearboxes, which can be classified as follows:

1.Sliding-mesh type;
2.Constant-mesh type;
3.Epicyclic (planetary) type.

The sliding-mesh type is the simplest one and is the oldest historically. The constant-mesh type is the most widely used type. They are termed "ordinary" gearing, the characteristic feature of which is that I lie axes of the various gears

are fixed axes. The gears simply rotate about their own axes.

The characteristic feature of epicyclic (planetary) gearing is that one gear rotates about its own axis and also rotates bodily about some other axis.

To secure the several speeds of the car the clutch shaft is mounted In direct line with the gearbox shaft. The gearbox shaft carries on it the sliding gears which are used for shifting to secure the forward speeds and the reverse drive.

Послетекстовые упражнения

The exercises to be done after reading the text

Найдите в тексте ответы на вопросы.

1.Where is the gearbox situated?
2.What is the function of the gearbox?
3.What speeds does the gearbox provide?
4.What types of gearboxes do you know?
5.Why is the clutch shaft mouned in direct line with the gearbox shaft?

Переведите предложения на английский язык.

1.Коробка передач предназначена для изменения скорости движения автомобиля.
2.Коробка передач обеспечивает четыре передние скорости и задний ход.
3.Коробки передач могут быть: со скользящими шестернями, с постоянным зацеплением шестерен и планетарного типа.
4.Самыми простыми являются коробки передач со скользящими шестернями.
5.Коробки передач с постоянным зацеплением шестерен используются наиболее часто.
6.Скользящие шестерни на валу коробки передач используются для обеспечения передних скоростей и обратного хода.

Упражнение 7. Переведите текст, пользуясь словарем.

Gearboxes are assembled and disassembled on special stands using special mechanisms. In case of trouble in change-speed gearbox it can be repaired only in the workshop. But in order not to get into trouble you should do the followings steps:

a).check the oil level in the gearbox casing;
b).wash the breather channel;
c).change the oil in accordance with the lubrication schedule;
d).wash the gearbox with a thin mineral oil;
e).drain the used oil through the drain hole.

DRIVIHG SYSTEM

When the motor - car has to be sat in motion first of all it is necessary to start the engine. When the engine is running you start the car. By means of a pedal, the operator at his will, connects or disconnects the engine with the transmission. This device is called a clutch. Clutches are divided into two main groups: cone clutches and disc clutches. In the former group two cone surfaces are used to convey the drive. The cones are normally pressed into contact with one or another by means of a single powerful coil spring. This type of clutch is old and is now used only to a limited extent. There exist two types of disc clutches: the multiple disc type, and

the single plate type.

There exist two types of disc clutches: the multiple disc type and the single plate type. The, multiple clutch is composed of a number of driving and driven discs. The driving discs have teeth on their outer diameter. They mesh with the internal teeth of: the internal teeth of the flywheel, sliding and turning it. When the flywheel revolves these discs revolve with it. The driven discs have teeth on their inner diameter. They are attached to the clutch shaft by means of splines. They can slide on the shaft. They are so fixed that they must rotate when the clutch shaft revolves. The driving discs continue to revolve with the flywheel while the driven discs rotate at the same speed as the clutch shaft.

3. Answer the questions:

1. Into what groups are clutch divided?
2. What is the cone clutch?
3. What is the disc clutches?
4. Does the flywheel revolve these discs?
5. Is multiple clutches composed of a number of driving and driven discs?
6. They mesh with the internal teeth of the internal teeth of the flywheel, sliding and turning it, don't they?

4. Fill in missing words:

When the motor - ___has to be sat in motion first of all it is _____to start the engine.
When the _____revolves these ____revolve with it.
This device is called a _____.
They are _____the clutch shaft by means of_____.
Clutches are _____two main groups: ____clutches and disc clutches.
The, multiple clutch _____of a number of _____and driven discs.
Bank of words: necessary , flywheel , divided into ,splines, is composed, driving, attached to, car, discs, cone, clutch.

Translate into Russian:

multiple disc type
two main groups
by means of splines
outer diameter
these discs revolve
start the car
at his will
the single plate type.

Тема 8.5. Виды автомобильных двигателей.

Практическое занятие 42

Образовательная цель: добиться прочного усвоения знаний по теме.

Развивающая цель: научить анализировать, правильно употреблять термины

Vocabulary.
to make – заставлять
to be referred to as – именоваться, называться
to term – называть
to cause – заставлять, вызывать, причинять
although – хотя
to create – создавать
shaft – вал
engine – двигатель
source – источник
wheel – колесо
internal combustion engine – двигатель внутреннего сгорания
combustion chamber – камера сгорания
to take place – происходить

Read and translate the text.

ENGINE
The engine is the source of power that makes the wheels go around and the car move. It is usually referred to as an internal combustion engine because gasoline is burned within its cylinders or combustion chambers.
This burning, or combustion, takes place an a high speed termed as an ”explosion”. The high pressure thus created causes a shaft to turn or rotate.
This rotary motion is transmitted to the car so the wheels rotate and the car moves.
Most automobile engines have four or six cylinders, although some eight-, twelve- and sixteen cylinder engines are in use.

3. Answer the questions:
1. What is transmitted to the car so the wheels rotate?
2. How many cylinders have most automobile engines?
3. What is the source of power?
4. What can you say about internal combustion engine?
4. Fill in missing words:
1. This burning, or combustion, takes place an (большая скорость).
2. Gasoline is (сгорает внутри цилиндров) or combustion chambers.
3. Power that makes the (колёса вращаются) and the car move.
4. The high pressure thus created causes a (вал поворачивается) or rotate.
5. Most (автомобильные двигатели) have four or six cylinders.

5. Translate into Russian:
car moves
high pressure
internal combustion engine
wheels go around

source of power
rotary motion
sixteen cylinder engines
transmitted to the car
Most automobile engines
within its cylinders

Topic “STEAM ENGINE.”
Vocabulary.
steam chest – паросборник
the more...the more - чем больше….тем больше
mostly - главным образом, большей частью
to invent – изобретать
to boil - кипеть
pipe - труба
steam - пар
valves - клапана
piston - поршень
to reach - достигать
pressure - давление
stroke - ход
speed - скорость
opening – отверстие

Read and translate the text.
STEAM ENGINE.
The steam engine was the first high-speed engine ever invented. The principle of the steam engine is simple. When water is boiled, it changes in to steam. The more the steam is heated, the more pressure it has.
A steam engine has some important parts. One is a boiler where fire turns water into steam. The steam goes through a pipe to the other important part - the steam chest with a cylinder and a piston in it. There are valves, or openings, in the steam chest. As the piston moves in the cylinder, it opens and closes the valves automatically, so that fresh steam enters just when the piston has reached the end of its stroke. A rod from the piston is connected to a wheel.
Now steam engines are mostly used in locomotives.

Answer the questions:
1. What is connected to a wheel?
2. What are some important parts of a steam engine?
3. What can you say about the principle of the steam engine?
4. Are there are valves, or openings, in the steam chest?
5. How now steam engines are mostly used?

Fill in missing words:
1. One is a boiler where _____water into steam.
2. A rod from the piston _____to a wheel.

3. The steam engine was the first _____ever invented.
4. As the _____in the cylinder, it opens and closes the_____, so that fresh steam enters just when the piston has reached the end of its stroke.
Missing words: fire turns, valves automatically, high-speed engine, is connected, piston moves.
Translate into English:
пар нагревается
поршень движется
важные части
огонь превращает воду
высокоскоростной двигатель
паросборник с цилиндром
окончание хода
соединяется с колесом
большее давление

Topic “DIESEL ENGINE”
Vocabulary.
gallon - галлон - англ. (4,54 л); амер. (3,78 л).
besides – помимо, кроме
to last - длиться, продолжаться, сохраняться
screw – винт
like - похожий, подобный
directly - прямо, непосредственно
alone - один, только
immediately - немедленно, тотчас же
spray - брызги, струя, разбрызгивать, распылять
fuel – топливо
spark plug – искра свечи
to connect - соединять
charging – загрузка
to inject – впрыскивать
to ignite – зажигать
to use – использовать

Read and translate the text
.
DIESEL ENGINE
A diesel engine is like a gasoline engine but simpler. Diesel engines are usually larger and can do more work. The fuel used in a diesel engine is oil. In diesel engines only air is blown into the cylinder. It does not need spark plugs. Diesel engines can be four - stroke ones and two - stroke ones.
Diesel engines use a cheaper kind of fuel and give more power for each gallon of fuel burned than gasoline engines. Besides they last much longer. In new trains and ships diesel engines run large generators which make electricity. The electricity runs motors which are connected to the wheels of the train or to the ship's screws.

The diesel engine is an internal combustion engine. It uses oil as a fuel. The fuel is introduced in the form of spray and the engine requires no special ignition device. In the four-stroke cycle Diesel engine air alone is drawn into the cylinder on the charging stroke. This air is being compressed on the return stroke to a very high pressure. The result of the combustion is that the air is heated to a high temperature.
The heavy oil injected into the air at the end of the stroke will be immediately ignited by It. The oil burns rapidly, but without explosion. The compression pressure is much higher than that in any other oil or gas engine.

Answer the questions:
1. What happened at the end of the stroke?
2. Is in the four-stroke cycle Diesel engine air or petrol drawn into the cylinder on the charging stroke?
3. What is the result of the combustion?
4. What is fuel used in a diesel engine?
5. A diesel engine is like a gasoline engine but simpler, isn't it?
6. How diesel engines are used in new trains and ships?

Fill in missing words:
1. The _____is an internal combustion engine.
2. This air is being _____on the return stroke.
3. The electricity _____which are connected to the wheels of the train or to the _____.
4. Diesel engines use a cheaper _____and give more power for each gallon of _____than gasoline engines.
5. In diesel engines only air _____into the cylinder.
Bank of words: compressed, fuel burned, diesel engine, ship's screws, runs motors, kind of fuel, is blown.

True or false:
In new trains and plane diesel engines run large generators which make electricity.
The fuel used in a diesel engine is petrol.
In the four-stroke cycle Diesel engine air alone is drawn into the cylinder on the charging stroke.
The oil burns slowly, but without explosion.
In new trains and ships diesel engines run large generators which make electricity.

"WHAT IS AN INTERNAL COMBUSTION ENGINE?"
Vocabulary.
detachable - съемный
secure - укреплять, прикреплять
to exert – влиять, оказывать влияние
duration - продолжительность, длительность
succession – последовательность
to comprise - включать, заключать в себе
to succeed - следовать за чем-либо

admission – поступление, доступ, вход
motion – движение
to take place – происходить, случаться
to secure – охранять, предотвращать
internal combustion engine – двигатель внутреннего сгорания
mechanical energy – механическая энергия
to consist of – состоять из…..
inside – внутри
crankshaft – коленвал
rotary – вращающийся
flywheel – маховик
inlet valve – впускной клапан
exhaust valve – выпускной клапан
camshaft – распредвал
constantly – постоянно
majority – большинство
revolution – поворот

Read and translate the text.
WHAT IS AN INTERNAL COMBUSTION ENGINE?
The gasoline engine is that type of machine where power generated within the cylinders. The engine is set in motion by the explosions of a mixture of gasoline and air.
Combustion takes place above the pistons. The detachable head is secured to the top of the cylinder block. It encloses the cylinder block and forms the combustion chamber. When the fuel is burnt within the cylinders the expansion of gases is used for producing piston movement. Such a type of engine is called the internal combustion engine.
In any internal combustion engine the gas charge is drawn into the cylinder.
The internal combustion engine converts heat into mechanical energy by burning a mixture of oil fuel and air within its cylinder or cylinders. The internal combustion engine consists of the following: 1. A cylinder (there may be several). 2. A piston which moves up and down inside cylinder. 3. A crankshaft connected to the piston by a rod known as a connecting rod. The connecting rod turns the up-and-down motion of the piston into a rotary motion of the crankshaft. 4. A flywheel which keeps the crankshaft moving when the pressure is exerted upon the top of the piston. 5. Two valves known as the inlet valve and the exhaust valve. 6. A camshaft which is used to open and close the valves. 'Combustion engines may be divided into types according to the duration of the cycle on which they operate. By a cycle is meant the succession of operations in the engine cylinder which constantly repeats itself. The great majority of modern automobile engines operate on the four-stroke cycle.
It is completed in four strokes of the piston, or during two revolutions of the crankshaft. Engines are also being built to operate on a cycle which is completed in two piston strokes. The four-stroke cycle comprises the following four phases or operations, which succeed one another in the order in which they are given: Admission of the charge to the cylinder. Compression of the charge. Combustion

of the charge. Expulsion of the products of combustion.

Answer the questions:
1. What are the operations in the four-stroke cycle?
2. What can you say about gasoline engine?
3.Discribe the internal combustion engine.
4. A camshaft which is used to open and close the valves, isn't it?
5. Why is such a type of engine called the internal combustion engine?
6. What energy does the internal combustion engine convert?
7. How many valves are there in the internal combustion engine? What are they?

Fill in missing words:
1. It is completed in (четыре хода) of the piston, or during two revolutions of the crankshaft.
2. In any internal combustion engine the (топливо) charge is (всасывается) the cylinder.
3. The detachable head is secured to the top of the (блок цилиндров).
4. The (двигатель) is set in motion by the explosions of a (смесь) of gasoline and air.
5. A (маховик) which keeps the (коленвал) moving when the pressure is exerted upon the top of the piston.
6.It is completed in four strokes of the (поршень) or during two (поворота) of the crankshaft.

Translate into Russian:
the inlet valve and the exhaust valve
gasoline engine
combustion chamber
air within its cylinder
close the valves
two revolutions of the crankshaft
in two piston strokes
connecting rod.
great majority
the inlet valve and the exhaust valve
duration of the cycle

Раздел 9. Шиномонтаж.

Тема 9.1. Шиномонтаж.

Практическое занятие 43

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Tire changers- устройство для установки и демонтажа шин

Tire- покрышка
Service- сервис, услуга
Brake lathes-Токарный станок
Wheel balancers- станок для балансировки колес
Wheel Alignment Systems-система схождения
Suspension Tools-инструменты подвески
TEXT: Wheel Service Equipment
is a staple of any automotive shop. From tire changers to brake lathes and so much more. They are the machines that get your shop running at optimum speeds - paying for themselves in days. To learn how to increase your shop's bottom line, just look below:

Brake Lathes

Brake lathes are hands-down the best investment you can make for brake service needs. The ability to stop at will is the most important safety feature a vehicle has. This is why Garage Equipment Supply carries from brake lathe manufacturers with years of industry experience - trusted to work hard, and maintain perfect integrity over years of shop use.
Wheel Balancers

Garage Equipment Supply provides more than just balancing equipment. We provide total balancing solutions. Our wheel-balancing machines are built to maximize shop productivity and uptime, and deliver years of dependable service.

Wheel Alignment Systems

Wheel Alignment is a necessary step to take to ensure tires and efficiency are running at optimal levels. For a wheel alignment system to be profitable, it needs to be fast, efficient, and easy. The bottom line is, if you can't get the alignment done quickly, and accurately, you won't be making a lot of money off of wheel alignment - this is why we carry Ranger and Bosch wheel alignment machines.

Suspension Tools

Garage Equipment Supply offers a variety of suspension tools such as strut spring compressors and other suspension tools. Make your suspension job easier by purchasing one of our suspension tools.
Wheel Service Accessories

We carry a full line of accessories to further expand the use of your wheel service equipment from Garage Equipment Supply. From brake lathe bits, to alignment turn plates, we have all of your wheel service equipment needs all in one spot.

At the Garage – Situational Dialogues

Ситуативный диалог

I'd like to arrange to have my car serviced.
Yes, of course. Which year and model is it?
It's a 1986 model, the smallest one in the range.
How would next Friday afternoon suit you?
That would be perfect. And could you also try to improve the starting?
Yes, we'll do that as a matter of course.
Could you book my car in for a service? It's well overdue.
That's no problem. Can you tell me the year and model?
It's a 500 series, and it's less than a year old.
Can you bring it in on Thursday?
That should be OK. And perhaps you could see to the clutch, it keeps slipping.
Yes, I'll make a special note of it.

Тема 9.2. Оборудование

Практическое занятие 44

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Vulcanization or vulcanisation is a chemical process for converting natural rubber

or related polymers into more durable materials via the addition of sulfur[1] or other equivalent curatives or accelerators. These additives modify the polymer by forming cross-links (bridges) between individual polymer chains.[2][3] Vulcanized materials are less sticky and have superior mechanical properties. The term vulcanized fibre refers to cellulose that has been treated in a zinc chloride solution to cross-link the cellulose fibers.

Although the curing of rubber has been carried out since prehistoric times, the modern process of vulcanization, named after Vulcan, the Roman god of fire, was not developed until the 19th century, mainly by Charles Goodyear. Today, a vast array of products are made with vulcanized rubber including tires, shoe soles, hoses, and conveyor belts. Hard vulcanized rubber is sometimes sold under the brand names ebonite or vulcanite, and is used in making articles such as clarinet and saxophone mouth pieces, bowling balls and hockey pucks.

Тема 9.3. Приспособление при замене шин

Практическое занятие 45

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Five types of curing systems are in common use. They are:
Acetoxysilane
Metallic oxides
Peroxides
Sulfur systems
Urethane crosslinkers
Vulcanization with sulfur[edit]

By far the most common vulcanizing methods depend on sulfur. Sulfur, by itself, is a slow vulcanizing agent and does not vulcanize synthetic polyolefins. Even with natural rubber, large amounts of sulfur, as well as high temperatures and long heating periods are necessary and one obtains an unsatisfactory crosslinking efficiency with unsatisfactory strength and aging properties. Only with vulcanization accelerators can the quality corresponding to today's level of technology be achieved. The multiplicity of vulcanization effects demanded cannot be achieved with one universal substance; a large number of diverse additives, comprising the "cure package," are necessary. The combined cure package in a typical rubber compound consists of sulfur together with an assortment of compounds that modify the kinetics of crosslinking and stabilize the final product. These additives include accelerators, activators like zinc oxide and stearic acid and antidegradants. The accelerators and activators are catalysts. An additional level of control is achieved by retarding agents that inhibit

vulcanization until some optimal time or temperature. Antidegradants are used to prevent degradation of the vulcanized product by heat, oxygen and ozone

Vulcanization of polychloroprene The vulcanization of neoprene or polychloroprene rubber (CR rubber) is carried out using metal oxides (specifically MgO and ZnO, sometimes PbO) rather than sulphur compounds which are presently used with many natural and synthetic rubbers. In addition, because of various processing factors (principally scorch, this being the premature cross-linking of rubbers due to the influence of heat), the choice of accelerator is governed by different rules to other diene rubbers. Most conventionally used accelerators are problematic when CR rubbers are cured and the most important accelerant has been found to be ethylene thiourea (ETU) which, although being an excellent and proven accelerator for polychloroprene, has been classified as reprotoxic. The European rubber industry has started a research project SafeRubber[8] to develop a safer alternative to the use of ETU.

Vulcanization of silicones

An example of a silicone rubber keypad typical of LSR moulding
Main article: RTV silicone
"Room-temperature vulcanizing" (RTV) silicone is constructed of reactive oil base polymers combined with strengthening mineral fillers. There are two types of room-temperature vulcanizing silicone:

RTV-1 (One-component systems); hardens due to the action of atmospheric humidity, a catalyst and acetoxysilane. Acetoxysilane, when exposed to humid conditions will form acetic acid.The curing process begins on the outer surface and progresses through to its core. The product is packed in airtight cartridges and is either in a fluid or paste form. RTV-1 silicone has good adhesion, elasticity and durability characteristics. The Shore hardness can be varied between 18 and 60. Elongation at break can range from 150% up to 700%. They have excellent aging resistance due to superior resistance to UV radiation and weathering.
RTV-2 (Two-component systems); two-component products that, when mixed, cure at room-temperature to a solid elastomer, a gel, or a flexible foam. RTV-2 remains flexible from −80 °C to +250 °C. Break down occurs at temperatures above 350 °C leaving an inert silica deposit that is non-flammable and non-combustible. They can be used for electrical insulation due to their dielectric properties. Mechanical properties are satisfactory. RTV-2 is used to make flexible moulds, as well as many technical parts for industry and paramedical applications.

Fill in:
a) by b)on c)in d)out of e)off
Since I broke my leg I have to travel bus because I can't get__ the car.
When your bus arrives you get__ it. If you want to leave it, you get__ taxi.
I usually go back home__ bus. It's mush cheaper then going taxi.
Two men with guns got the car and went into the shop.

b) Supply the articles if they are necessary.
a)a b)an c)the d)-
bravity is soul of wit.
charity begins at home.
A danger foreseen is___half avoided.
Closed mouth catches no__flies.

Put the verbs in brackets into the correct voice and tense-forms:

1. We (just/ talk) about him when he suddenly (come) in. 2. We were late. The' meeting (start) an hour before. 3. He was tired because he (work) hard in the garden all day. 4. I (talk) over the phone when they brought me the letter. 5. If I (get up) early tomorrow morning, I (go) jogging. 8. If Benjamin Franklin (not/work) so hard, he (not/become) the symbol of America.

Use the right form of the adjective:

If you want to find your way around the city (easy), you should buy the map of it. 2. I'm getting (fat). 3. We are going (slow). 4. The (soon) you start, (quick) you'll finish. 5. This camera costs (twice more than / twice as much as) the other one.

Fill in the blanks with the articles a, an, the and prepositions, where necessary. When Mary was to open a meeting.. .the first time ... her life, her voice shook ... excitement. The young scientist shook hands ... his friends who had com ... the airport to see him ... .I wonder why Bob is such an ill-natured boy. It's a pity he takes ... his mother only ... appearance! Ask Kate to join ... our party. She looks serious, but I know she is very gay ... nature and is fond of ... singing and dancing.

Use little or few.
1. I have ... time, so I can't go with you. 2. He has ... English books. 3. There is ... ink in my pen. Have you got any ink? 4. There are ... bears in the zoo. 5. Tom Canty was the son of poor parents and had very ... clothes. 6. There is tool ... soup in my plate. Give me some more, please. 7. The children returned from the wood very sad because they had found very ... mushrooms. 8. There was too ... light in the room, and I could not read. There are very ... people who don't know that the earth is round.

Use the Past Indefinite or the Past Perfect.
They (to complete) all the preparation for the fancy-dress ball by 5 o'clock.
On leaving the hospital the man (to thank) the doctor who (to cure) him of his disease.
In the morning all the passengers (to feel) good after the night they (to spend) in the comfortable sleeper.
During my last visit to the picture gallery I (to find) that I no longer (to like) the pictures which (to impress) me when I first (to see) them. Evidently my taste (to

change).
Last night he (complete) the experiment which he (to begin) some months before.
They (to be) friends for some ten years before I (to meet) them.

Раздел 10. Инновации

Тема 10.1. Инновации в автомобилях

Практическое занятие 46

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Electronics-электроника
Security innovation systems- инновационные системы безопасности
Vehicle-транспортное средство
ABS- антиблокировочная система
To keep the vehicle trajectory under control-держать траекторию транспортного средства под контролем
Pressure- давление
Braking-торможение
Airbags- воздушные подушки
Seat bealts- ремни безопасности
Injury- травма
Headlights- передние фары
ESP- электронная программа стабилизации
ASR- противобуксовочная система

Text: Today's innovations in cars

Today, electronics are very important and available in most of the cars. We will see here some of the most prevalent security innovation systems that you can found in your vehicle.

ABS (Anti blocking System) : It's a system which prevents wheels blocking in case of sudden braking. This allow the tire to maintain their guiding power and the driver to keep the vehicle trajectory under control. For that, the ABS detects that the wheel will be blocked. It then reduces the pressure in the brake circuit so that the tire still grip. It restores the pressure immediately so that braking continues.

Airbags : Airbags support the final damping of a shock, after that seat belts have absorbed most of the energy of the occupant of the vehicle. A gas generator, controlled by a computer, ensures their inflation. Air bags inflate in

30 milliseconds to in complement of the seat belt during the final phase of the shock damping. They reduce of 75% the risk of serious head injuries. During a shock, accelerator sensors send to the computer information about abnormal acceleration. The computer determine the direction and the intensity and launch inflation of airbags

Headlights and Wipers Automated Start : The wipers automated initiation works with an active infrared sensor that detects the presence of water drops on the windscreen by the modification of the reflection that they cause. The ignition of headlights is controlled by a light sensor passive. The measurement of the brightness is based on a set of photoelectric cells.

ESP (Electronic Stability Program) : This stability program assists the driver to maintain control of his vehicle in case of loss of handling. The ASR (traction control) complete the actionof this device. Using data from seven sensors, the computer of the ESP acts selectively on thewheels for the car to find the expected trajectory. For this, it works closely with the ABS

ASR (Active traction control) : To insure a perfect start on the surface with the handling deteriorated, as sleet or snow, the ASR plays on the torque distribution between the drive wheels. It reduces the torque applied to a wheel which begins to slip and apply it to another .

Improved Structure : By its progressive deformation, the structure of the car absorbs impact energy. The programmed deformation structure protects the cockpit. This should dissipate as much as possible the impact energy to preserve the cabin which is, by contrast, very rigid. Automakers takes many years of extensive studies on the programmed structure deformation of vehicles.

Additional cornering lights :On winding roads, the inside of bends does not benefitof lightning of the headlights and remains in the dark. A problem eliminated by the additionalcornering lights … Oriented at 40 ° compared to the axis of the car, they light up the inside of the turn. They are automatically disabled at high-speed or in reverse.

Практическое занятие 47

Прочитайте и переведите текст:

Using Computer

Ever since the car was first invented, a breaker point ignition has been used to transform battery voltage into 20,000 volts to fire the spark plugs. With government intervention and regulation, more advanced system was needed. This system had to meet emission control levels, gas mileage, and provide a smooth and continuous operation. The answer was found in an on-board computer system. The computer mounted on modern cars has two components. One is the hardware and the other is the software.

The computer hardware on an automobile uses a Central Processing Unit (CPU),

which, when made in an integrated circuit, is referred I o as a microprocessor. The integrated circuit (IC) combines transistors, diodes, and capacitors, which are placed on a tiny chip of semiconductor material that is smaller and thinner that an eraser on a pencil. The material used most of the time is silicon. Silicon, like any semiconductor, does not conduct electricity until either voltage, a magnetic field, heat, or light is directed to the semiconductor. A program instructs the microprocessor what to do.

The computer software on a car carries a program. The program (ells the computer what to do, and when to do it in a specific sequence. The program is stored in a permanent memory, which is referred to as Read Only Memory (ROM).The computer knows only what is placed in its memory.

There is another variation, which is called the Programmable Read Only Memory (PROM), which can be readily removed und replaced, while the ROM cannot. This makes it less expensive if the memory becomes defective. Only the PROM has to be replaced, not the entire microprocessor. The microprocessor contains a ROM (or PROM) and a RAM. RAM stands for Randon Access Memory, which can be accessed without going through a specific sequence. The technician interfaces with the RAM whenever trouble codes are accessed. Not all computerized ignition systems have trouble codes, however. Some computers have the ability to learn. This is referred to as an adaptive memory. When a value falls outside of a specified limit, due to engine wear, the adaptive memory makes a slight adjustment in the program to compensate. The car must be driven from 20 to 30 miles, as it takes the computer this long to learn. Any time that power is disconnected from the computer, it will have to relearn everything.

The exercises to be done after reading the text

. Найдите в тексте ответы на вопросы.

1.How many components has the computer on modern cars? What are they?
2.How do we call the computer hardware on the automobile?
3.What does an integrated circuit combine?
4.What material is used in the integrated circuit? Why?
5.What does the computer software do?
6.Why is the computer used on board the car?
7.What does the program tell to the computer?
8.Where is the program stored?
9.What is ROM?
10.What is PROM?
11.What is RAM?

Переведите на английский язык.

1.Многие современные автомобили оборудованы бортовыми компьютерными системами для лучшей работы автомобиля.
2.Программа такого компьютера имеет только два запоминающих устройства: постоянную память (ПЗУ) и оперативную память (ОЗУ).
3.Компьютерная программа сообщает компьютеру, что надо делать и когда необходимо выполнить данное действие в соответствующей последовательности.

4.Программа хранится в постоянной памяти компьютера.
5.Микропроцессор содержит в себе постоянную и оперативную память.
6. Некоторые компьютеры обладают способностью запоминать (заучивать). Это относится к адаптивной памяти.
Прочтите диалог, а затем выполните следующие за ним упражнения.

Тема 10.2. Инновации в автомобилях. Skoda

Практическое занятие 48

Образовательная цель: добиться прочного усвоения знаний по теме. Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

TEXT ŠKODA: INNOVATION IN CARS

The world of automobiles is constantly developing and changing. Things which were hard to imagine not long ago, have become a regular part of our lives today. Imagine a car which unlocks itself for you without you having to look in your pocket for the key. Or a car which finds its own parking space and parks in it without you having to touch the steering wheel. Fantasy? Not at all: this is everyday reality with Parking Assistant and the KESSY system.

However, you will also find innovative solutions in many other places in ŠKODA vehicles. Let's start, for example, with the practicality for which our vehicles are renowned. As well as the vehicles' generous dimensions, this is also contributed to by original solutions such as the VarioFlex system of sliding, tilting and removable seats in Yeti and Roomster vehicles, for example. Owners of the Superb model will appreciate the way their sedan transforms into a practical liftback with one press of a button thanks to the TwinDoor system.
However, our developers also have the environment and your wallet in mind. The wide range of modern petrol and diesel engines provides excellent consumption and low CO2 emissions, even while maintaining sufficient performance reserves. Further savings have been realised thanks to technology such as energy recuperation during braking, start-stop systems or tyres with a low rolling resistance. ŠKODA is also testing the Octavia Green E Line purely electric automobile. More about these technologies can be found in the environment section.
The handling properties of our vehicles are also constantly being developed, as is shown by their numerous successes in automotive competitions. The Haldex four-wheel drive system not only takes you to places which would be inaccessible for regular automobiles, but also provides safer and more secure handling on the roads. A whole range of electronic systems enables you to feel safe behind the steering wheel, even under unfavourable conditions. More information about these

systems and the other active and passive safety components can be found in the appropriate sections.

Прочтите диалог, а затем выполните следующие за ним упражнения.
DIALOGUE
Anton: What is the purpose of using computers on board the car?
Vlad: You see. As I know computer is used to advance the engine operation as well as the performance of other units.
A.: What components does the on-board computer consist of?
V.: It consists of two components. One is the hardware and the other is the software.
A.: What is hardware?
V.: The computer hardware uses a Central Processing Unit (CPU) which is referred to as a microprocessor.
A.: What is software?
V.: The computer software on a car carries a program. The program tells the computer what to do and when to do it.
A.: And where is the program stored?
V.: It is stored in a permanent memory which is called Read Only Memory (ROM).
A.: And what is Programmable Read Only Memory (PROM)? What is the difference between ROM and PROM?
V.: In case the memory becomes defective PROM can be readily removed and replaced, while ROM cannot.
A.: And what is RAM?
V.: RAM is Random Access Memory (main memory), which can be accessed without going through a specific sequence. The technician interfaces with RAM whenever trouble codes are accessed.
A.: Thanks a lot for your explanation.
V.: You are welcome. See you later.
A.: Goodbye.

Answer the questions:

1. What levers are there in the driver's cabin?
2. Where is the hand brake lever?
3. Where is the steering wheel?
4. Where is the lighting switch?
5. Where is the gear shift lever?
6. Into what two capital parts we divide the car?
7. What can you say about transmission?

Fill in missing words:
The (ходовая часть) is the lower part of the car.
The engine consists of a, (блок цилиндров), crankcase, (коленвал) and many

other parts.
It is designed according to the (величина) of the frame.
It is to the (справа) of the brake pedal.
Transmission (состоит из) the clutch the gear box, drive shafts and (вал винта).

Translate into Russian:

clutch pedal
steering column
brake pedal
control levers
driver's cabin
chassis and the body
wheels and springs
crankshaft
in motion
the fly wheel.

Тема 10.3. Инновации в автомобилях Nissan.

Практическое занятие 49

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст

Nissan named the Qashqai after the Qashqai (pronounced Cash'ki) semi-nomadic tribe living in mountainous Southwestern Iran. Nissan considered releasing the Chinese version as the CCUV (Compact Crossover Utility Vehicle). In Australia the Qashqai carries the name Dualis from the Japanese domestic market version because Nissan worried Qashqai could be pronounced "cash cow".

Production

The Qashqai has been built at Nissan's Nissan Motor Manufacturing UK(NMUK) Sunderland, Tyne and Wear plant since December 2006.

It is the first model to be styled by Nissan Design Europe in London, with engineering development led by Nissan Technical Centre Europe (NTCE) in Cranfield, Bedfordshire. It was globally presented at the 2006 Paris Motor Show.

By the end of 2007, Nissan had sold approximately 100,000 Nissan Qashqais in Europe, including 17,554 in UK, 15,376 in Russia, and 10,746 in Italy. Nissan expects to deliver its 500,000th Qashqai before the end of 2009, ahead of a facelift for the 2010 model year.

The Qashqai is exported to the Middle East and additional overseas markets.

In order to increase production capacity in Nissan's UK plant in Sunderland, some models of the 2014 Qashqai will be produced in Nissan's Russian plant in Saint Petersburg.

Features

Nissan Qashqai Concept Car

Built on an all-new platform, the Qashqai went on sale in February 2007, and Nissan targeted more than 100,000 sales per year. Nissan said the car would cater to those buyers who want a more dynamic design, but are not attracted to the large, aggressive nature of a sport utility vehicle. The car slots below the X-Trail in the Nissan range and partially replaces the conventional Primera, even though it took the production place of the smaller Almera. In terms of size, its 4,310 millimetres (169.7 in) length and 1,610 millimetres (63.4 in) height make it fall between compact MPVs, such as the SEAT Altea and Peugeot 5008;

and compact SUVs like the Hyundai Tucson, Kia Sportage and Mitsubishi Outlander.

The top half of Qashqai has a sleek, dynamic form with a distinctive shoulder line which rises at the rear — a design cue similar to that of the Nissan Murano. The lower portion resembles an SUV due to large, pronounced wheel arches and a slightly elevated ground clearance. The Qashqai uses the same platform as the X-Trail (the vehicle upon which the Qashqai is based). Nissan regards the Qashqai as a rival to such cars as the Toyota RAV4 and the Honda CR-V and in 2007 it received a five star Euro NCAP safety rating — the best ever adult occupant score.[7]

Five engine choices are available: a 114 PS (84 kW; 112 bhp) 1.6 L or a 141 PS (104 kW; 139 bhp) 2.0 L petrol, while the 106 PS (78 kW; 105 bhp) 1.5 L, 130 PS (96 kW; 128 bhp) 1.6 L and 150 PS (110 kW; 148 bhp) 2.0 L provide the dieselofferings.

Прочитайте и переведите текст

JAPAN'S MOTOR INDUSTRY

Looking at the fleets of varicolored cars, lorries and buses rushing from traffic lights to traffic lights, from one jam to another, it is hard to imagine that Japan entered the automobile only some 30 years ago.

The first car appeared there at the turn of the century. It was brought from abroad as a present to the Emperor. In 1902 a Japanese firm assembled a 12 h.p. car from imported components and it took another five years for the first all-Japanese car to be produced at the Tokyo Motor Works. Throughout the first quarter of the century cars remained expensive toys. By 1923 the country had 12,700 cars of which only one in thirteen was Japanese-made.

On September 1, 1923, an earthquake hit Tokyo and dozens of other big cities in the Kanto Vally, destroying almost all houses and roads. There was an acute need for buses and lorries. In the mid-1930s, the government took over the motor industry, orienting it towards the manufacture of lorries.

By the time of Japan's capitulation in World War II the, motor, industry (like almost all other industries) was virtually non-existent. Acute shortages of fuel and other raw materials led to a ban on the manufacture of motor vehicles In 1946 a few were allowed to be produced, and in 1947, 300 cars. The restrictions were not lifted,,until 1949.

. Fill in the prepositions.

It was two o'clock when John went ... the dining-room to have dinner. Peter was already there. He sat ... a table with a book ... his hands. John took the menu ... the next table. When the waitress came, he ordered some soup and meat. "Can you

bring me some white bread?" asked John. "Yes, of course, I can", answered the waitress, "I shall bring you some ... a minute". She came back ... a few minutes. "What will you have ... dessert?" she asked. John asked her to bring him some ice-cream. "I'm sorry", said the waitress. "It will only be ready ... half an hour". So they took some milk, paid ... their dinner, and went out ... the street. John then went ... the library, Peter went home.

Put these sentences in the Future and in the Past

The tourists are shown many places of interest in our town.
The Moscow University is greatly admired by everybody.
New metro station is built in our town.
The poem is recited in our group.
We are told to wait outside.

Use the Past Indefinite or the Past Perfect.

They (to complete) all the preparation for the fancy-dress ball by 5 o'clock.
On leaving the hospital the man (to thank) the doctor who (to cure) him of his disease.
In the morning all the passengers (to feel) good after the night they (to spend) in the comfortable sleeper.
During my last visit to the picture gallery I (to find) that I no longer (to like) the pictures which (to impress) me when I first (to see) them. Evidently my taste (to change).
Last night he (complete) the experiment which he (to begin) some months before.
They (to be) friends for some ten years before I (to meet) them.
No sooner she (to open) the drawer than she (to find) the photo which she (to think) she (to lose) long before.
I (to refuse) to give a definite answer before I (to receive) a letter from him.

Тема 10.4. Инновации в автомобилях BMW.

Практическое занятие 50

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Bayerische Motoren Werke AG (pronunciation (help·info); English: Bavarian Motor Works), commonly known as BMW or BMW AG, is a German automobile, motorcycle and engine manufacturing company founded in 1916.

BMW is headquartered in Munich, Bavaria, Germany. It also owns and produces Mini cars, and is the parent company of Rolls-Royce Motor Cars. BMW produces motorcycles under BMW Motorrad. In 2012, the BMW Group produced 1,845,186 automobiles and 117,109 motorcycles across all of its brands. BMW is part of the "German Big 3" luxury automakers, along with Audiand Mercedes-Benz, which are the three best-selling luxury automakers in the world.

The 1 Series, originally launched in 2004, is BMW's smallest car. Currently available are the second generation hatchback (F20) and first generation coupe/convertible (E82/E88). The 3 Series, a compact executive car manufactured since model year1975, is currently in its sixth generation (F30); models include the sport sedan (F30), and fourth generation station wagon (F30), and convertible (E93), and theGran Turismo. In 2014, the 4 Series will be released and replace the 3 Series Coupe and Convertible. The 5 Series is a mid-size executive car, available in sedan (F10) and station wagon (F11) forms. The 5 Series Gran Turismo (F07), which debuted in 2010, created a segment between station wagons and crossover SUV

BMW Z4 (E89)

BMW's full-size flagship executive sedan is the 7 Series. Typically, BMW introduces many of their innovations first in the 7 Series, such as the iDrive system. The 7 Series Hydrogen, having one of the world's first hydrogen fueled internal combustion engines, is fueled by liquid hydrogen and emits only clean water vapor. The latest generation (F01) debuted in 2009. Based on the 5 Series' platform, the 6 Series is BMW's grand touring luxury sport coupe/convertible (F12/F13). A 2-seater roadsterand coupe which succeeded the Z3, the Z4 has been sold since 2002.

BMW X3 (F25)

The X3 (F25), BMW's second crossover SUV (called SAV or "Sports Activity Vehicle" by BMW) debuted in 2010 and replaced the X3 (E83), which was based on the E46 3 Series' platform, and had been in production since 2003. Marketed in Europe as an off-roader, it benefits from BMW's xDrive all-wheel drive system. The all-wheel drive X5 (E53) was BMW's first crossover SUV (SAV), based on the 5 Series, and is a mid-size luxury SUV (SAV) sold by BMW since 2000. A 4-seat crossover SUV released by BMW in December 2007, the X6 is marketed as a "Sports Activity Coupe" (SAC) by BMW. The X1 extends the BMW Sports Activity Series model lineup.

In 2013, the company announced that it was to launch its first fully electric car range. This

would begin with the launch of the BMW i3 in the second quarter of 2014

Прочтите диалог, а затем разыграйте диалог.

Teacher: Can you tell me English equivalents to: двигатель, сцепление, коробка передач, тормоза и ручное управление?
Student: Yes, I can. They are the engine, clutch, gearbox, brakes and steering system.
T.: Do you know what main units the automobile consists of?
S.: Yes, I do. They are the chassis, the body and the engine.
T.: What is the source of power?
S.: The engine is. It makes the car wheels rotate and the car move.
T.: What unit of the car carries the power to the wheels?
S.: The transmission does.
T.: What mechanisms does the transmission consist of?
S.: It consists of the clutch, gearbox, propeller shaft, rear axle, final drive and differential. It also includes brakes and steering system.
T.: And what is the clutch used for?
S.: It is used for disengaging the engine from the car wheels.
T.: What is the function of the brakes?
S.: They are necessary to slow or stop the car.
T.: And what about the steering system?
S.: It is used to turn the car in the direction the driver wants to go.
T.: That is right. You know the subject very well.

Fill in the blanks with the articles a, an, the where necessary.

I have ... hobby. I like to cook. During my leisure time I make ... cakes and pies. It is not difficult to make ... pie. Sometimes my brother helps me. He is ... good boy and we get along well with ... each other. My brother usually goes ... shopping and buys ... different things, which are necessary for ... cooking. My cakes are tasty but I like ... pies ... best of all.

Use the Present Indefinite or the Present Perfect.

No wonder he (to look) tired after the strain under which he (to be) lately.
She just (to ask) a porter to carry her as they (to be) too heavy for her.
Where (to be) your monitor? "She (to go)" to the library.
I regularly (to see) him every morning at the tram stop, but I (not to see) him these two or three days.
It (to be) cold in winter in Moscow as a rule?- Yes, generally it (to be), but this winter (to be) exceptionally warm.
Why you (not to shave) in the morning?-I(to shave) every other day.

Use the Passive Voice.

A guide will show the visitors the new buildings.

Someone told him to make a report on ancient architecture.
Mr. Smith taught her Greek and gave her a dictionary.
The teacher told John to learn the alphabet.
I will tell you another fable next time.
They invited the rest of us to go sightseeing.

Прочитайте и переведите иекст:

German Firms Will Help Reconstruct KAMAZ

A contract has been signed for the construction of a drive shop (цех по производству приводов) at KAMAZ. The partner of the Russian side is a consortium (консорциум) of 15 machine-tool firms of Germany's Eastern lands. Among the consortium members are both privatized and state enterprises. The largest share (доля) of the project (about 75%) belongs to the firms of Saxony land. The total (общая) sum of capital invested in the project will be 600 million marks.

The design commission (комиссия по выбору проекта) consisting of equal (равный) numbers of representatives of the Russian and German sides and headed by the firm Hurth Modul GmBh, will prepare the formation of a joint enterprise which will be responsible for the construction work and subsequent (последующий) operation of the shop.

The sides will enter into the joint venture on a parity (паритет) basis. Each of them will cover 25% of the cost of the shop's construction, the remaining 50% will be covered, in all probability (по всей вероятности), by the East European Bank in London which sent its observer to the negotiations conducted in Moscow between the KAMAZ management, privatization agency Treuhandanstalt and the government in Saxony. The sides also hope to get financial support by the governments of Germany and Russia.

It is expected that the shop will be able to make 150.000 modernized drives by the end of 1995.

Close financial ties (связи) may be established with individual , German firms in the course of (в ходе) cooperation of KAMAZ with Germany's Eastern lands.

Раздел 11. Автомобили будущего

Тема 11.1. Автомобили будущего

Практическое занятие 51

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины, чтение и перевод аутентичных текстов.

Прочитайте и переведите текст:

Sun Powers Cars

Each day, millions of people across the world fill their cars with gas' to make them move. But can you imagine running a car on just a tankful of sunshine That's what some college students did this past summer in the U.S.

The students built cars for an unusual race called "Sunrayce USA". The students had to drive their cars from Florida to Michigan, more than 1,600 miles, in the fastest time. The only power[5] their cars used was solar power, or energy from the sun.

The students' solar-powered cars were different from any gas-powered car on the road today. Here's how.

The outside of the solar cars was covered with rows of dark, shiny panel made of special materials. These panels caught the sun's rays and turned sunshine into electricity that powered the cars' motors. The panels also saved[1] solar power in special batteries so the cars could run on cloudy" days.

The solar cars were much lighter than gas-powered cars. Their tires[3] were as thin as bicycle tires. Some race cars had parts made of the plastic material used in drinking cups.

The cars had to be light because their motors didn't have as much power as cars with gas-powered motors. Each car ran on about the same amount of energy needed to run a hair dryer! The cars were also built in strange shapes. One car looked like a giant pizza box with a bubble on top. Another was shaped like a teardrop . These shapes helped air pass smoothly over and around the cars so they could move easily along the road.

Прочитайте и переведите текст:

We've looked into our automotive crystal ball and examined industry trends and news reports to come up with a few innovations we predict will be available in cars sometime in the next 10 years.

Around the Corner (here now, or within 2 years)

A fingerprint scanner could unlock the car door and start the engine.

Keyless Entry and Ignition

Time frame: One year

What: A number of cars already offer keyless entry and ignition, but their use isn't widespread. Combine that with biotechnology access (like the fingerprint scanners at grocery stores and on some laptop computers) and the key chain is on the road to obsolescence.

What we do now: Fumble with a handful of keys and hope we don't drop the groceries.

Adaptive brake lights could warn drivers when the vehicle ahead stops suddenly.

Adaptive Brake Lights

Time frame: Two years

What: Brake lights that flash or get brighter or larger depending on how hard the brake pedal is

depressed. This will tell the driver behind you how quickly you are stopping. Mercedes-Benz is currently experimenting with adaptive brake lights on a very limited number of U.S. models, but safety regulations prohibit wide implementation.
What we do now: Make an educated guess how quickly we need to stop, resulting in occasional rear-end collisions.

A computer center would manage everything from phones to navigation.

Computer Center
Time frame: Two years
What: A master in-dash computer that can manage navigation, phones, email, CDs, a PDA and every other new techno-gadget we come up with. Some Chrysler models are slated to have a system called MyGig with Bluetooth capability and a built-in hard drive that can rip CDs like your home computer.
What we do now: Fiddle with the in-dash navigation system while texting the office from our cell phone — hey, get your eyes back on the road!

Collision Mitigation Systems
Time frame: Two years
What: Already available on the Acura RL, a collision mitigation system prepares the car for an accident when one is deemed unavoidable. Brakes are applied and seat belts are tightened to prevent injury.
What we do now: Cringe and wait for the collision.

Depiction of a data recorder located under a car's hood.

Automotive Black Box
Time frame: Two years
What: Airplanes have the ability to record trip details, so why not cars? An automotive black box could be invaluable in an accident, keep tabs on a new driver, help frequent speeders monitor their miles-per-hour — or it could be a big invasion of privacy. Reports indicate that two-thirds of the models built by General Motors and Ford already have data recorders, but accessing the information isn't easy.
What we do now: Act shocked when we get pulled over for going 10 miles over the speed limit because we never ever (ever!) speed.

Economy Mode
Time frame: Two years

What: If drivers can't change their driving behavior to increase gas mileage, cars may do it for them. In economy mode, a car turns off non-essential systems, turns down the A/C and even engages cruise control to conserve fuel. The 2007 Saturn Vue Green Line Hybrid features an economy mode that limits A/C use, and several models (such as the Honda Odyssey) can deactivate cylinders depending on driver demand.
What we do now: Continue to debate whether we get better gas mileage by rolling down the windows or turning on the A/C when we're on the highway.

Down the Road (coming in 3-5 years)

Lane Changer Warning
Time frame: Three years
What: A system that would monitor traffic in adjacent lanes to let the driver know when it's safe to change lanes. The 2007 Audi Q7 and Volvo XC90 already offer similar technology on a limited basis.
What we do now: Take our eyes off the road to check all the mirrors and our blind spot. Check the mirrors again. Double-check our blind spot. Dang, still missed that Mini!Camless Engines
Time frame: Three years
What: Like the human body, engines demand airflow based on workload. A complex array of tubes, valves and camshafts facilitates this process, but it has nowhere near the flexibility of our lungs. Camless technology bridges the gap, better controlling the amount of air that's drawn into the engine. The result: More power, less pollution and better mileage. The 2008 Mercedes-Benz C-Class will likely be one of the first cars to have this gas-saving technology.

What we do now: Wonder why our gutless four-bangers can only manage 26 mpg.

Self-repairing paint could fix minor scratches over time.

Self-Repairing, Self-Cleaning Paint
Time frame: Three years
What: Paint that can better resist and repair minor scratches and withstand marks from things like greasy fingers and tree sap. Nissan has already developed a topcoat made from an elastic resin that prevents some scratches — unfortunately it lasts about three years.
What we do now: Cross our fingers the guy parked next to us doesn't scratch our doors.

A navigation screen with real-time traffic information.

Navigation Systems With Real-Time Traffic Information

Time frame: Three years

What: All cars with navigation systems would be able to integrate real-time traffic data in order to alert drivers to road construction issues or traffic snarls while providing alternate routes. Similar systems are already available on handheld devices and in some luxury cars, like the Acura RL and Cadillac CTS.

What we do now: Arrive to work 30 minutes late because we forgot to check the traffic report before we left home.

Найдите ответы на вопросы.

1.What mechanism is necessary to guide the car?
2.How is the steering wheel connected to the front wheels?
3.Why can the front wheels be swung to the left or to the right?
4.What does the manual steering system incorporate?
5.What types of manual steering gears in use do you know?

Переведите на русский язык, обращая особое внимание на герундий.

1.To guide the car it is necessary to have some means of turning the front wheels.
2.The steering wheel in front of the driver is linked by gears and levers to the front wheels for turning the car in the direction the driver wants to go.
3.Without using the steering system the car moves only in the direct position.
4.Manufacturers can use rack and pinion type steering gear without choosing another type because "rack and pinion" type steering is very dependable.
5.Energy-absorbing columns must stop the steering wheel from being pushed to the rear when the front of the car is damaged in an impact.

Переведите текст, не пользуясь словарем.

To turn the car you must have some means of turning the front wheels. For this purpose the steering wheel and steering column are linked to the front wheels. The front wheels are on pivots and can be swung to the left or to the right.
When the driver turns the steering wheel and column the front wheels (being on pivots) attached by the steering knuckle arms to the lie rods are also turned.

Переведите текст, пользуясь словарем.

Troubles of Steering Gear Components

Steering gear and linkage may have the following basic troubles: excessive steering-wheel free play, bending of steering rod, oil leakage from the steering-gear case, disadjustment of steering gear.

What to do

1.Check the steering-wheel free play and steering gear performance while the car is running.
2.Check the steering-gear case for oil leakage by visual inspection.
3.Adjust the steering gear. Steering gear of the worm and roller type is adjusted by

end playing in the steering worm shaft bearings

Тема 11.2. Инновации будущего

Практическое занятие 52

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Self-Parking Cars
Time frame: Four years
What: A system that parks a car with minimal or no help from the driver. Toyota introduced a system in Japan in which the driver keeps his foot on the brake while the car parallel parks itself. BMW recently created a version the driver can operate from outsidethe car to squeeze into those tight garage spots.
What we do now: Inadvertently play bumper cars when trying to fit into small spots.

Illustration of electric window tinting on a panoramic roof.
Electric Window Tinting
Time frame: Five years
What: Electric window tinting could take windows or a moonroof from clear to tinted to even opaque with the push of a button. Maybach already offers a panoramic glass roof that can be switched from opaque to transparent, but not many of us can afford a Maybach.
What we do now: Wear sunglasses and wrestle with the sun visor.
Cool Stuff That's Been Talked About
(but who knows if we'll see it)
Advanced Flexible Fuel Systems
What: With fuel prices and technology in flux, this prediction is more general. In addition to widely available hydrogen-powered cars and clean diesel cars, we envision a car that could run on all types of fuel interchangeably. You could have one car that could run on gas, diesel, hydrogen, E85 and electric power. Your mileage would increase and you could use whatever fuel was cheapest — or available. Research into hydrogen fuel cells has been in the works for years, and we already have cars that can run on E85 and gas, as well as hybrids that can run on gas and battery power. Now we just need to figure out how to combine all the technologies into one car.
What we do now: Spend a lot of money at the pump and feel guilty for not taking public transportation.
Active Tires
What: Sure, airless tires would be great, but wouldn't it be even cooler to have tires made from some sort of synthetic compound that could change with the push

of a button to handle different road conditions? One set of tires could take you from summer to winter or, better yet, handle an unexpected rainstorm.
What we do now: Buy all-season tires, replace seasonal tires as needed, or keep summer tires on all year and spend January gazing longingly at our sweet ride as it sits in the garage.

The future of autopilot?
True Autopilot
What: In some ways, we're still far from the cars most of us thought we'd be driving by now. True autopilot — where the navigation system guides the car to its destination while the driver sits back and relaxes — is a huge, futuristic step in the right direction. Whether through an extension of GPS or with the aid of magnets in the road, research into this Jetsons-like technology is already under way.
What we do now: Um ... drive.

Components of the Automobile

Automobiles are trackless, self-propelled vehicles for land transportation of people or goods, or for moving materials. There are three main types of automobiles. They are passenger cars, buses and lorries (trucks).The automobile consists of the following components: a)the engine; b)the framework: c)the mechanism that transmits the power-engine to the wheels; d)the body.

Passenger cars are, as a rule, propelled by an internal combustion engine. They are distinguished by the horse-power of the engine, the number of cylinders on the engine and the type of the body, the type of tpansmission, wheeelbase, weight and overall length.

There are engines of various designs. They differ in the number of cylinders, their position, their operating cycle, valve mechanism, ignition and cooling system.

Most automobile engines have six or eight cylinders, although some four-, twelve-, and sixteen-cylinder engines, are used. The activities that take place in the engine cylinder can be divided into four stages which are called strokes. The four strokes are: intake, compression, power and exhaust. «Stroke» refers to the piston movement. The upper limit of piston movement is called top dead centre, TDC. The lower limit of piston movement is called bottom dead centre, BDC.A stroke constitutes piston movement from TDC to BDC or from BDC to TDC. In other words, the piston completes a stroke each time it changes the direction of motion.

. Переведите текст, пользуясь словарем**.**

Gearboxes are assembled and disassembled on special stands using special mechanisms. In case of trouble in change-speed gearbox it can be repaired only in the workshop. But in order not to get into trouble you should do the followings steps:
a).check the oil level in the gearbox casing;
b).wash the breather channel;

c).change the oil in accordance with the lubrication schedule;
d).wash the gearbox with a thin mineral oil;
e).drain the used oil through the drain hole.

Тема 11.3. Автомобильные технологии будущего

Практическое занятие 53

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Economy Mode
Time frame: Two years
What: If drivers can't change their driving behavior to increase gas mileage, cars may do it for them. In economy mode, a car turns off non-essential systems, turns down the A/C and even engages cruise control to conserve fuel. The 2007 Saturn Vue Green Line Hybrid features an economy mode that limits A/C use, and several models (such as the Honda Odyssey) can deactivate cylinders depending on driver demand.
What we do now: Continue to debate whether we get better gas mileage by rolling down the windows or turning on the A/C when we're on the highway.
Down the Road (coming in 3-5 years)
Lane Changer Warning
Time frame: Three years
What: A system that would monitor traffic in adjacent lanes to let the driver know when it's safe to change lanes. The 2007 Audi Q7 and Volvo XC90 already offer similar technology on a limited basis.
What we do now: Take our eyes off the road to check all the mirrors and our blind spot. Check the mirrors again. Double-check our blind spot. Dang, still missed that Mini!
Camless Engines
Time frame: Three years
What: Like the human body, engines demand airflow based on workload. A complex array of tubes, valves and camshafts facilitates this process, but it has nowhere near the flexibility of our lungs. Camless technology bridges the gap, better controlling the amount of air that's drawn into the engine. The result: More power, less pollution and better mileage. The 2008 Mercedes-Benz C-Class will likely be one of the first cars to have this gas-saving technology.
What we do now: Wonder why our gutless four-bangers can only manage 26 mpg.

Self-repairing paint could fix minor scratches over time.
Self-Repairing, Self-Cleaning Paint
Time frame: Three years

What: Paint that can better resist and repair minor scratches and withstand marks from things like greasy fingers and tree sap. Nissan has already developed a topcoat made from an elastic resin that prevents some scratches — unfortunately it lasts about three years.
What we do now: Cross our fingers the guy parked next to us doesn't scratch our doors.

A navigation screen with real-time traffic information.
Navigation Systems With Real-Time Traffic Information
Time frame: Three years
What: All cars with navigation systems would be able to integrate real-time traffic data in order to alert drivers to road construction issues or traffic snarls while providing alternate routes. Similar systems are already available on handheld devices and in some luxury cars, like the Acura RL and Cadillac CTS.
What we do now: Arrive to work 30 minutes late because we forgot to check the traffic report before we left home.
Electric motors

There is a wide variety of d.c. motors. There are shunt motors, series motors, synchronous motors, induction motors, single-,two-,and three-phase motors. They are used to drive various machines.

Direct-current motors are of three principal kinds, and are named according to the manner in which their field coils are connected to the armature. They are named respectively: series, shunt, and compound.

In the series motors the field windings and armature are connected in series with each other. All the current which passes through the armature passes through the field coils. The field windings are therefore composed of a few turns of thick wire. Starting under heavy load, a series motor will take a large current to provide the huge torque required.

The field coils of shunt motors are connected direct across the brushes, hence they have the full voltage of the mains applied to them. The shunt motor may by called a constant speed motor, and is suitable for driving machine tools, lathes, wood-working machines and any machines requiring a steady speed.

A compound motor has both shunt and series field windings and therefore partakes of the nature of both types of motors.

Практическое занятие 54

A. C. Electric Motor

Motors for alternating-current circuits may by either single-phase or polyphase (two-or three-phase).They may again be divided into two kinds, named respectively:1.Synchronous;2.Non-or asyn-chronous, ordinarily called induction motors.

The most widely used a.c. motor is the induction motor. It has two main parts: a)the stationary winding or stator, which sets up a rotating magnetic field, and b)the rotating part of the motor, i.e. the rotor. The rotor of a commercial a.c. motor consists of an iron core with large copper bars placed in sets around the circumference and connected at both ends to copper rings. This is called a

squirrel-cage rotor. When a rotor is placed in a rotating magnetic field, a large current is induced in it.

A.c. motors are exactly similar in construction to a.c. generators and may be called inverted alternators, since the same machine may be used as either a generator or motor.

Synchronous motors are very suitable for large powers, where the machine can be started up without load, and once started run for long periods.

For supplying direct-current power networks, the supply comes first from an alternating-current source and is converted to direct current by synchronous convertors or motor-generator sets.

Дайте ответы на вопросы.

1. How many components has the computer on modern cars? What are they?
2. How do we call the computer hardware on the automobile?
3. What does an integrated circuit combine?
4. What material is used in the integrated circuit? Why?
5. What does the computer software do?
6. Why is the computer used on board the car?
7. What does the program tell to the computer?
8. Where is the program stored?
9. What is ROM?
10. What is PROM?
11.What is RAM?

Раздел 12. Мастер технического обслуживания и ремонта автомобиля

Тема 12.1. Автомастерские

Практическое занятие 55

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

An automobile repair shop (also known as a garage) is a repair shop where automobiles are repaired by auto mechanics and electricians.
Automotive garages and repair shops can be divided into following categories:

The auto parts stores or motor factors who also maintain service operations. This is not common in the United Kingdom but more common in the US.
Automobile repair workshops that are independently owned and operated

businesses. These may also include regional or national chains and franchises including OEM car dealership sites. In the United States, these sites are commonly certified by their respective manufacturer to perform warranty and recall repairs by that manufacturer or distributor. Independent automobile repair shops in the US may also achieve certification through manufacturer sponsored programs.[1]
In the European Union a recent law (The EC Block Exemption Regulation 1400/2002 (October 2003[2])) allows motorists more flexibility in selecting where they can get their car serviced. Due to this legislation, maintenance and service work does not have to be done by the main dealer as long as the garage uses Original Equipment 'Matching Quality' parts, and are recorded as such, and the garage follow the manufacturer's service schedules. The Block Exemption Regulation (BER) covers service and maintenance during the warranty period and prohibits vehicle manufacturers' warranties from including conditions that require normal maintenance to be provided within the vehicle manufacturer's network or that all parts used must be the manufacturer's original spare parts. This means that motorists benefit from open market competition in aftermarket parts, repairs and services thus reducing the cost of servicing through better labor rates and competitively priced parts. Also, some auto repair shops provide additional towning services.
Specialty automobile repair shops are shops specializing in certain parts such as brakes, mufflers and exhaust systems, transmissions, body parts, tires, automobile electrification, automotive air conditioner repairs, automotive glass repairs and installation, and wheel alignment or those who only work on certain brands of vehicle or vehicles from certain continents of the world. There are also automotive repair shops that specialize in vehicle modifications and customization.
Oftentimes, various specialized auto repair shops will have varied infrastructure and facilities (for specific jobs or vehicles), as well as technicians and mechanics with different qualifications.
Online automobile repair shops providing doorstep repair services and home delivery of new and used auto parts of different late model and classic cars whose parts are not widely available in the market. Such kind of organizations are predominant in US with wide acceptance and high growth in UK also.The developing countries are still adapting to the e-commerce marketplace and it is expected that with its success in the US this will also prove to be revolutionary there also.
Auto body repair[edit]
Automotive repair shops also offer paintwork repairs to scratches, scuffs and dents to vehicle damage as well as damage caused by collisions and major accidents. Many body shops now offer paintless dent repair, which is done by pushing the dents out from inside. OEM Certified Collision Centers have the highest standards.

Тема 12.2. Техническое обслуживание автомобиля.

Практическое занятие 56

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Закончите предложения, используя необходимые слова или словосочетания, данные ниже.

A.: What three functions does the clutch ... ?
B.: It is used for ....
A.: Where is it... ?
B.: It is ... between the flywheel of the engine and the ....
A.: By what is the clutch ... ?
B.: It is ...by the....
A.: What takes place when the pedal is ... ?
B.: The clutch is ....
A.: And when the driver pushes down on the pedal?
B.: The clutch is ....

Прочтите диалог и выполните следующие за ним упражнения.
DIALOGUE
A.: What is the function of the clutch?
B.: You see, it serves three functions. It is used for freeing the engine from the gearbox, for starting the car and for freeing the engine from car wheels.
A.: Is it a friction device?
B.: Yes, of course. It is fixed between the flywheel of the engine and the gearbox and usually consists of two discs.
A.: What discs?
B.: The friction disc (driven disc) and the pressure disc.
A.: I suppose the principle of operation of clutches is a frictional force between discs. Am I right?
B.: Yes, you are. When the clutch is fully engaged the frictional force makes discs rotate at the same speed.
A.: And by what is the clutch controlled?
B:.By the clutch pedal. When it is at rest the clutch is engaged and when it is pressed down the clutch is disengaged and the engine is disconnected from the car wheels.
A.: Thank you. And what types of clutches do you know?
B.: Positive clutches and gradual engagement clutches.
A.: Thank you very much for your information.
B.: Not at all. Glad to help you.

Тема 12.3. Ремонт автомобиля.

Практическое занятие 57

Образовательная цель: научить применять знания в решении практических задач.

Прочитайте и переведите текст:

This article relies largely or entirely upon a single source. Relevant discussion may be found on the talk page. Please help improve this article by introducing citations to additional sources. (May 2011)

Mechanical repair
Maintenance, repair and operations (MRO) or maintenance, repair, and overhaul involves fixing any sort of mechanical, plumbing or electrical device should it become out of order or broken (known as repair, unscheduled, or casualty maintenance). It also includes performing routine actions which keep the device in working order (known as scheduled maintenance) or prevent trouble from arising (preventive maintenance). MRO may be defined as, "All actions which have the objective of retaining or restoring an item in or to a state in which it can perform its required function. The actions include the combination of all technical and corresponding administrative, managerial, and supervision actions."

MRO operations can be categorised by whether the product remains the property of the customer, i.e. a service is being offered, or whether the product is bought by the reprocessing organisation and sold to any customer wishing to make the purchase (Guadette, 2002). In the former case it may be a backshop operation within a larger organization or smaller operation.

The former of these represents a closed loop supply chain and usually has the scope of maintenance, repair or overhaul of the product. The latter of the categorisations is an open loop supply chain and is typified by refurbishment and remanufacture. The main characteristic of the closed loop system is that the demand for a product is matched with the supply of a used product. Neglecting asset write-offs and exceptional activities the total population of the product between the customer and the service provider remains constant.
Engineering[edit]

Road repair
In telecommunication, commercial real estate and engineering in general, the term maintenance has the following meanings:

Any activity – such as tests, measurements, replacements, adjustments and repairs — intended to retain or restore a functional unit in or to a specified state in which the unit can perform its required functions.
For material — all action taken to retain material in a serviceable condition or to restore it to serviceability. It includes inspection, testing, servicing, classification as to serviceability, repair, rebuilding, and reclamation.
For material — all supply and repair action taken to keep a force in condition to carry out its mission.

For material — the routine recurring work required to keep a facility (plant, building, structure, ground facility, utility system, or other real property) in such condition that it may be continuously used, at its original or designed capacity and efficiency for its intended purpose.
Manufacturers and Industrial Supply Companies often refer to MRO as opposed to Original Equipment Manufacturer (OEM). OEM includes any activity related to the direct manufacture of goods, where MRO refers to any maintenance and repair activity to keep a manufacturing plant running.

Maintenance types[edit]
Generally speaking, there are four types of maintenance in use:

Preventive maintenance, where equipment is maintained before break down occurs.
Operational maintenance, where equipment is maintained in using.
Corrective maintenance, where equipment is maintained after break down. This maintenance is often most expensive because worn equipment can damage other parts and cause multiple damages.
Adaptive maintenance, where equipment is maintained by letting it adapt to new environment.
Preventive maintenance[edit]
Main article: Preventive maintenance
Preventive maintenance is maintenance performed in an attempt to avoid failures, unnecessary production loss and safety violations.

The effectiveness of a preventive maintenance schedule depends on the RCM analysis which it was b
Инструменты для ремонта автомобиля

flashlight – карманный фонарик
fuse – предохранитель
jack – домкрат
oil - масло
pliers – клещи
screwdriver – отвертка
spare part – запчасть
spark plug / sparking plug (BrE) – свеча зажигания
tool – инструмент
water – охлаждающая жидкость
wrench – гаечный ключ
Места обслуживания автомобилей

car park (BrE) / parking lot (AmE) – парковка, стоянка
car wash – автомойка
filling station (BrE) / gas station (AmE) – заправочная станция
garage [gə'rɑ:ʒ] – крытая парковка, парковка в здании
repair shop - мастерская

toll road – платная дорога
turnpike – место взимания дорожного сбора на платной дороге
Прочие автомобильные термины

break down – сломаться
breakdown ['breikdaun] - поломка
buckle up (разговорная форма) – пристегнуться
car phone – автомобильный телефон (телефон, который установлен в автомобиле)
car pool – небольшая группа автомобилистов, которые едут на одном автомобиле, поочередно садясь за руль
car theft – автомобильная кража
diesel ['di:zəl] – дизельное топливо
driving licence (BrE) / driver's license (AmE) – водительские права
fasten one's seat belt – застегнуть ремень
fix (something) – починить (что-либо)
fuel – топливо
mph (= miles per hour) – миль в час (скорость движения)
petrol (BrE) / gasoline, gas (AmE) – бензин
speed limit – ограничение скорости

Закончите предложения, выбрав соответствующее логике окончание.

The clutch is a device connecting ....
a).the rear axle and axle shafts.
b).the gearbox and differential.
c).the engine and the gearbox.
2.The clutch is situated between ....
a).the gearbox and cardan shaft.
b).the flywheel and the gearbox.
c).the gearbox and rear axle.
3.The clutch is controlled by ....
a). the brake pedal
b). the clutch pedal.
c).the gearbox and rear axle.
4.The clutch is engaged ....
a).when the clutch pedal is pressed down.
b).when the clutch pedal is at rest.
5.The clutch is disengaged ....
a).when the clutch pedal is at rest.
b).when the clutch pedal is pressed down.

Тема 12.4. Резюме автомеханика

Практическое занятие 58

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Text: What Automotive Service Technicians and Mechanics Do

An auto mechanic performs an oil change on a vehicle.

Automotive service technicians and mechanics, often called service technicians or service techs, inspect, maintain, and repair cars and light trucks.

Duties

Automotive service technicians and mechanics typically do the following:
Identify mechanical problems, often by using computerized diagnostic equipment
Test parts and systems to ensure that they are working properly
Follow checklists to ensure that all critical parts are examined
Perform basic care and maintenance, including changing oil, giving tuneups, checking fluid levels, and rotating tires
Repair or replace worn parts, such as brake pads and wheel bearings
Disassemble and reassemble parts
Use testing equipment to ensure that repairs and maintenance are effective
Explain to clients their automotive problems and the repairs done on their vehicles
Service technicians work on traditional mechanical components, such as engines, transmissions, and drive belts. However, they also must be familiar with a growing number of electronic systems. Braking, transmission, and steering systems, for example, are controlled primarily by computers and electronic components.
Other integrated electronic systems, such as accident-avoidance sensors, are becoming common as well. In addition, a growing number of technicians are required to work on vehicles that run on alternative fuels, such as ethanol and electricity.
Service technicians use many different tools, including computerized diagnostic tools and power tools such as pneumatic wrenches, lathes, welding torches, and jacks and hoists. These tools usually are owned by their employers.

Service technicians also use many common handtools, such as sockets and ratchets, wrenches, and pliers. These tools generally are owned by service technicians. In fact, experienced workers often have thousands of dollars invested in their personal tool collection. For example, some invest in their own set of

pneumatic tools—tools, such as impact wrenches—powered by compressed air. Service technicians sometimes specialize in a particular type of repair that may be subject to specific regulations or procedures. For instance, those focused on repairing air-conditioning system must follow federal and state regulations governing the handling, recycling, and disposal of refrigerants.

In some shops, technicians may specialize. The following are examples of types of service technicians:

Automotive air-conditioning repairers install and repair air conditioners and parts, such as compressors, condensers, and controls. They are trained in government regulations related to their work.

Brake repairers adjust brakes, replace brake rotors and pads, and make other repairs on brake systems. Some technicians specialize in both brake and front-end work.

Front-end mechanics align and balance wheels and repair steering mechanisms and suspension systems. They frequently use special alignment equipment and wheel-balancing machines.

Transmission technicians and rebuilders work on gear trains, couplings, hydraulic pumps, and other parts of transmissions. Extensive knowledge of computer controls, the ability to diagnose electrical and hydraulic problems, and other specialized skills are needed to work on these complex components.

Drivability technicians use their extensive knowledge of engine management, emission, fuel, electrical, and ignition systems to diagnose issues that prevent engines from performing efficiently. They often use the onboard diagnostic system of a car and electronic testing equipment such as a multimeter to find where the malfunction may be.

For information about technicians who work on large trucks and buses, see the profile on diesel service technicians and mechanics.

For information about technicians who work on farm equipment, construction vehicles, and railcars, see the profile on heavy vehicle and mobile equipment service technicians.

For information about technicians who repair and service motorcycles, motorboats, and small all-terrain vehicles, see the profile on small engine mechanics.

Прочитайте и переведите текст:

TEXT: CAR REPAIR SPECIALIST

Many consider their cars as their prized possessions. If the car sustains any malfunctioning or disfiguring, they immediately seek the expertise of a car mechanic. This has increased the scope and demand for a car repairer's position. A Car repair specialist works for several car servicing centers. His main responsibility is to communicate with the clients and comprehend the malfunctioning of the car. He inspects the main engine of the car and finds out the reason for the defect. He examines the main components of the car engine that includes spark plug, piston, valves, crankshaft, cylinders, etc. Based on the nature and degree of the defect, the car repair mechanic repairs, removes or replaces the defective components. In addition to repairing of the engine, a car repair technicians performs repair to the auto body and removes the dents, paints the exteriors, fixes the windows or windshields and mends the upholstery. Thus, the car repair mechanic helps to provide thorough servicing to cars.

Car Repair Resume Example
Резюме автомеханика

Alex Malfoy
16N, Wellington Street,
Dallas, TX 87745
988 - 020 - 4547
alexmalfoy@example.com

Career Objective

I aspire to work as a car repair mechanic and provide quality repairing services that will allow my clients to maintain their cars free of trouble for long and contribute to the goodwill of the organization

Key Skills

- Expertise in functioning of the mechanical and electrical components
- Profound competence in identifying the type and degree of malfunctioning
- Proficient with the different varieties of car engines and mechanism
- A well built physic that helps undertake strenuous repairing work
- Skilled at communicating with customers and guiding them on basics of car maintenance

Work Experience

Car Repair Mechanic
Aviator Automobile Repair Stores, Dallas
June 2009 - till date
Responsibilities:

- Inspect the engine of the car and figure out the reason of malfunctioning
- Ensure the spark plug is functioning accurately and provides the ignition at the right time
- Analyze the opening and closing action of the valves to make certain they let the fuel in and release the exhaust on precise time
- Repair the broken windows and windshields and replace them with new glass
- Replace the worn out wheels and remove puncture
- Guide the customers in maintaining the efficiency of their cars and ensuring its optimum performance

Car Repair Mechanic
Jackson's Automobile Services, Dallas
October 2007 - May 2009
Responsibilities:
Responsible to perform repairs to the internal and external car components
Ensure the engine cylinders are well fixed and function smoothly
Make repairs to the crank shaft and ensure it accurately converts the up and down movement of the piston into circular motion
Verify the competence of the piston rings in providing a seal that separates the movement of fuel and exhaust of flowing into the sump
Remove dents, fill-up cracks and paint the car exteriors to restore the elegance of the car
Draft a bill and forward it to the customers for payments
Educational Qualifications
High School Diploma
Ritter's High School
Dallas (2006)
Certifications
Certified Automotive Servicing Technician
Robinson Automobile Servicing Training School
Dallas (2007)
Reference
Allan Stanley
Professional Details: Stores Manager

Aviator Automobile Repair Stores, Dallas
Contact Details: 988 - 525 - 1213
allanstanley@example.com

Письменная работа
Напишите резюме по образцу

Situational Dialogues Ситуативные диалоги

1.
-Could you book me in for a full service, please?
-Certainly, madam. I just need to know the year and model.
-I can't remember the year but it's a D registration.
-I think I can fit you in first thing tomorrow morning.
-That would suit me fine. And while you've got it, could you have a look at the brakes as well?.
-Yes, we always check everything thoroughly.

2.
-My car needs servicing. Can I get it done here?
-Yes, I think we can help you. Which year and model, please?
-It's last years model, the estate version.
-How about next Wednesday morning?
-That's fine. And at the same time, could you do something about the sunroof? It lets the rain in.
-Yes, we'll do that for you

Тема 12.5. Запасные детали автомобиля

Практическое занятие 59

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст:

Components of the Automobile

The automobile is made up of three basic parts: the power plant, or the engine, the chassis and the body.
The engine is the source of power that makes the wheels rotate and the car move. It includes fuel, cooling, lubricating and electric systems. Most automobile engines have six or eight cylinders
The chassis includes a power train (power transmission), a running gear, steering and braking systems as well.

The power train carries the power from the engine to the car wheels.
The power transmission, in turn, contains the clutch, gearbox, propeller or cardan shaft, final drive, differential, rear axle and axle shafts. The running gear consists of a frame with axles, wheels and springs.
The body has a hood, fenders and accessories: the heater, stereo tape recorder, windshield wipers, conditioner, speedometer and so on.

Переведите текст:

Components of the Automobile

Automobiles are trackless, self-propelled vehicles for land transportation of people or goods, or for moving materials. There are three main types of automobiles. They are passenger cars, buses and lorries (trucks).The automobile consists of the following components: a)the engine; b)the framework: c)the mechanism that transmits the power-engine to the wheels; d)the body.

Passenger cars are, as a rule, propelled by an internal combustion engine. They are distinguished by the horse-power of the engine, the number of cylinders on the engine and the type of the body, the type of tpansmission, wheeelbase, weight and overall length.

There are engines of various designs. They differ in the number of cylinders, their position, their operating cycle, valve mechanism, ignition and cooling system.

Most automobile engines have six or eight cylinders, although some four-, twelve-, and sixteen-cylinder engines, are used. The activities that take place in the engine cylinder can be divided into four stages which are called strokes. The four strokes are: intake, compression, power and exhaust. «Stroke» refers to the piston movement. The upper limit of piston movement is called top dead centre, TDC. The lower limit of piston movement is called bottom dead centre, BDC.A stroke constitutes piston movement from TDC to BDC or from BDC to TDC. In other words, the piston completes a stroke each time it changes the direction of motion.

Teacher: Can you tell me English equivalents to: двигатель, сцепление, коробка передач, тормоза и ручное управление?
Student: Yes, I can. They are the engine, clutch, gearbox, brakes and steering system.
T.: Do you know what main units the automobile consists of?
S.: Yes, I do. They are the chassis, the body and the engine.
T.: What is the source of power?
S.: The engine is. It makes the car wheels rotate and the car move.
T.: What unit of the car carries the power to the wheels?
S.: The transmission does.
T.: What mechanisms does the transmission consist of?
S.: It consists of the clutch, gearbox, propeller shaft, rear axle, final drive and differential. It also includes brakes and steering system.
T.: And what is the clutch used for?
S.: It is used for disengaging the engine from the car wheels.

T.: What is the function of the brakes?
S.: They are necessary to slow or stop the car.
T.: And what about the steering system?
S.: It is used to turn the car in the direction the driver wants to go.
T.: That is right. You know the subject very well.

Практическое занятие 60

Подберите английские эквиваленты запасных частей автомобиля:

фара, сблокированная с указателем поворота;
радиатор системы охлаждения;
аккумуляторная батарея;
распределитель зажигания;
воздушный фильтр;
двигатель;
вакуумный усилитель с главным цилиндром гидропривода тормозов;
главный цилиндр гидропривода выключения сцепления;
рулевое колесо;
внутреннее зеркало заднего вида;
заднее сиденье;
запасное колесо;
задний тормоз;
пружина задней подвески амортизатор задней подвески;
задний мост;
карданная передача;
переднее сиденье;
наружное зеркало заднего вида;
рычаг стояночного тормоза;
рычаг переключения передач;
коробка передач;
педаль гидропривода сцепления;
педаль гидропривода тормозов;
педаль акселератора;
рулевой механизм;
передний тормоз;
пружина передней подвески с амортизатором;
топливный насос;
масляный фильтр

1. cornering lamp; 2. cooling system radiator; 3. accumulator battery; 4. ignition distributor; 5. air filter; 6. engine; 7. vacuum-power with master cylinder of hydraulic drive brakes; 8. master cylinder of hydraulic drive of clutch disengagement; 9. steering wheel; 10. inside (interior) mirror; 11. back seat; 12. spare wheel; 13. rear wheel brakes; 14. rear suspension spring; 15. rear suspension shock absorber; 16. rear axle; 17. cardan shaft;

18. front seat; 19. outside mirror; 20. parking brake lever; 21.gear change lever; 22. gearbox; 23. clutch pedal; 24. brake pedal; 25. accelerator pedal; 26. steering mechanism; 27. front wheel brake; 28. front suspension spring with shock absorber; 29. fuel pump; 30. oil filter.

Тема 12.6. Инструменты для ремонта автомобиля.

Практическое занятие 61

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Инструменты для ремонта автомобиля

flashlight – карманный фонарик
fuse – предохранитель
jack – домкрат
oil - масло
pliers – клещи
screwdriver – отвертка
spare part – запчасть
spark plug / sparking plug (BrE) – свеча зажигания
tool – инструмент
water – охлаждающая жидкость
wrench – гаечный ключ
Места обслуживания автомобилей

car park (BrE) / parking lot (AmE) – парковка, стоянка
car wash – автомойка
filling station (BrE) / gas station (AmE) – заправочная станция
garage [gə'rɑ:ʒ] – крытая парковка, парковка в здании
repair shop - мастерская
toll road – платная дорога
turnpike – место взимания дорожного сбора на платной дороге
Прочие автомобильные термины

break down – сломаться
breakdown ['breikdaun] - поломка
buckle up (разговорная форма) – пристегнуться
car phone – автомобильный телефон (телефон, который установлен в автомобиле)
car pool – небольшая группа автомобилистов, которые едут на одном автомобиле, поочередно садясь за руль
car theft – автомобильная кража
diesel ['di:zəl] – дизельное топливо

driving licence (BrE) / driver's license (AmE) – водительские права
fasten one's seat belt – застегнуть ремень
fix (something) – починить (что-либо)
fuel – топливо
mph (= miles per hour) – миль в час (скорость движения)
petrol (BrE) / gasoline, gas (AmE) – бензин
speed limit – ограничение скорости
Переведите диалог на станции техобслуживания:

Good morning, sir, I have come for a 15 thousand kilometers servicing. I have an appointment for 10 a m.
- OK. Please, drive your car into the garage... Let me check the car and diagnose all possible problems... Right.
I will have to replace the tyres, change the brake disk and check the oil level.
- Fine. Please check why my wipers get stuck in the middle of the windshield. And I've got some other problems as well. I've noticed that the clutch is very noisy when I change gears.
-1 see. The plate must be worn out. But it's a normal thing at this mileage. And I can see you have some minor problem with the radiator.
- Can I get it repaired today too?
- I'm afraid it will take a couple of days to fix it. You can leave the car some other day. I'm sorry for the inconvenience.
- Ok then. Another problem is that my car won't start in the mornings. I usually call my neighbour to jump-start it.
- Let me open the hood and check all the hoses and belts. So... I'm glad to say they are all in working order. Did you check the battery? If you need to jump-start your car, you probably have to change the weak battery. When did you buy the last one?
- Oh, I guess it was ages ago. You're right. I have to replace it.
- Right. There it is. Everything is in order in your car. The oil level was below the full mark, so I've filled it up. Take our 30-day warranty card, please.
- Greatl How much is it?
- It's 300 $ in total,
- Here you are. Thanks for your help. See you for a 30 thousand servicing

Тема 12.7. Приспособления для ремонта автомобилей.

Практическое занятие 62

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите на русский язык:
shinomontazhnye machine tools for automobile wheels;
balancing machines;

two lifts with upper and lower synchronization;
four-post lifts;
plunger lifts; ,
scissor lifts;
she was pneumatic lifts for a quality tire;
Jack;
tire mounting machines for wheels of trucks;
machinery for cleaning wheels and water treatment;
spray equipment;
different types of compressors (reciprocating, movable, stationary, screw);
diagnostic equipment;
tools for auto service in collections and lodgments;
stands for filling and maintenance of air conditioning and more.

Переведите на английский язык

шиномонтажные станки для легковых колёс;
балансировочные станки;
двухстоечные подъемники с верхней и нижней синхронизацией;
четырёхстоечные подъемники;
плунжерные подъемники; ,
ножничные подъемники;
пневматичные подъемники для качественного шиномонтажа; домкраты;
шиномонтажные станки для колес грузового типа; оборудование для мойки колес и очистки воды; окрасочное оборудование;
различные виды компрессоров (поршневые, передвижные, стационарные, винтовые);
диагностическое оборудование;
инструменты для автосервиса в наборах и ложементах;
стенды для заправки и обслуживания кондиционеров и многое другое.

Переведите текст:

An automobile repair shop (also known as a garage) is a repair shop where automobiles are repaired by auto mechanics and electricians.

Automotive garages and repair shops can be divided into following categories:

The auto parts stores or motor factors who also maintain service operations. This is not common in the United Kingdom but more common in the US.
Automobile repair workshops that are independently owned and operated businesses. These may also include regional or national chains and franchises including OEM car dealership sites. In the United States, these sites are commonly certified by their respective manufacturer to perform warranty and recall repairs by that manufacturer or distributor. Independent automobile repair shops in the US may also achieve certification through manufacturer sponsored programs.[1]
In the European Union a recent law (The EC Block Exemption Regulation

1400/2002 (October 2003[2])) allows motorists more flexibility in selecting where they can get their car serviced. Due to this legislation, maintenance and service work does not have to be done by the main dealer as long as the garage uses Original Equipment 'Matching Quality' parts, and are recorded as such, and the garage follow the manufacturer's service schedules. The Block Exemption Regulation (BER) covers service and maintenance during the warranty period and prohibits vehicle manufacturers' warranties from including conditions that require normal maintenance to be provided within the vehicle manufacturer's network or that all parts used must be the manufacturer's original spare parts. This means that motorists benefit from open market competition in aftermarket parts, repairs and services thus reducing the cost of servicing through better labor rates and competitively priced parts. Also, some auto repair shops provide additional towning services.
Specialty automobile repair shops are shops specializing in certain parts such as brakes, mufflers and exhaust systems, transmissions, body parts, tires, automobile electrification, automotive air conditioner repairs, automotive glass repairs and installation, and wheel alignment or those who only work on certain brands of vehicle or vehicles from certain continents of the world. There are also automotive repair shops that specialize in vehicle modifications and customization.
Oftentimes, various specialized auto repair shops will have varied infrastructure and facilities (for specific jobs or vehicles), as well as technicians and mechanics with different qualifications.
Online automobile repair shops providing doorstep repair services and home delivery of new and used auto parts of different late model and classic cars whose parts are not widely available in the market. Such kind of organizations are predominant in US with wide acceptance and high growth in UK also.The developing countries are still adapting to the e-commerce marketplace and it is expected that with its success in the US this will also prove to be revolutionary there also.

Переведите и составьте вопросы к тексту:

Auto body repair
Automotive repair shops also offer paintwork repairs to scratches, scuffs and dents to vehicle damage as well as damage caused by collisions and major accidents. Many body shops now offer paintless dent repair, which is done by pushing the dents out from inside. OEM Certified Collision Centers have the highest standards. Auto body repair Automotive repair shops also offer paintwork repairs to scratches, scuffs and dents to vehicle damage as well as damage caused by collisions and major accidents. Many body shops now offer paintless dent repair, which is done by pushing the dents out from inside. OEM Certified Collision Centers have the highest standards.

Составьте диалог с выражениями:

service center — автосервис

food service center — центр продовольственного снабжения
vehicle service center — автоцентр
computer service center — центр обслуживания электронно-вычислительной техники
automated service center — автоматизированный центр обслуживания
automatic data service center — автоматический центр информационного обеспечения
motion-picture service center — центр кинообслуживания
management data service center — центр обеспечения сбора и обработки управленческой информации
forward electrical/electronic service center — передовой центр технического обслуживания и ремонта электрического и электронного оборудования
family services center — центр по обслуживанию семей военнослужащих
community services center — центр бытового обслуживания военнослужащих
service operations center — центр управления службы тыла
self-service supply center — центр снабжения методом самообслуживания
serviced amplification center — обслуживаемый усилительный пункт
military service propaganda center — центр пропаганды военной службы

Переведите диалог на станции техобслуживания:

Good morning, sir, I have come for a 15 thousand kilometers servicing. I have an appointment for 10 a m.
- OK. Please, drive your car into the garage... Let me check the car and diagnose all possible problems... Right.
I will have to replace the tyres, change the brake disk and check the oil level.
- Fine. Please check why my wipers get stuck in the middle of the windshield.
And I've got some other problems as well. I've noticed that the clutch is very noisy when I change gears.
-1 see. The plate must be worn out. But it's a normal thing at this mileage. And I can see you have some minor problem with the radiator.
- Can I get it repaired today too?
- I'm afraid it will take a couple of days to fix it. You can leave the car some other day. I'm sorry for the inconvenience.
- Ok then. Another problem is that my car won't start in the mornings. I usually call my neighbour to jump-start it.
- Let me open the hood and check all the hoses and belts. So... I'm glad to say they are all in working order. Did you check the battery? If you need to jump-start your car, you probably have to change the weak battery. When did you buy the last one?
- Oh, I guess it was ages ago. You're right. I have to replace it.
- Right. There it is. Everything is in order in your car. The oil level was below the full mark, so I've filled it up. Take our 30-day warranty card, please.
- Greatl How much is it?
- It's 300 $ in total,
- Here you are. Thanks for your help. See you for a 30 thousand servicing.

Перевод
- Доброе утро, сэр. Я приехал на техосмотр с пробегом 15 тыс. км. У меня запись на 10 утра.
- ОК. Пожалуйста, заезжайте на машине в гараж... Давайте я проверю авто и проведу диагностику всех возможных проблем... Что ж. Мне придется поставить новые шины, заменить тормозной диск и проверить уровень масла.
- Прекрасно. Пожалуйста, проверьте, почему дворники застревают посередине лобового стекла. У меня имеются еще и другие проблемы. Я заметил, что сцепление очень шумит при переключении передач.
- Понятно. Должно быть, диск стерт. Но это нормально при таком пробеге. И, как я вижу, у вас незначительная проблема с радиатором.

- Его можно отремонтировать сегодня?
- Боюсь, что потребуется пара дней для того, чтобы его починить. Вы можете оставить машину в какой- нибудь другой день. Прошу прощение за неудобство.
- Хорошо тогда. Другая проблема - моя машина не заводится по утрам. Я обычно прошу своего соседа, чтобы завести ее от постороннего источника.
- Давайте я открою капот и проверю все рукава и ремни. Итак... Я рад сообщить, что все в рабочем состоянии. Вы проверяли аккумулятор? Если вам приходится заводиться от постороннего источника, возможно, вам нужно заменить слабый аккумулятор. Когда вы покупали его в последний раз?
- О, думаю, прошла целая вечность. Вы правы. Мне надо его заменить.
- Что ж. Вот и все. В вашей машине все в порядке. Уровень масла был ниже отметки, поэтому я его заправил. Возьмите наш гарантийный талон на 30 дней.
- Здорово! Сколько с меня?
- В общей сложности, 300 $.
- Вот, возьмите. Спасибо за помощь. Увидимся на техосмотре с 30-тысячным пробегом.

Переведите на английский язык

Станция технического обслуживания (СТО) — организация, предоставляющая услуги населению и/или организациям по плановому техническому обслуживанию, текущему и капитальному ремонтам, устранению автополомок, установке дополнительного оборудования (тюнингу), восстановительному (кузовному) ремонту автотранспорта. СТО станция технического обслуживания-представляет собой комплекс сооружений и механизмов (подъёмники, рихтовочные стенды, шиномонтаж, балансировка, стенд развал-схождения, установка для замены масла, промывки топливной системы, рихтовочное и покрасочно-сушильное оборудование, стенды и тестеры для диагностики эл. цепи автомобиля), а также ручной и пневматический инструмент, собранные в одном месте для полноценного комплексного ремонта и обслуживания автомобилей.

Современные сервисные центры
Имеют также собственные склады запчастей, расходных материалов и комплектующих. Для удобства клиентов часто оборудуется отдельное помещение, в котором, как правило, имеются телевизор, торговый автомат, набор печатных изданий, кресла или диваны для сидения. Клиентские зоны сервисных центров, запрещающих нахождение клиента в цехе во время ремонта автомобиля, представляют возможность наблюдения за процессом ремонта через окно либо путем трансляции изображения с видеокамер, установленных в цеху.

Раздел 13. История автомобилестроения

Тема 13.1. История автомобилестроения.

Практическое занятие 63

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

History of Cars

The history of cars involved people from different countries who, in ways large and small, contributed to its development. The automobile as we know it started from crude but machines that by degrees underwent transformation due to dedicated work by several people. It is estimated that over 100,000 patents created the modern automobile. However, we can point to the many firsts that occurred along the way. Starting with the first theoretical plans for a motor vehicle that had been drawn up by both Leonardo da Vinci and Isaac Newton.

The first recorded use of a self-powered vehicle was in 1769 when Nicolas Cugnot, a French military engineer, designed and built an awkward but workable three-wheeled vehicle powered by a steam engine. The vehicle was intended as a tractor for hauling heavy cannons.

A second unit was built in 1770 which weighed 8000 pounds and had a top speed of 2 miles per hour and which ran on the cobble stone streets of Paris. The vehicle was intended as a tractor for hauling heavy cannons. It had a short career, 'tho. It went out of control during a trial run and crashed adding a colorful chapter in the history of cars. It's been alleged that Cugnot was also the first person to be involved in an auto accident, an interesting trivia in the history of cars.

Steam engines powered cars by burning fuel that heated water in a boiler, creating steam that expanded and pushed pistons that turned the crankshaft, which then turned the wheels. During the early history of cars - both road and railroad vehicles were being developed with steam engines. (Cugnot also

designed two steam locomotives with engines that never worked well.) Steam engines added so much weight to a vehicle that they proved a poor design for road vehicles; however, steam engines were very successfully used in locomotives. Historians, who accept that early steam-powered road vehicles were automobiles, feel that Nicolas Cugnot was the inventor of the first automobile.

The history of cars continued on Christmas Eve, 1801, when frightened British farmers rushed to their windows to witness the first practical use of mechanical power to move a vehicle. What they saw was a smoke-belching, steam-powered carriage moving without being pulled by a man or an animaIt was driven by their neighbor Richard Trevithick and he was driving the world's first true "automobile". An automobile is a self-propelled land vehicle that can carry passengers or freight. Trevithick's self-propelled carriage could carry passengers over land at a speed of nearly 10 miles per hour. And only if those neighbors knew at that time - a page in the history of cars had been unfolding.

Neither his neighbors nor even Trevithick himself appreciated the importance of his achievement. He considered his noisy carriage little more than a toy. He finally took it apart and sold the engine to a mill owner.

The early steam powered vehicles were so heavy that they were only practical on a perfectly flat surface as strong as iron. A road thus made out of iron rails became the norm for the next hundred and twenty five years. The vehicles got bigger and heavier and more powerful and as such they were eventually capable of pulling a train of many cars filled with freight and passengers.

However impractical as these cars may have been, the design for these vehicles were the basis for the subsequent self-propelled vehicles, enriching the history of cars, and ultimately became the basis for the design of the car we know today.

The next step towards the development of the car was the invention of the internal combustion engine. Francois Isaac de Rivaz of Switzerland designed the first internal combustion engine in 1807, using a mixture of hydrogen and oxygen to generate energy. However, his was a very unsuccessful design.

An internal combustion engine is any engine that uses the explosive combustion of fuel to push a piston within a cylinder - the piston's movement turns a crankshaft that then turns the car wheels via a chain or a drive shaft. The different types of fuel commonly used for car combustion engines are gasoline (or petrol), diesel, and kerosene.

Several designs were developed for a car to run on the internal combustion engine during the early 19th century, but with little to no degree of commercial success due to the fact that there was no known fuel that could be safely internally combusted.

A few years after Trevithick's steam engine, American inventor Oliver Evans built a steam-powered dredge, equipped with wheels so that it could move on land. He drove it around Philadelphia's Center Square to convince wealthy people to provide capital in manufacturing steam vehicles. But most people thought his invention was not practical.

The history of cars is fortunate to have people like Trevithick and Evans because steam-powered vehicles gained rapid popularity in England. But these early steam coaches soon ran into opposition. Stagecoach and railroad operators resented and feared their competition.

Early Electric Cars

Early electric cars contributed to the development of self-propelled vehicles. The history of cars wouldn't be complete without mentioning them.

Steam engines were not the only engines used in early automobiles. Vehicles with electrical engines were also invented. Between 1832 and 1839 (the exact year is uncertain), Robert Anderson of Scotland figured favorably in the history of cars when he invented the first electric carriage. Electric cars used rechargeable batteries that powered a small electric motor. The vehicles were heavy, slow, expensive, and needed to stop for recharging frequently. Both steam and electric road vehicles were abandoned in favor of gas-powered vehicles. Electricity found greater success in tram ways and streetcars, where a constant supply of electricity was possible.

From 1831 to 1865, the British Parliament passed a series of strict laws that hampered the development of the automobile. The strictest of those was the Red Flag Act of 1865 which was so named because one of the provisions of the law required a person to walk ahead of all "road locomotives" to warn of their approach proving that the history of cars could be a colorful one. The various laws unfortunately imposed so many limitations and such high taxes that steam coaches could not operate without losing money. This hurt automobile development in England until the Red Flag Act was repealed in 1896.

Early 1900s Cars

Contributions to the manufacture of early 1900 cars were made possible by several men. Two brothers, Charles E. and James F Duryea, were the first to manufacture and market a successful gasoline-powered automobile.

James Duryea completed the first Duryea automobile in 1893, in Springfield, Massachusetts, working with his brother's design. In 1895, the Duryeas established the first American automobile manufacturing company. On Thanksgiving Day, 1895, in what was dubbed the "Race of the Century," Frank Duryea won a 54-mile race from Jackson Park in Chicago to Evanston and back

again. It was a race sponsored by Herman H. Kohlsaat, publisher of the Chicago Times_herald. The prize money was $2,000 but in addition to the prize money, the Duryea brothers also became celebrities.

The sudden rush of fame allowed the brothers to form the Duryea Motor Wagon Company and produce early 1900s cars. Orders began arriving soon and unofficially, the American automobile industry was born as the brothers manufactured the first of 13 vehicles in 1896. By 1900, at least 100 different brands of horseless carriages were being marketed in the United States. Since they were all virtually handmade, the cars were outrageously expensive. Cars were perceived as no more than a high-priced toy for the rich. The early 1900s cars were, to many, a despicable symbol of arrogance and power. Nevertheless, the horseless carriage was finding buyers, hence a niche in the marketplace, and demand for this new toy was growing. In many metropolitan areas - New York, Boston, and Philadelphia, electric cabs, delivery trucks, and ambulances became more and more familiar sights.

It was a blacksmith's son from Lansing, Michigan who put the automobile on the main streets of America. His name was Ransom E. Olds who was only 18 when he hooked a steam engine to a three-wheeled vehicle and took off for a ride around his neighborhood. Despite his youth, he perceived that steam engines had a tendency to explode. He was ahead of his time when he had the intuition that gasoline, which was then abundant and cheap, would fuel fuel the early 1900s cars as well asfuture cars. He began to work of an internal combustion engine of his own. He also was among the first of the American investors to recognize the need for an automobile that was functional and reliable, a car for everyone.

Over the course of the next year, Olds produced eleven different models priced differently. He was trying to decide which car would need priority in production but fate intervened. A fire made the decision for him when all models except the Runabout - a small buggy with lightwheels and a curved dashboard. Powered by a one-cylinder engine not unlike the present day's lawnmowers, the Runabout had speeds of three to twenty miles.

In the case of the Runabout, necessity was indeed the mother of invention. In order to survive the competition of 100 different brands of horseless carriages, his early 1900 cars had to be manufactured in a different way. Olds came up with the idea of outsourcing the parts to small manufacturers. Of course, that word "outsourcing" was not yet known at that time but that idea was a major breakthrough in automobile manufacturing. He contracted with other companies to make some of the parts for his cars. The final product would then be assembled in his factory. This method was indeed revolutionary during that time. Each individual part would then be interchangeable - exactly as all other parts of the same car. As a result, Olds' assembly line was able to produce a great number of cars in a relatively short period of time.

It is therefore noteworthy to make reference to the astounding results of this partnerships. Several subcontractors hired by Olds later became famous for their own accomplishments. The Dodge brothers who supplied transmissions to Olds were big players in the history of the automobile. Olds' engines were supplied by Henry Leland who would later found Cadillac and Lincoln. Fred J. Fisher would later be bodymaker for General Motors.

Henry M. Leland, who founded the Cadillac Company built on Ransom Olds' idea by coming up with standardized parts that could be interchanged among several models.
Although Olds and Cadillac developed the idea of standardized and interchangeable parts, it was Henry Ford who developed mass production and made possible rapid production of the early 1900s cars. In 1908 the Ford Motor Companyproduced the famous Model T Ford. His idea was to produce and motor car that the average person could afford, operate, and maintain. The first Model T Ford sold for $850.00.

Ford's ideas truly revolutionized car manufacturing by developing the first assembly line in 1914. The basic idea of the assembly line was to move the car on a moving conveyor belt while workers on each side added parts as the car moved along. Often the parts were brought to the workers on another conveyor belt. Each worker had a specific relatively simple task to perform as compared with assembling an entire engine. The use of standardized interchangeable parts also produced a better product that could be easily repaired at lower cost. Before the assembly line, it had taken more than twelve hours to assembly a Model T. New Model T's now come off the assembly line at the rate of one car every 24 seconds. By 1915 the price of a Model T had dropped to $440.00, and by 1925 a Model T could be bought for $290.00. The early 1900's cars now are within reach of the average car buyer.
The early 1900s cars also benefited from major advances in automotive technology. In 1912, the electric starter, an electric motor that starts the gasoline engine, was invented. It made the operation of the 1910s cars a lot easier. Before its invention, the gasoline engine had to be started by cranking it by hand. This took considerable strength and was also dangerous. If the car were not cranked properly, the crank could kick back and cause a fractured thumb or arm.
World War I proved the value of the gasoline automobile. Trucks and ambulances were used in great numbers during the war, and the war proved to be a testing ground for automotive design.
The early 1900s cars underwent many changes from 1900 through 1920. During this time, closed cars that protected the drivers and passengers from sun and rain became more common.
Innovations

Most 1930s cars had four-wheel hydraulic brakes. Low-pressure balloon tires took the place of hard-riding high-pressure tires. During the 1930's most cars were also equipped with heaters and radios. At this time cars also began to take on a smoother shape, more aerodynamic in design, hence offering less wind resistance.The 1930 Cadillac "V-16" is the industry's first production car to offer sixteen-cylinder engine and immediately sets a new standard for power, performance, and luxury.

Pre War 1940s cars

US car production was dealt a setback because of World War II. In 1940 pre World War II the US produced 4,680,000 cars. Although each decade in history is different the decade of the 1940's is by far the most unusual in U.S. automobile history. This was the only period of time when automobile production stopped for a period of 3-4 years. No cars were manufactured after 1942 due to the advent of World War II. Production for civilians did not resume until 1946 . Early 1940's saw the first time luxury cars started rolling off a production line. A car showed the wealth and status of its owner. Cars like the Delahaye 135 convertible whose top speeds reached 95 mph, the Delahaye was the ultimate 1940luxury car.

The department of war came up with a one-quarter ton four wheel drive military vehicle called the Jeep. WWII saw the conversion of many U.S. automotive plants to military production. Chrysler meanwhile introduced a safety rim wheel that kept the tire on the rim in case of a blowout. Chrysler also offered two-speed electric windshield wipers.
The new 1940s cars had a lower, longer, broader, and more massive look. Hudson offered a combination automatic clutch with a semi-automatic transmission. The driver could select either the manual or semi-automatic shift with buttons on the dash.The 1941-42 Packard Clipper was another luxury car produced before the war.
The 1950s cars became lower, longer, and wider. The early 1950s saw the rise of chrome on cars , as an increasingly opulent society flourished in the United States. Many of the automobiles of the time were designed by stylists who took their influence from the transport industry in general and therefore used ideas from both planes and trains prevailing during that time.
The 1950s saw U.S. auto production exceeded that of Great Britain, France, Japan, Sweden and all other nations *put together several times over*, and Ford and GM - both of which produced their 50 millionth vehicle in the 1950s - posted healthy profits.
The long pent up demand for cars caused by the Depression and World War II exploded into an irrational excess in the decade of the '50's. Tailpins and chromes was the norm and that design was the brainchild of Harley Earl. The "fabulous fifties" also saw some of the most beautiful and some of the most outlandish cars ever made.
With the advent of the jet age in the 1950's came technological and design breakthroughs in the automobile. One of those was the speed with which the automobile, despite complicated compound curves and forms, could be manufactured. The jet set lifestyle had captured the hearts of the American public and car designers of the time exploited this fascination to turn out ordinarily plain-looking family cars to come out with wings, turbines and after-burner tail lights.
The 1960's automobiles belonged to a distinct decade of automobile history with the advent of economy, muscle and pony cars.
The 1960's saw the American automobile industry consolidating into the Big Three: (General Motors, Ford, and Chrysler) and American Motors. These firms not only dominated the domestic market with the sales of the 1960s cars, but the

global market as well. In 1960 American companies built 93 percent of the autos sold in the United States and 48 percent of world sales .
muscle cars are a product of the Classic Car Era. They evolved from the pent-up consumerism that exploded after World War II. Overnight, it seemed American consumers opted for bigger and faster cars. Muscle Cars appeared at a time when Detroit was trying to stop the invasion of imported cars led by Volkswagen and included Fiat, Renault ,Datsun (now Nissan), with new, light-weight models like the Corvair, Falcon and Valiant.
The term muscle car generally describes a mid-size car with a large, powerful engine (typically, although not universally, a V8 engine) and special trim, intended for maximum acceleration on the street or in drag racing competition. It is distinguishable from sports cars, which were customarily considered smaller, two-seat cars, or GTs, two-seat or 2+2 cars intended for high-speed touring and possibly road racing.
Muscle cars are high-performance automobiles, principally referring to American models produced between 1964 to 1971. During the period these vehicles were interchangeably (and more commonly) described as supercars. The term "Muscle Car" was spawned by the horsepower race. Most give credit toJohn Z. DeLorean and the Pontiac GTO. The 1964 Pontiac Tempest GTO ignited the muscle car boom by giving the small-car, big-engine make an identity of its own.
Pony cars are American cars that took its name from the Ford Mustang Classic built from the middle of 1964 through 1973, one of the most successful cars in automotive history . With their sporty, long front ends and short rear decks, many auto builders attempted to duplicate the style of the original Mustang but none could come close to capturing the spirit that those fable cars brought to the American car buyers.
Pony automobiles were made as affordable alternatives to muscle cars. By American standards, these cars were high performance cars built on compact passenger car chassis. In terms of size, they are are small to mid sized cars emphasizing sportiness and frequently performance. Although pony cars were not necessarily high performance, the ones equipped with the more powerful V-8s are generally classified as muscle cars, and equaled or exceeded the performance of the mid-sized muscle cars.
Some of the most famous high performance pony cars include the the Mustang 428 Super Cobra Jets, theYenko Camaros, the Hemi Cudas, and the AMC Javelin.

Дайте ответы на вопросы:

Approximately how many cars can General Motors make on a good day?
2. How long does it take to build one Rolls-Royce automobile?
3. Which US city leads the nation in the number of car thefts?
4. In the last 100 years, how many different makes of automobile have been manufactured in the U.S. in numbers of one or more?
5. How many parts are there in a modern automobile?
6. What is the real name of the chubby Michelin Man?
7. How many cars are there in the world today?

8. How did the diesel engine get its name?
9. The first woman to receive her driver's license in the U.S. did so in what year?
10. How many cars and trucks are junked each year in the U.S.?
11. Henry Ford paid the highest daily wage in the auto industry in 1914. How much was that?
12. How much profit did Rosette Cousins eventually make on her 1903 investment of $100 in the new Ford Motor Company?
13. Before he built cars, how did David Dunbar Buick make his money?
14. Why do the British drive on he left side of the road and the French on the right?
15. How long did it take to put together a Model T Ford on the 1914 assembly line?
16. What was unusual about he French automobile that set a new world's speed record of 65 mph in 1899?
17. A bailing press can crush a car in two minutes. What size is the car after the press has finished its work?
18.What percentage of new cars are purchased by women?
19. Which company sold the first production diesel car?
20. How many 1999 cars would it take to pollute as much as one 1927 car?
21. How many miles does the average new York taxi rack up before it is retired?
22. Of these three safety devices--air bags, seat belts and ABS brakes--which has had little effect in saving lives?
23. In what year was the first speeding ticket issued in the US?
24. What kind of car did the disheveled detective drive on the TV series Columbo?
25. What was the price of a barrel of crude oil in 1901?
26. When and where was the world's first racetrack built?
27. Which car was noted by automotive journalists to be the most innovative production automobile manufactured since 1945?
28. When and where was the worst racing crash?
29. How man vehicles did the Ford Motor Company make from 1903 to 1959?
30. What was the first production road car to exceed 200 miles per hour?
31. In how many states do female driver outnumber male drivers?
32. When was the first airbag offered by a major manufacturer?
33. What was the first production rotary engine car?
34. Who is the only American mentioned in Adolph Hitler's political manifesto Mein Kampf?
35. Who invented the T-Top?
36.. From 1947 to 1964, how many times did Offenhauser engines win the Indy 500?
37. When Oldsmobile introduced the 4-4-2 option on certain models of its 1964 cars, what did the numbers stand for?
38.. When was the first car driven under its own power from England to France?
39. . Ray Harroun was paid $14,250 for winning the first Indy 500 race in 1911. How much did the 1992 winning driver earn?
40. In what year did the Italian government ban the famous Mille Miglia race?

Тема 13.2. Генри Форд

Практическое занятие 64

Образовательная цель: добиться прочного усвоения знаний по теме. Развивающая цель: научить анализировать, правильно употреблять термины

Henry Ford (30.07.1863 - 07.04.1947) - American industrialist, the founder of the Ford Motor Company.

Early Life

Henry Ford was born on 30 July 1863 near Detroit. His father, William, was born in Ireland and his mother, Mary, was born in Michigan. Her parents were Belgian immigrants. Mary had adoptive parents because her birth parents died. She was adopted by the O'Herns family. They were the neighbors of Mary. There were five children in the family of William and Mary: Henry, Margaret, Robert, William and Jane.

When Henry was young he received a pocket watch from his father. At the age of fifteen he took to pieces and reassembled the timepieces of his pals many times and they knew him as a watch repairman.

In 1876 Henry's mother died and he felt low. His father wanted him to go round the farm but Henry abhorred farm work.

Three years later Henry Ford began to work as an apprentice machinist in Detroit. In 1882 he arrived in Dearborn and began to work for Westinghouse company where he maintained steam engines.

In 1888 Ford married Clara Ala Bryant. They had their only son: Edsel Ford.

Career

Three years after marriage Henry became an engineer in the Edison Illuminating Company. In 1893 he became Chief Engineer. Since then Henry Ford started to work on gasoline engine. Consequently in 1896 he developed a self-propelled vehicle which was called the Ford Quadricycle. Afterwards Ford created different improvements for his invention.

In 1896 Henry Ford made the acquaintance of Thomas Edison who endorsed the experiments of Ford. With the assistance of Edison Henry Ford created a new vehicle in 1898. Later he left his job and established the Detroit Automobile Company in 1899. But Henry Ford was not satisfied because the vehicles produced there were of a lower quality and expensive. Eventually the enterprise

was not successful and it was abolished in 1901.

Ten months later encouraged by C. Harold Wills Henry Ford developed a 26-horsepower automobile which was successfully tested. As a result stockholders of the Detroit Automobile Company founded the Henry Ford Company in 1901 where Henry Ford was a chief engineer. In 1902 he left the company because a new consultant was hired there. Afterwards the company was renamed. It was called the Cadillac Automobile Company.

Cooperating with Tom Cooper, who was a racing cyclist, Henry Ford created the 80+ horsepower racer "999". Consequently Henry established contact with his old friend Alexander Y. Malcomson with whom he founded a company "Ford & Malcomson, Ltd." to produce automobiles.

In 1908 Henry Ford designed a new automobile called Model T. The vehicle was inexpensive and simple to drive. Moreover the steering wheel was on the left. This car was a great success.

In 1926 Henry Ford decided to create a new model because the sales of Model T were slow. He worked on technical improvements and his son designed the body. This model was introduced in 1927. As the Model T, Model A was a great success. From 1918 to 1943 his son, Edsel, was a president of Ford Motor Company. In 1943 he died of cancer and his father became a president again but his health left much to be desired. Henry Ford was a president of Ford Motor Company until the end of war.

Death Henry Ford died in 1947 at the age of 83. He was interred in the Ford Cemetery in Detroit.

Прочтите текст ответьте на вопросы, приведенные ниже.

The automobile is made up of three basic parts: the engine, the body and the chassis. The engine is the source of power and makes the car move.

The chassis consists of the transmission and running gear (frame, springs and wheels). The transmission carries the power from the engine to the wheels. It consists of the clutch, gearbox, propeller shaft, rear axle, final drive and differential. The transmission also includes the steering system and brakes.

The body has the hood, fenders, the heater and so on.

1.What main components is the automobile made up of?
2.What is the source of power?
3.What units does the chassis include?
4.What duty is performed by the frame?
5.What does the transmission do?
6.What mechanisms does the transmission consist of?
7.What is the function of the steering system?
8.Why are brakes necessary?
9.What is the function of the clutch?

10.What is the function of the gearbox?
11.What types of gearboxes do you know?
12.What is the function of a differential?
13.What purposes do brakes serve?
14.What parts has the body?

Тема 13.3. Карл Бенц.

Практическое занятие 65

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Karl Benz (Carl Benz)
In 1885, German mechanical engineer, Karl Benz designed and built the world's first practical automobile to be powered by an internal-combustion engine. On January 29, 1886, Benz received the first patent (DRP No. 37435) for a gas-fueled car. It was a three-wheeler; Benz built his first four-wheeled car in 1891. Benz & Company, the company started by the inventor, became the world's largest manufacturer of automobiles by 1900.

Biography
Karl Friedrich Benz was born in 1844 in Baden Muehlburg, Germany (now part of Karlsruhe). He was the son of an engine driver. Benz attended the Karlsruhe grammar school and later the Karlsruhe Polytechnic University. In 1871, He founded his first company with partner August Ritter, the "Iron Foundry and Machine Shop" a supplier of building materials.

Benz began his work on a two-stroke engine, in hopes of finding a new income. He received his first patent in 1879. In 1883, he founded Benz & Company to produce industrial engines in Mannheim, Germany. He then began designing a "motor carriage", with a four-stroke engine (based on Nicolaus Otto's patent). Benz designed his engine (958cc, 0.75hp) and the body for the three-wheel vehicle with an electric ignition, differential gears, and water-cooling. The car was first driven in Mannheim in 1885. On January 29, 1886, he was granted a patent for his gas-fueled automobile (DRP 37435) and in July, he began selling his automobile to the public.

Прочитайте и переведите текст:

Mercedes-Benz traces its origins to Karl Benz's creation of the first petrol-powered car, the Benz Patent Motorwagen, financed by Bertha Benz[2] and

patented in January 1886,[3] and Gottlieb Daimler and engineer Wilhelm Maybach's conversion of a stagecoach by the addition of a petrol engine later that year. The Mercedes automobile was first marketed in 1901 by Daimler-Motoren-Gesellschaft. The first Mercedes-Benz brand name vehicles were produced in 1926, following the merger of Karl Benz's and Gottlieb Daimler's companies into the Daimler-Benz company.[3][4] Throughout the 1930s, Mercedes-Benz produced the 770 model, a car that was popular during Germany's Nazi period. Adolf Hitler was known to have driven these cars during his time in power, with bulletproof windshields. Most of the surviving models have been sold at auctions to private buyers. One of them is currently on display at the War Museum in Ottawa, Ontario. Mercedes-Benz has introduced many technological and safety innovations that later became common in other vehicles.[5] Mercedes-Benz is one of the best-known and established automotive brands in the world, and is also one of the world's oldest automotive brand still in existence today in 2015, having produced the first petrol-powered car.[6]

For information relating to the famous three-pointed star, see under the title Daimler-Motoren-Gesellschaft including the merger into Daimler-Benz.

Прочитайте и переведите текст:

В 1886 году создана трёхколесная самоходная повозка с бензиновым двигателем. В этом же году 29 января её создатель — Карл Бенц — получил патент на это изобретение (№37435[5]). Первый в мире трёхколесный автомобиль запущен в серийное производство.

Через семь лет, уступив Даймлеру первенство, Карл Бенц создает свой четырёхколесный автомобиль, а в следующем году ещё более совершенная конструкция под странным названием «Велосипед» идёт в серию.

В 1901 году, вскоре после выпуска Даймлером новой модели «Мерседес-35PS», становится понятно, насколько «Бенц» отстаёт от прогресса. Чтобы наверстать упущенное, акционеры приглашают в компанию французского инженера Мариуса Барбару. Из-за технических разногласий Карл Бенц покидает основанную им же компанию. Вскоре становится ясно, что француз не оправдал возложенных надежд. Следуя логике, что немецкие автомобили должны делаться немецкими руками, в фирму на должность главного инженера приглашён Фриц Эрле. Эта идея также оказывается неудачной. Только с приходом в компанию талантливого инженера Ганса Нибеля дела постепенно начинают идти в гору. В 1909 году, создав целый ряд прекрасных легковых автомобилей, фирма построила самый известный гоночный автомобиль того времени «Блитцен Бенц» с мотором мощностью в 200 лошадиных сил и объёмом 21,594 см3.

В послевоенные годы создано множество новых моделей, большинство из которых с успехом выпускались до середины двадцатых годов. Всего с момента начала производства в 1886 году и до объединения с «Даймлер-

Моторен-Гезелльшафт» в 1926 г., фирма «Бенц» произвела 47,555 автомобилей, включая легковые автомобили, грузовики и омнибусы

Переведите на русский язык микротексты. Обратите внимание на выделенные грамматические структуры.

Текст

The automobile is known to be made up of three basic parts: the engine, the body and chassis, the engine being the source of power. We know the body to include the hood and fenders and accessories. The body should provide protection to the passengers from wind, cold and rain. Thus to shape a car means to do it in such a way that it offers small resistance to the air.
Brakes are necessary for stopping the car.
Most braking systems used today are hydraulic.

Текст

The engine is known to be attached to the frame in three or four points. Noise and vibrations are inherent in engine operations. To prevent this noise from passing to the frame, the engine should be insulated from the frame by washers. We know the frame to provide support for engine, body and power train, the body providing protection to the passengers from wind and rain. The frame is made of channel sections welded together.

Текст

We know the clutch to consist of two plates: the driven plate and the pressure plate. The driven plate is known to be situated between the flywheel and the pressure plate. The clutch used for engagement the engine and the gearbox is incorporated within the flywheel housing.
To guide the car it is necessary to have some means of turning the car, the steering wheel being linked to the front wheels for this purpose.

Раздел 14. Ралли Париж – Даккар

Тема 14.1. Ралли Париж – Даккар

Практическое занятие 66

Образовательная цель: добиться прочного усвоения знаний по теме. Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

THE DAKAR RALLY

The Dakar Rally (or simply "The Dakar"; formerly known as the "Paris–Dakar Rally") is an annual rally raid organised by theAmaury Sport Organisation. Most events since the inception in 1978 were from Paris, France, to Dakar, Senegal, but due to security threats in Mauritania, which led to the cancellation of the 2008 rally, the 2009 Dakar Rally was run in South America (Argentina andChile). It has

been held in South America each year since 2009.[2][3] The race is open to amateur and professional entries, amateurs typically making up about eighty percent of the participants.

Despite its "rally" name, it is an off-road endurance race, properly called a "rally raid" rather than a conventional rally. The terrain that the competitors traverse is much tougher and the vehicles used are true off-road vehicles rather than the modified on-road vehicles used in rallies. Most of the competitive special sections are off-road, crossing dunes, mud, camel grass, rocks, and erg among others. The distances of each stage covered vary from short distances up to 800–900 kilometres (500–560 mi) per day.

The race originated in December 1978, a year after Thierry Sabine got lost in the Тйнйгй desert whilst competing in the Abidjan-Nice rally and decided that the desert would be a good location for a regular rally.[4] 182 vehicles took the start of the inaugural rally in Paris, with 74 surviving the 10,000 kilometre trip to the Senegalese capital of Dakar. Cyril Neveu holds the distinction of being the event's first winner, riding a Yamaha motorcycle. The event rapidly grew in popularity, with 216 vehicles taking the start in 1980 and 291 in 1981.[5] Neveu won the event for a second time in 1980, Hubert Auriol taking honours in 1981 for BMW. By this stage, the rally had already begun to attract the participation of famous names from elsewhere in motorsport, such as Henri Pescarolo and Jacky Ickx.

Vehicles and classes

The four major competitive groups in the Dakar are the motorcycles, quads, the cars class, (which range from buggies to small SUVs) and the trucks class. Many vehicle manufacturers exploit the harsh environment the rally offers as a testing ground and consequently to demonstrate the durability of their vehicles, although most vehicles are heavily modified or purpose built.

Motorbikes

As of 2014, the engine capacity limit for all motorbikes competing in the Dakar Rally is 450cc. Engines may be either single or twin cylinder. Riders are divided into two groups, "Elite" (Group 1) and Non-Elite (Group 2), with the latter subdivided into two further groups - the "Super Production" (Group 2.1) and "Marathon" (Group 2.2) classes. "Marathon" competitors are not permitted to change such key components as the engine (including the engine case, cylinders and cylinder heads), the frame, the forks or swinging arm, whereas those in the "Super Production" and "Elite" classes may replace these components.[15]

KTM have dominated the motorcycle class in recent years, although Honda, Yamaha, Sherco and Gas Gas also compete currently. BMW and Cagiva have also enjoyed success in the past.

Quads

Prior to 2009, Quads were a subdivision of the motorbike category, but they were granted their own separate classification in 2009 and are designated Group 3 in the current regulations. They are divided into two subgroups - Group 3.1, which features two-wheel drive quads with a single cylinder engine with a maximum capacity of 750cc, and Group 3.2, which permits four-wheel drive quads with a maximum engine capacity of 900cc, in either single or twin cylinder layout.[15]

Yamaha are unbeaten in the Quad category since 2009, with their main current opposition coming courtesy of Honda and Can-Am.

Cars

The car class is made up of vehicles weighing less than 3,500 kg (7,716 lb), which are subdivided into several categories. The T1 Group is made up of "Improved Cross-Country Vehicles", subdivided according to engine type (petrol or diesel) and drive type (two-wheel or four-wheel drive). The T2 Group is made up of "Cross-Country Series Production Vehicles", which are subdivided into petrol and diesel categories, while the T3 Group is for "Light Vehicles". There is also an "Open" category catering for vehicles conforming toSCORE regulations.[16]

Mini have been the most successful marque in the car category in recent years, thanks to the efforts of the non-factory X-Raid team, with limited involvement currently coming fromToyota, Ford and Haval. Several constructors also produce bespoke buggies for the event, most notably SMG and Damen Jefferies.

Mitsubishi is historically the most successful manufacturer in the car class, with Volkswagen, Citroen, Peugeot and Porsche having all tasted success in the past with factory teams.Jean-Louis Schlesser has also won the event twice with his Renault-supported buggies. Factory teams from Nissan and SEAT have also won stages, as has BMW, courtesy of the X-Raid team.

Trucks

The Truck class (T4), first run as a separate category in 1980, is made up of vehicles weighing more than 3,500 kg (7,716 lb). Trucks participating in the competition are subdivided into "Series Production" trucks (T4.1) and "Modified" trucks (T4.2), whilst Group T4.3 (formerly known as T5) trucks are rally support trucks - meaning they travel from bivouac to bivouac to support the competition vehicles.[16] These were introduced to the rally in 1998. The truck event was not run in 1989 after it was decided the vehicles, by this stage with twin engines generating in excess of 1000 horsepower, were too dangerous following the death of a DAF crew member in an accident during the 1988 rally.[5]

Kamaz has dominated the truck category since the turn of the century, although it has come under increasing pressure from rivals such as Iveco,MAN and Tatra, which enjoyed much success in the 1990s. Hino, DAF, Perlini and Mercedes-Benz have also been among the winners in the past.

Переведите на русский язык микротексты. Обратите внимание на выде-

ленные грамматические структуры.

Текст
Brakes are known to be one of the most important mechanisms of the car. They are necessary for stopping the car. Most braking systems used today are hydraulic, many vehicles using power brakes. We know the brakes to be applied to four wheels.
In order to stop the car, the driver should press down on the pedal. When the pedal is pressed down the brakes are applied and the car is stopped.

Текст
In order to drive the car, the driver should have some means of turning the front wheels. We know the steering wheel to be located at the front of the driver. It is linked by gears and levers to the front wheels, these wheels being on pivots. The front wheels are known to swing to the
left or right when the steering wheel is turned in one direction or the other. The front wheels are attached to the rods, the rods are, in turn, attached to the pitman arm.
Текст
We know the automobile to be made up of three basic parts: the engine, the chassis and the body. The body should provide protection to the passengers of the car. The chassis is known to consist of a power train, frame with axles and wheels. The chassis includes the brake and the steering systems, the brakes being the most important mechanism of the car. To provide a satisfactory smooth ride, an additional device, called a shock absorber, is used with each spring.

Тема 14.2. История ралли Париж – Даккар

Практическое занятие 67

Образовательная цель: добиться прочного усвоения знаний по теме. Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

The Dakar Rally (or simply "The Dakar"; formerly known as the "Paris–Dakar Rally") is an annual rally raid organised by theAmaury Sport Organisation. Most events since the inception in 1978 were from Paris, France,
to Dakar, Senegal, but due to security threats in Mauritania, which led to the cancellation of the 2008 rally, the 2009 Dakar Rally was run in South America (Argentina andChile). It has been held in South America each year since 2009.[2][3] The race is open to amateur and professional entries, amateurs typically making up about eighty percent of the participants.

Despite its "rally" name, it is an off-road endurance race, properly called a "rally raid" rather than a conventional rally. The terrain that the competitors traverse is much tougher and the vehicles used are true off-road vehicles rather than the modified on-road vehicles used in rallies. Most of the competitive special sections are off-road, crossing dunes, mud, camel grass, rocks, and erg among others. The distances of each stage covered vary from short distances up to 800–900 kilometres (500–560 mi) per day.

The race originated in December 1978, a year after Thierry Sabine got lost in the Ténéré desert whilst competing in the Abidjan-Nice rally and decided that the desert would be a good location for a regular rally.[4] 182 vehicles took the start of the inaugural rally in Paris, with 74 surviving the 10,000 kilometre trip to the Senegalese capital of Dakar. Cyril Neveu holds the distinction of being the event's first winner, riding a Yamaha motorcycle. The event rapidly grew in popularity, with 216 vehicles taking the start in 1980 and 291 in 1981.[5] Neveu won the event for a second time in 1980, Hubert Auriol taking honours in 1981 for BMW. By this stage, the rally had already begun to attract the participation of famous names from elsewhere in motorsport, such as Henri Pescarolo and Jacky Ickx.

Переведите на русский язык микротексты. Обратите внимание на выделенные грамматические структуры.

Текст

The frame is known to be the structural centre of the car. It is made of channel sections welded together, cross-members providing support Tor the engine and wheels. We know the frame to be rigid. Noise and vibrations are inherent in engine operation. To prevent this noise and vibrations from passing to the frame and to the passengers of the car, t lie engine should be insulated from the frame by rubber washers.

Текст

We know the chassis to be one of the most important units of the car. The chassis is known to consist of a power train, a frame with axles, wheels and springs. It should be noted that the chassis includes the brake and the steering systems as well. Brakes are necessary to stop the car. Springs are used with additional devices called shock absorbers. The front wheels are attached to the rods by steering knuckle arms, the same wheels being on pivots.

Текст

We know the power train to include the clutch, gearbox, propeller shaft, rear axle, final drive and differential. The clutch is used for engaging the engine with the gearbox, the gearbox being located between (he clutch and the propeller shaft. The clutch is known to consist of two plates incorporated within the flywheel housing. To shape the car means to make it in such manner that it offers small resistance to the air.

Текст

We know the engine to be the source of power. In some types of engines a V-type fan belt is utilized to drive the fan, the same belt being used for driving the generator pulley and the water pump. The engine is known to comprise the fuel,

cooling, electric and lubricating systems. It should be noted that the gasoline pump is operated from the cam-
shaft by the engine, called also the power plant. To guide the car means to turn it in one direction or the other.

Тема 14.3. Автомобили и классы.

Практическое занятие 68

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Automibile

Since the first automobile was introduced to our life, we can notice that there are a lot of changes happened around us. As a modern transportation, it not only brings convenience to our daily life, but also enhances the efficiency.
One of advantages of using automobiles is that it can give the users much more convenience compared with other transportations, such as bikes or buss. For me, I like to go to the supermarket once per week and normally buy many foods at one time. Can you imagine that I need to carry a lot of foodstuff and maybe take a crowded bus to reach home? How inconvenient it is! Suppose that I have a car, and then I will feel very easy because what I need to do is to put all my stuff at the back of the car.
On the other hand, automobiles can save our time and energy. Driving the automobile, we can go wherever we want to go. We can reach the destination faster than other transportation means. We can use the saved hours to enjoy the views or do anything that we want. After all, time means a lot to modern people. It can mean money to businessmen, knowledge to school students and profit to companies. By means of cutting time with the help of automobiles, we can increase the efficiency of our society.
Of course, I must admit that automobiles bring a lot of problems such as traffic jam and air pollution. But these outcomes cannot be avoided during the development of a society. I believe we will have a better solution to solve all these problems soon .
Generally speaking, I would like to say automobiles have improved modern life through providing more convenience to people and increasing efficiency. We should encourage the society to support the automobile industry and develop different kinds of automobiles to meet various needs.

We know the automobile to be made up of three basic parts: the engine, the chassis and the body. The body should provide protection to the passengers of the

car. The chassis is known to consist of a power train, frame with axles and wheels. The chassis includes the brake and the steering systems, the brakes being the most important mechanism of the car. To provide a satisfactory smooth ride, an additional device, called a shock absorber, is used with each spring.

Brakes are known to be used for stopping the car. Most braking systems used today are hydraulic, many vehicles having power brakes. To stop the car, the driver should apply the brakes. We know the brakes to have been applied to the front wheels. At present the brakes are applied to all four wheels. The brakes are controlled by a pedal. When the driver presses down on the pedal the brakes are applied and the car is stopped.

The clutch is known to be the part of the power train. Besides the clutch, the power train also includes the gearbox, propeller shaft, rear axle, final drive, differential and axle shafts. The gearbox named transmission is located between the clutch and the propeller shaft. We know the clutch to consist of the driven plate and the pressure plate, the driven plate having fabric linings on each side. To connect the engine with the gearbox, the driver should engage the clutch.

The frame in considered to be the structural centre of any vehicle, us it should provide support for the engine, body and power train members. The frame is made of sections welded together.
We know the frame to be reinforced by cross-members. To provide support for the engine and wheels, the frame should be rigid and strong. Noise and vibrations being inherent in engine operation, the engine is insulated from the frame by rubber washers.

Переведите на русский язык микротексты. Обратите внимание на выделенные грамматические структуры.

Текст
Brakes are known to be one of the most important mechanisms of the car. They are necessary for stopping the car. Most braking systems used today are hydraulic, many vehicles using power brakes. We know the brakes to be applied to four wheels.
In order to stop the car, the driver should press down on the pedal. When the pedal is pressed down the brakes are applied and the car is stopped.

Текст
In order to drive the car, the driver should have some means of turning the front wheels. We know the steering wheel to be located at the front of the driver. It is linked by gears and levers to the front wheels, these wheels being on pivots. The front wheels are known to swing to the
left or right when the steering wheel is turned in one direction or the other. The front wheels are attached to the rods, the rods are, in turn, attached to the pitman arm.
Текст

We know the automobile to be made up of three basic parts: the engine, the chassis and the body. The body should provide protection to the passengers of the car. The chassis is known to consist of a power train, frame with axles and wheels. The chassis includes the brake and the steering systems, the brakes being the most important mechanism of the car. To provide a satisfactory smooth ride, an additional device, called a shock absorber, is used with each spring.

Переведите тексты с типологией автомобилей:
City car
Citroën C1
Main articles: City car and Kei car
A city car is a small automobile intended for use in urban areas. Unlike microcars, a city car's greater speed, capacity and (in perception at least) occupant protection are safer in mixed traffic environments and weather conditions. While city cars can reach highway speeds, that is not their intended use. In Japan, city cars are called kei cars.[17] Kei cars have to meet strict size and engine requirements: engines have a maximum displacement of 660 cc and the car's length must be under 3400 mm.

Large family

Kia Optima
Main article: Mid-size car
A class described as "large family" in Europe and "mid-size" in the USA, these cars have room for five adults and a large trunk (boot). Engines are more powerful than small family/compact cars and six-cylinder engines are more common than in smaller cars. Car sizes vary from region to region; in Europe, large family cars are rarely over 4700 mm long, while in North America, Middle East and Australasia they may be well over 4800 mm.

Examples of large family cars/mid-size cars:

Crossover SUV

Mitsubishi Outlander
Main article: Crossover (automobile)
Crossover SUVs are derived from an automobile platform using a monocoque construction with light off-road capability and lower ground clearance than SUVs. They may be styled similar to conventional "off-roaders", or may be look similar to an estate car or station wagon.

Examples of crossover SUVs:

Tata Aria
Nissan Pathfinder
Chevrolet Equinox

Full-size luxury Grand saloon
See also: Luxury vehicle

BMW 7 Series
Also known as full-size luxury cars, grand saloons, or premium large cars, while "Oberklasse" is used in Germany. Typically a four-door saloon (sedan). These are the most powerful saloons, with six, eight and twelve-cylinder engines and have more equipment than smaller models.

Examples of grand saloons:

Audi A8
Cadillac XTS
Mercedes-Benz S-Class
This category is equivalent to the EuroNCAP class "Executive Cars".

Sports car

A BMW Z4
Main article: Sports car
The term "sports car" does not appear to have a clear definition.[18] It is commonly used to describe vehicles which prioritise acceleration and handling; however, some people claim it is also defined as a vehicle with two seats.[19]
A Sports car (sportscar or sport car) is a small, usually two-seat, two-door automobile designed for spirited performance and nimble handling.[20] Sports cars may be spartan or luxurious but high maneuverability and minimum weight are requisite.[21]

Examples of sports cars:

Chevrolet Corvette
Mazda MX-5
Porsche 911

Переведите на русский язык микротексты. Обратите внимание на выделенные грамматические структуры.

Текст

The automobile is known to consist of the engine, the body and the chassis, the engine being the source of power. The body has a hood and lenders and accessories: heater, lights and radio. It should provide protection to the passengers from wind and rain. The chassis is known to include the power train, frame and wheels.
Streamlining is an important factor. To streamline a car means to shape it in such a manner that it offers small resistance to the air.

Текст

We know the steering system to be one of the most important mechanisms of the

car. The steering system is known to consist of a steering wheel, gears, tie-rod, pitman arm and other units. The steering wheel is attached to the front wheels by gears and levers, the front wheels being on pivots. In order to turn the car in one direction or the other, the driver should turn the steering wheel. The steering wheel connected to the front wheels turns the car.

Раздел 15. Лучшие автогонщики планеты

Тема 15.1. Лучшие автогонщики планеты

Практическое занятие 69

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины
Прочитайте и переведите текст:

See also: List of Formula One drivers, List of Formula One World Drivers' Champions and List of Formula One driver numbers

2005 Formula One Canadian Grand Prix, Kimi Räikkönen leading Michael Schumacher, with Jarno Trulli (left) and Takuma Sato fighting for position. As of 2015, only Räikkönen remains in Formula 1.
Every team in Formula One must run two cars in every session in a Grand Prix weekend, and every team may use up to four drivers in a season.[45] A team may also run two additional drivers in Free Practice sessions,[45] which are often used to test potential new drivers for a career as a Formula One driver or gain experienced drivers to evaluate the car.[62][63] Most modern drivers are contracted for at least the duration of a season, with driver changes taking place in between seasons, in comparison to early years where drivers often competed at an ad hoc basis from race to race. Each competitor must be in the possession of a FIA Super Licence to compete in a Grand Prix,[64] which is issued to drivers who have met the criteria of success in junior motorsport categories and having achieved 300 kilometres (190 mi) of running in a Formula One car. Drivers may also be issued a Super License by the World Motor Sport Council if they fail to meet the criteria.[64] Teams also contract test and reserve drivers, to stand in for regular drivers when necessary and develop the team's car; although with the reduction on testing the reserve drivers' role mainly takes places on a simulator,[65] such as rFactor Pro,[66][67] which is used by most of the F1 Teams.[68][69] Although most drivers earn their seat on ability, commercial considerations also come into play with teams having to satisfy sponsors and financial demands.

Each driver chooses an unassigned number from 2–99 (excluding 17)[70] upon entering Formula One, and keeps that number during their time in the series. The

number one is reserved for the reigning driver's champion, who retains their previous number and may choose to use it instead of the number one.[71] At the onset of the championship, numbers were allocated by race organisers on an ad-hoc basis from race to race, and competitors did not have a permanent number throughout the season.[72] Permanent numbers were introduced in 1973, when teams were allocated numbers in ascending order based upon the constructors standings. The teams would hold those numbers from season to season with the exception of the team with the world drivers champion, which would swap its numbers with the one and two of the previous champion's team. New entrants were allocated spare numbers, with the exception of the number 13 which had been unused since 1976.[73] As teams kept their numbers for long periods of time car numbers became associated with a team, such as Ferrari's 27 and 28.[72] A different system was used from 1996 to 2013. At the start of each season, the current drivers champion was designated number one, his team-mate number two, and the rest of the teams assigned ascending numbers according to previous season's constructors' championship order.[74]

A total of 32 separate drivers have won the world championship, with Michael Schumacher holding the record for most championships with seven, as well as holding the race wins and pole position records. Juan Manuel Fangio has won the next most, with five championships won during the 1950s, as well as having won the greatest percentage of wins, with 24 out of 52 entries. Jochen Rindt is the only posthumous World Champion, after his points total was not overhauled despite his fatal accident at the 1970 Italian Grand Prix. Drivers from the United Kingdom have been the most successful in the sport, with 14 championships from 10 drivers, and 214 wins from 19.
См. также: список драйверов Формула один, Формула один мир список водителей и список чемпионов Формулы один водитель чисел

Переведите на английский язык:

2005 Формула один канадский Гран-При, Кими Райкконен, ведущий Михаэль Шумахер с Ярно Трулли (слева) и Такума Сато борется за позицию. В 2015 году, только Райкконен останется в Формуле 1.
Каждая команда в Формуле нужно выполнить две машины в каждой сессии в выходные Гран-При, и каждая команда может использовать до четырех водителей в сезон. команда может также запустить два дополнительных водителей в свободных сессий практики, которые часто используются для тестирования новых потенциальных водителей за карьеру в Формуле один водитель или набирать опытных водителей, чтобы оценить автомобиль. большинство современных драйверов работают по контракту как минимум на Длительность сезона, с водителем изменения, происходящие в межсезонье, в сравнении с ранних лет, где водители часто соревновались на специальной основе от гонки к гонке. Каждый участник должен иметь во владении ФИА суперлицензии для участия в Гран-При, который выдается водителям, которые имеют критериям успешности в юношеском автоспорте категории и добившись 300 километров (190 ми) бега в Формуле один

автомобиль. Водители могут также выдаваться супер лицензии мирового Совета по автоспорту, если они не соответствуют критериям. команды также контракт тест-и резервного водителей, стоять в регулярных водители при необходимости и развивать команду машине; хотя со снижением на тестирование в резервный водителей роль в основном занимает места на тренажере, например, установлено-Профи, которую используют большинство команд F1. хотя большинство водителей зарабатывают на сиденье на способности, коммерческие соображения также играют с командами того, чтобы удовлетворить спонсоров и финансовых требований. Каждый водитель выбирает неназначенных от 2-99 (исключая 17) после ввода Формулы один, и сохраняет это число в течение их времени в серии. Номер один зарезервирован для действующего чемпиона водителя, который сохраняет свое Предыдущее число и может выбрать, чтобы использовать его вместо номера один.в начале чемпионата, числа были выделены организаторами забега на специальной основе от гонки к гонке, и конкурентов не было постоянного номера в течение сезона. постоянного числа были введены в 1973 году, когда команды были выделены номера в порядке возрастания на основе конструкторов турнирной таблице. Команды проведет эти цифры от сезона к сезону, за исключением команды с мировым чемпионом водителей, которые бы поменять свои цифры с одной и два предыдущих чемпиона команды. Новички выделялись запасные чисел, за исключением числа 13, которые были неиспользованные с 1976 года поскольку команды держали их числа в течение длительных периодов времени автомобильных номеров стал ассоциироваться с командой, такие как Феррари 27 и 28. другая система использовалась с 1996 по 2013 год. В начале каждого сезона, нынешние водители чемпион был определен номер один, его товарищ по команде номер два, а остальные команды присваивается по возрастанию чисел по предыдущим Кубке конструкторов сезона-заказа.

Переведите на русский язык микротексты. Обратите внимание на выделенные грамматические структуры.

Текст
The frame is known to be the structural centre of the car. It is made of channel sections welded together, cross-members providing support Tor the engine and wheels. We know the frame to be rigid. Noise and vibrations are inherent in engine operation. To prevent this noise and vibrations from passing to the frame and to the passengers of the car, t lie engine should be insulated from the frame by rubber washers.
Текст
We know the chassis to be one of the most important units of the car. The chassis is known to consist of a power train, a frame with axles, wheels and springs. It should be noted that the chassis includes the brake and the steering systems as well. Brakes are necessary to stop the car. Springs are used with additional devices called shock absorbers. The front wheels are attached to the rods by steering knuckle arms, the same wheels being on pivots.

Тема 15.2. М. Шумахер.

Практическое занятие 70

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять

Переведите на русский

THE BEST RACING DRIVERS

Schumacher (German pronunciation: born 3 January 1969) is a retired German racing driver. Schumacher is a seven-time Formula One (F1) World Champion and is widely regarded as one of the greatest F1 drivers of all time. He holds many of Formula One's driver records, including most championships, race victories, fastest laps, pole positions and most races won in a single season – 13 in 2004. In 2002, he became the only driver in Formula One history to finish in the top three in every race of a season and then also broke the record for most consecutive podium finishes. According to the official Formula One website, he is "statistically the greatest driver the sport has ever seen".

After beginning with karting, Schumacher won the German drivers' championships in Formula Kцnig and Formula Three before joining Mercedes in the World Sportscar Championship. After one Mercedes-funded race for the Jordan Formula One team, Schumacher signed as a driver for the Benetton Formula One team in 1991. After winning consecutive championships with Benetton in 1994/5, Schumacher moved to Ferrari in 1996 and won another five consecutive drivers' titles with them from 2000 to 2004. Schumacher retired from Formula One driving in 2006 staying with Ferrari as an advisor. Schumacher agreed to return for Ferrari part-way through 2009, as cover for the badly injured Felipe Massa, but was prevented by a neck injury. Schumacher returned to Formula One on a permanent basis from 2010 with the Mercedes team before retiring for a second time at the conclusion of the 2012 season.

His career was not without controversy, including being twice involved in collisions in the final race of a season that determined the outcome of the world championship, with Damon Hill in 1994 in Adelaide, and with Jacques Villeneuve in 1997 in Jerez. Off the track Schumacher is an ambassador for UNESCO and a spokesman for driver safety. He has been involved in numerous humanitarian efforts throughout his life and donated tens of millions of dollars to charity. Schumacher and his younger brother,Ralf, are the only brothers to win races in Formula One, and they were the first brothers to finish 1st and 2nd in the same race, a feat they repeated in four subsequent races.

In December 2013, Schumacher suffered a serious head injury while skiing. He was airlifted to a hospital and placed in a medically induced coma, having suffered a traumatic brain

. Перепишите предложения, употребив пассивный залог.

1. His parents gave him a car. - A car_____

12.They told him the truth (правду). – He_____
13.He showed me his books. - His books _____
14.They build new houses every month. - New houses_____
15.They asked him some questions. – He_____
16.She has typed all the letters. -7 All the letters_____
7. They are showing a new film at our cinema. - A new film_____
14.Helen won the contest (победила в соревновании). - The contest_____
15.The USA bought Alaska from Russia in 1867. - Alaska _____
16.Virus Bering first visited Alaska in 1741. – Alaska_____

. Поставьте предложения в вопросительную и отрицательную формы:

1. Physics is a study of non-living things.
2. The science deals with changes in composition.
3. These dictionaries are very useful.
4. He can spell all these words.
5. This was the teacher's last question.
6. She knows the answer to this question.
7. The lesson is over.
8. The teacher speaks English to the students.
9. Tom answered the teacher's question correctly.
10. Alice spoke loudly.

Ответьте на вопросы.

Yes *No*

3.Have you got one or more television sets at home? _____
_____
4.How much television do you watch during the week?
_____
c)up to one hour c) two to three hours
d)one to two hours d) more than three hours
9.Do you do your homework with the television on? _____
_____
10.Do you eat meals in front of the television? _____
_____
11.Do you usually watch the same programmes as your parents?
_____
12.What is your favorite programme?
_____
13.Who usually controls the television?
Is it you, your father or your mother? _____
14.What do you do after school apart from homework?
_____

Тема 15.3. Хуан Фанджо, Данико Патрик.

Практическое занятие 71

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Текст № 12

The clutch is known to be the part of the power train. Besides the clutch, the power train also includes the gearbox, propeller shaft, rear axle, final drive, differential and axle shafts. The gearbox **named transmission** is located between the clutch and the propeller shaft. **We know the clutch to consist** of the driven plate and the pressure plate, **the driven plate having fabric linings on each side. To connect** the engine with the gearbox, the driver **should** engage the clutch.

Текст № 13

The frame in considered to be the structural centre of any vehicle, us it **should** provide support for the engine, body and power train members. The frame is made of sections **welded together.**
We know the frame to be reinforced by cross-members. **To provide** support for the engine and wheels, the frame should be rigid and strong. **Noise and vibrations being inherent in engine operation,** the engine is insulated from the frame by rubber washers.

Текст №14

The automobile is known to consist of the engine, the body and the chassis, **the engine being the source of power.** The body has a hood and lenders and accessories: heater, lights and radio. It **should** provide protection to the passengers from wind and rain. **The chassis is known to include the power train, frame and wheels.**
Streamlining is an important factor. **To streamline** a car means **to shape** it in such a manner that it offers small resistance to the air.

Текст №15

We know the steering system to be one of the most important mechanisms of the car. **The steering system is known to consist of** a steering wheel, gears, tie-rod, pitman arm and other units. The steering wheel is attached to the front wheels by gears and levers, **the front wheels being on pivots.** In order **to turn** the car in one direction or the other, the driver **should** turn the steering wheel. The steering wheel **connected to the front wheels** turns the car.

Juan Manuel Fangio (Spanish pronunciation: Italian pronunciation: ['fandʒo]; 24 June 1911 – 17 July 1995), nicknamed *El Chueco* ("the bowlegged one", also commonly translated as "bandy legged") or *El Maestro* ("The Master"), was a racing car driver from Argentina, who dominated the first decade of Formula One racing, winning the World Championship of Drivers five times.

From childhood, he abandoned his studies to pursue auto mechanics. In 1938, he debuted in Turismo Carretera, competing in a Ford V8. In 1940, he competed with Chevrolet, winning the Grand Prix International Championship and devoted his time to the Argentine Turismo Carretera becoming its champion, a title he successfully defended a year later. Fangio then competed in Europe between 1947 to 1949 where he achieved further success.

He won the World Championship of Drivers five times —a record which stood for 46 years until beaten by Michael Schumacher—with four different teams (Alfa Romeo, Ferrari, Mercedes-Benz and Maserati), a feat that has not been repeated. A member of the Formula 1 Hall of Fame, he is regarded by many as one of the greatest F1 drivers of all time[3] and holds the highest winning percentage in Formula One - 46.15% - winning 24 of 52 Formula One races he entered. Fangio

is the only Argentine driver to have won the Argentine Grand Prix, having won it four times in his career—the most of any driver.

After retirement, Fangio presided as the honorary president of Mercedes-Benz Argentina from 1987, a year after the inauguration of his museum, until his death in 1995. In 2011, on the centenary of his birth, Fangio was remembered around the world and various activities were held on the occasion of his birthday.

Sir John Young "Jackie" Stewart , OBE[2] (born 11 June 1939) is a British former Formula One racing driver from Scotland.Nicknamed the "Flying Scot", he competed in Formula One between 1965 and 1973, winning three World Drivers' Championships. He also competed in Can-Am. In 2009 he was ranked fifth of the fifty greatest Formula One drivers of all time by journalist Kevin Eason who wrote: "He has not only emerged as a great driver, but one of the greatest figures of motor racing."

He is well known in the United States as a color commentator (pundit) of racing television broadcasts for ABC's Wide World of Sports and ABC Sports, having worked in that role in the Indianapolis 500 from 1971 to 1981. He has also been a spokesman forFord, Rolex and Молт.

Between 1997 and 1999, in partnership with his son, Paul, he was team principal of the Stewart Grand Prix Formula One racing team.

James "Jim" (or "Jimmy") Clark, Jr OBE (4 March 1936 – 7 April 1968) was a British Formula One racing driver from Scotland, who won two World Championships, in 1963 and 1965.

Clark was a versatile driver who competed in sports cars, touring cars and in the Indianapolis 500, which he won in 1965. He was particularly associated with the Lotus marque.

He was killed in a Formula Two motor racing accident in Hockenheim, Germany in 1968. At the time of his death, he had won more Grand Prix races (25) and achieved more Grand Prix pole positions (33) than any other driver. In 2009, The Times placed Clark at the top of a list of the greatest Formula One drivers ever.
Ответьте на вопросы.

Yes *No*

5.Have you got one or more television sets at home? _____

_____

6.How much television do you watch during the week?

_____

e)up to one hour c) two to three hours
f) one to two hours d) more than three hours

15.Do you do your homework with the television on? _____

_____

16.Do you eat meals in front of the television? _____

_____

17.Do you usually watch the same programmes as your parents?

_____

18.What is your favorite programme?

_____

19.Who usually controls the television?
Is it you, your father or your mother? _____

20.What do you do after school apart from homework?
_____

Дополните следующие разделительные вопросы:

1. Physics, chemistry, mathematics and biology are called sciences,_____?
2. The word *physics* is derived from the Greek word meaning 'nature',_____?
3. Such words are not (aren't) used in everyday English,_____?
4. Children are taught metric units in English schools,_____?
5. Milk is sold in pints and litres,_____?
6. The metric system of weights and measures is used only in scientific contexts in the USA,_____?
7. These workers are not paid by the hour,_____?
8 .Eggs in England are sold by the dozen,_____?

Раздел 16. Раритетные автомобили

Тема 16.1. Раритетные автомобили.

Практическое занятие 72

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Переведите текст

Most Rare- Bugatti Veyron Super Sports

If the McLaren F1 is still a sensational car almost twenty years after it was first seen - and by all accounts it is - the Bugatti Veyron will still be so in 2025, two decades after its introduction, and beyond. Quite simply, there is nothing else that looks like - or goes like - this amazing car, the most expensive car in the world today.

Pagani, Koenigsegg and other newcomers to the game may have tried their best to provide us with simply sensation machines that push the boundaries of the game, but it was the Volkswagen Group - an unlikely starting place for some - who were left to bring us what has been described as the ‘Car of the Decade’, and more.

The original concept came from a Bentley concept - that company is also owned by the VW Group - and the decision to revive the legendary Bugatti name is one that has been something of a success.

If your young son doesn't have a picture of this car and a Pagani Zonda on his wall there is something wrong with him.

Much was made of the talk of Veyron's being deliberately designed to produce 1001bhp, but in fact this is slightly wrong; the amazing 8 liter W16 configured engine, with four turbochargers and no fewer than ten radiators - it takes a lot to keep something of that size cool - thumps out 987bhp.

The missing 14bhp are not a good reason not to buy one.
Of course, to buy one you will have to be unbelievably wealthy, for this car - the ultimate Super Sports version - will cost you $2,400,000, and that's if you can find one. At auction you will undoubtedly pay a premium.
Like many modern hypercars there is some division over the Veyron's looks, but if you have been lucky enough to see one in the flesh it is a far prettier machine than it looks in pictures or on film, and infinitely more elegant that the Zonda or Agera R. The glorious two tone bodywork - a hark back to Bugatti's of old - works very well on the low slung, curvy and very futuristic design.
So, what'll she do, mister? In Super Sports spec, 267mph (429 km/h), and nought to 60mph in 2.5 seconds. Take a deep breath and read that again. Yes, it does say 267mph (429 km/h), and 60mph in 2.5 seconds. It really does.
The good news is that there are - in comparison with some rival hypercars - plenty of Veyron's around; of all types there have been 300 built to date. The bad news is you are unlikely to be lucky enough to get hold of one. We can't see anyone who has one of these wanting to let it go - ever.

Переведите микротексты:

Текст
The clutch is known to be the part of the power train. Besides the clutch, the power train also includes the gearbox, propeller shaft, rear axle, final drive, differential and axle shafts. The gearbox named transmission is located between the clutch and the propeller shaft. We know the clutch to consist of the driven plate and the pressure plate, the driven plate having fabric linings on each side. To connect the engine with the gearbox, the driver should engage the clutch.
Текст
The frame in considered to be the structural centre of any vehicle, us it should provide support for the engine, body and power train members. The frame is made of sections welded together.
We know the frame to be reinforced by cross-members. To provide support for the engine and wheels, the frame should be rigid and strong. Noise and vibrations being inherent in engine operation, the engine is insulated from the frame by rubber washers.
Текст
The automobile is known to consist of the engine, the body and the chassis, the engine being the source of power. The body has a hood and lenders and accessories: heater, lights and radio. It should provide protection to the passengers from wind and rain. The chassis is known to include the power train, frame and wheels.
Streamlining is an important factor. To streamline a car means to shape it in such a manner that it offers small resistance to the air.

Текст
We know the steering system to be one of the most important mechanisms of the car. The steering system is known to consist of a steering wheel, gears, tie-rod, pitman arm and other units. The steering wheel is attached to the front wheels by gears and levers, the front wheels being on pivots. In order to turn the car in one direction or the other, the driver should turn the steering wheel. The steering wheel connected to the front wheels turns the car.

Тема 16.2. Редкие автомобили

Практическое занятие 73

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст
Lamborghini Reventon

The much-rumored Lamborghini is a very special car indeed and, while not quite matching is equally priced rival Koenigsegg Agera R for performance, does so with ease where exclusivity is concerned. Only 20 of these sensationally sleek and menacing-looking machines will ever exist, making it among the rarest of modern cars... and most expensive cars.
Based on the Murcielago, the Reventon is inspired by fighter aircraft, and most likely feels like one when you are catapulted from standstill to 60mph in a quite stunning 3.3 seconds. Yes, we know that's not in Agera R territory, but what's a few tenths between friends? More to the point, look at the thing - it's simply incredible.
This is the sort of design that would not look out of place in a sci-fi epic as a typical design from forty years ahead of now; it is ahead of its time, and it looks like nothing else on earth right now. Whether you consider it beautiful or otherwise is not the point; it's startling and, like great Lamborghini's from the Countach to the Diablo, that's what the raging bull is all about.
The Reventon reaches only 211 mph (339 km/h) - if you feel short changed by that you're not on the right planet - according to the factory but one has been timed at 221 mph, and comes in only one color, that of carbon fiber grey. Admit it, how cool is that? It is powered by a 6.5 liter V12 engine and is popular with collectors who see the massive investment potential of a $1,600,000 car that has a mere 19 identical models across the world.
Love it or hate it, the Reventon is unmistakeably Lamborghini, but why would you choose it over a similarly priced Koenigsegg Agera R? Because it's a Lamborghini, of course, and the rarest one ever made. One final teaser - if you like the wind in your hair, the factory has produced a Reventon Roadster, but with rumored production at only 15 cars it may prove to be hard to catch... which makes one of the most expensive cars in the world.

Pagani Zonda Cinque Roadster

Many years ago, when I was a youngster, my bedroom wall - and that of all my car-loving friends - featured posters of the supercars of the era. In the 1980's there would probably have been a Lamborghini Countach and Ferrari F40, maybe a Porsche 959 or Jaguar XK220. These were the 'cult' cars of the era, supercars with a lot to shout about.

Now, in 2012, there are two contenders for young men's bedroom walls; the Pagani Zonda, and the Bugatti Veyron, both motoring icons that have entered the world of hypercars and made massive waves in the process. The Zonda Cinque Roadster - an open top version of what has to be one of the strangest, if most sensational looking, cars ever built, is the most exclusive version of an already exclusive model, and is one of the most expensive cars in the world today.

The Cinque was intended as the final incarnation of the Zonda, having superseded the Zonda R, and only five examples of the hard top and the Roadster were built. At $1,850,000 each - for the Roadster - it's easy to see why there was no surprise worldwide clamor for a thousand units.

740bhp from the stunning and beautiful to listen to AMG built 6.0 liter V12 is adequate, and the performance figures are in the plus 200mph (321 km/h) region with acceleration to 60mph in around 3.4 seconds. This is superb performance from a car that was first introduced, in its original form, in 1999.

The Zonda will remain a favorite with young boys everywhere, epitomizing as it does the sense of stunning, outrageous styling that comes with modern hypercars. There are few that are as quite outrageous as this amazing Italian gem, however - witness that crazy rear end for a start - and the front-forward cabin has been described by some as being rather awkward.

The Pagani Zonda is not built for beauty, but for performance and style, and it brings plenty of both to the party.

Текст

The clutch is known to be the part of the power train. Besides the clutch, the power train also includes the gearbox, propeller shaft, rear axle, final drive, differential and axle shafts. The gearbox named transmission is located between the clutch and the propeller shaft. We know the clutch to consist of the driven plate and the pressure plate, the driven plate having fabric linings on each side. To connect the engine with the gearbox, the driver should engage the clutch.

Текст

The frame in considered to be the structural centre of any vehicle, us it should provide support for the engine, body and power train members. The frame is made of sections welded together.

We know the frame to be reinforced by cross-members. To provide support for the engine and wheels, the frame should be rigid and strong. Noise and vibrations being inherent in engine operation, the engine is insulated from the frame by rubber washers.

Текст

The automobile is known to consist of the engine, the body and the chassis, the engine being the source of power. The body has a hood and lenders and accessories: heater, lights and radio. It should provide protection to the passengers from wind and rain. The chassis is known to include the power train, frame and wheels.

Streamlining is an important factor. To streamline a car means to shape it in such a manner that it offers small resistance to the air.

Текст

We know the steering system to be one of the most important mechanisms of the car. The steering system is known to consist of a steering wheel, gears, tie-rod, pitman arm and other units. The steering wheel is attached to the front wheels by gears and levers, the front wheels being on pivots. In order to turn the car in one direction or the other, the driver should turn the steering wheel. The steering wheel connected to the front wheels turns the car.

Тема 16.3. Дорогие автомобили.

Практическое занятие 74

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст

the Most Expensive Cars in The World

When talking of the most expensive cars in the world we are talking only of those that - in an ideal world - anyone could buy from a showroom if they could put up the money. The classic car market is a different world, one of $10 million Ferrari 250GTO's and rare or unique Bugatti's that have been hidden away for decades, and then there's the custom build market.

It's not unknown for an Arab sheik or Russian oligarch to demand a specially built Rolls Royce, Pagani or Ferrari complete with unique features and costing many millions as a result. The practice of special build supercars was, indeed, especially popular in the 1960's, thanks in no small part to the Aga Khan and his penchant for hand built Italian supercars, especially from Maserati.

Here we will take a look at the top five most expensive cars on the market today (six, in fact, for we have a tie for third place) - that is, those that are listed for sale as new from the manufacturer. Okay, we have taken a couple of liberties with our choices, but it's worth it! Prepare for an exciting ride through the automotive echelons of 2012.

Most Expensive Car - Ferrari Enzo

Given that the chances of finding a new Enzo in a showroom are nil - they have, officially, all been sold - it may seem odd to include this sensational and now

legendary car in the list, but the fact is it remains listed as a ‘for sale’ model in Ferrari stocks across the world.
The current US list price for an Enzo is around $670,000 - hardly a candidate for most expensive car - but if you want one you are going to pay much, much more than that. Nobody who buys one of these is using it to pick up the kids from school or to do the shopping - it is, without any question, an investment. That’s why you’re unlikely to find one for less than $1,000,000.
Stunning performance - 217mph (349km/h) and a 0-60mph time of 3.4 seconds - makes this a car that is on the edge of the maximum performance a road car can achieve, but it is the cache of the Ferrari name that makes the Enzo special. The six litre V12 punches out an amazing 651 bhp - a figure that is topped only by a handful of rivals - and makes what can only be described as a glorious cacophony, and the Formula One race car derived chassis - the Enzo was developed with help from the Ferrari team’s race drivers, including German legend Michael Schumacher - give this car a simply sensational pedigree.
One word of warning: there are only 400 Ferrari Enzo’s in the world, so you will have to search long and hard to find one, and it is most likely to be red!

Most Expensive Mc Laren F1

Let’s not beat about the bush here: the McLaren F1 was designed to compete with Ferrari on its own terms, no matter what the unashamedly reserved UK based company says. A sensational looking machine with the unusual draw of a central driving position and three seats, it is difficult to believe right now that the car first went on sale in 1994 - almost 20 years ago!
It may be a bit tenuous to describe, in 2012, the F1 as being ‘on sale’ to the public, but in fact they do change hands quite regularly, and usually at around $1,000,000. Popular with celebrities who see them as a bit of a plaything, and with true aficionados who recognize the racing pedigree of the beautiful Gordon Murray design - the race version won the prestigious Le Mans 24 hours race after all.
Where the F1 wins over many of its rivals of the time is in the precision detailing and careful design that it was imbued with. This was not just another supercar, it was designed to be - and to many still is - the ultimate supercar, and obviously one of the most expensive cars.
You want performance figures? Official top speed of 240mph (386 km/h), 60mph from a standstill in 3.2 seconds, and 618bhp from the six liter V12 BMW sourced engine make it hard to beat even today, and simply out of reach when introduced. With just over 100 made - including the race variants - it is a car that even the most die-hard collector will find hard to get, but one that simply has to be present in any self-respecting dream garage.
The McLaren F1 was once described as the ‘finest driving machine built for the public roads’ and while this may stand up to some scrutiny, it is a sad fact that all too few of us will get to experience the thrill.

Выберите и вставьте требуемый по смыслу глагол из приведенных в скобках. Предложения переведите.

1. Economics _____ (is/ are) the scientific study of the way in which

wealth _____ (is/are) produced and used.

2. Science _____ (deal/deals) with the changes and properties of living and non-living things.

3. Biology, physics and chemistry _____ (is/are) natural sciences.
4. Mathematics _____ (include/ includes) algebra and geometry as well as arithmetic.
5. Physics _____ (is/are) an exact science.
6. Physics _____ (do not/does not) deal with changes in composition which chemistry studies.
7.This course _____ (is/are) an introduction (введение), through theory and, experimentation, to motion
8. Physics _____ (is/ are) difficult to learn.
9. These hypotheses _____ (are/is) subject to verification.
10. This course _____(introduce, introduces -вводит) the student to the practice and language of art (искусство).

Выберите и вставьте требуемый по смыслу глагол из приведенных в скобках. Предложения переведите.

1. Economics _____ (is/ are) the scientific study of the way in which wealth _____ (is/are) produced and used.

2. Science _____ (deal/deals) with the changes and properties of living and non-living things.

3. Biology, physics and chemistry _____ (is/are) natural sciences.
4. Mathematics _____ (include/ includes) algebra and geometry as well as arithmetic.
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7.This course _____ (is/are) an introduction (введение), through theory and, experimentation, to motion
8. Physics _____ (is/ are) difficult to learn.
9. These hypotheses _____ (are/is) subject to verification.
10. This course _____(introduce, introduces -вводит) the student to the practice and language of art (искусство).

Раздел 17. СМИ об автомобилях.

Тема 17.1. Журнал автомобилистов.

Практическое занятие 75

Образовательная цель: научить применять знания в решении

практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Переведите текст

TOP GEAR
Top Gear is a British television series about motor vehicles, primarily cars, and is the world's most widely watched factual television programme. It began in 1977 as a conventional motoring magazine programme. Over time, and especially since a relaunch in 2002, it has developed a quirky, humorous and sometimes controversial style. The programme is currently presented by Jeremy Clarkson, Richard Hammond and James May, and has featured at least three different test drivers known as The Stig. The programme is estimated to have around 350 million views per week in 170 different countries.

In each episode, a celebrity is interviewed by Clarkson. Then, they and the studio audience watch footage of the guest's fastest lap around the Top Gear test track. The times are recorded on a leader board. For the first seven series of Top Gear's current format, the car driven was a Suzuki Liana.

At the beginning of the eighth series, the Liana was replaced by a Chevrolet Lacetti. As the Lacetti is more powerful, the leader board was wiped clean, which has allowed several celebrities to return, including Boris Johnson, now Mayor of London. The format for setting a lap time was also changed: each celebrity is allowed five practice laps, then a final timed lap. No allowance is made for any errors on this final timed lap. The Lacetti was replaced with a new car for the fifteenth series, a Kia Cee'd, which was subsequently replaced for the twentieth series by a Vauxhall Astra in "Tech Line" trim.

Ellen MacArthur set the fastest lap time in the Liana, with a time of 1:46.7. The fastest lap time in the Chevrolet Lacetti was set by Jay Kay with a time of 1:45.83. The fastest time in the Kia Cee'd was Matt LeBlanc who achieved 1:42.1, and the fastest time in the Vauxhall Astra is held by Breaking Bad actor Aaron Paul, who posted a 1:44.7 in March 2014, besting the record of 1:45.1 previously held by AC DC's Brian Johnson.

Michael Gambon went around the final corner of the track on two wheels, prompting Clarkson to rename the corner in Gambon's honour. Lionel Richie and Trevor Eve each lost a wheel and David Soul destroyed the clutches of both the main car and the back-up car.

There is a separate Formula One drivers' leader board. Lewis Hamilton is currently top of the time sheet, with a time of 1:42.9. All Formula One times, even those set after the seventh series, are set in the Suzuki Liana.

Тема 17.2. Газетные статьи об автомобилистах.

Практическое занятие 76

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины.

Переведите текст

Unusual reviews

A common theme on Top Gear is an approach to reviewing cars which combines standard road tests and opinions with an extremely unusual circumstance, or with a challenge to demonstrate a notable characteristic of the vehicle.

This has included several reviews, including "Toyota Hilux Destruction", featured in series three, episodes five and six. Various methods were employed by Clarkson and May to try to destroy a fourth generation Toyota Hilux, thereby proving its strength. The 'trials' included dropping the Hilux from a crane, setting the vehicle on fire, crashing it into a tree, driving it through a big shed (with a sign which said 'Top Gear Production Office'), leaving it in the Bristol Channel tethered to the jetty atBurnham on Sea and waiting for the tide to engulf it, dropping a caravan on it, slamming it with a wrecking ball, and finally having it hoisted to the roof of a tower-block that was subsequently demolished with explosives. The heavily damaged (but still driveable, without the use of any new parts except for a replacement windscreen) Hilux now stands on a plinth in the Top Gear studio.

Another such review featured a Ford Fiesta, after Hammond read out a letter from a viewer complaining that "Top Gear cannot review cars properly any more." Clarkson gave the model a sarcastic, but thorough, appraisal and was then pursued around Festival Place shopping centre in Basingstoke, Hampshire, by aChevrolet Corvette C6. The Fiesta was then used as a beach landing craft with the Royal Marines.

Occasionally, many cars are featured and reviewed inside one segment. In the "Scooter Road Test Russian Roulette Challenge" of series six, episode nine, Hammond and May worked as ScooterMen in order to road-test as many randomly selected cars as possible, the catch being that they wouldn't know what they'd be road-testing and would have to review the vehicles in the presence of the owners.

Exotic or foreign cars are occasionally also reviewed in unusual ways. In the "VIP Chauffeur" test of series eleven, episode six, May conducted road tests in Japan of the Mitsuoka Orochi and Galue, and used the Galue to chauffeur a Sumo wrestler and his manager to a tournament as a way to test if the car is "Japan's Rolls-Royce".

During its release in 2008, the Dacia Sandero was frequently mentioned as

a running gag in the programme's News feature, with the presenters' increasingly sarcastic excitement highlighting their opinion that the car was of no real importance to anybody. James May would sarcastically say "Great News! The Dacia Sandero..." and it would follow with a pointless fact about the Sandero. In the first episode of series 14, the crew actually went to Romania, where the Sandero is built. While there, Jeremy bought a Sandero for May, but just after May drove it, it was promptly crushed by a lorry. James said it was a brilliant car, and was furious when it was crushed. The phrase was once again revived in Series 15, referencing the Dacia Duster, in Series 18, when May brought up the new Dacia Lodgy, in Series 19, Episode 1, when May had announced that the Dacia Sandero was finally on sale in the UK, in Series 20, Episode 2, when May mentioned that the Dacia Duster is the #1 family 4x4 of the year, and finally, in Series 20, Episode 3, when James stated there would be a Dacia Duster "Black edition", which Clarkson and Hammond stated was "just a Duster covered with black plastic wrap". In Series 21, Episode 3, May drove a Sandero across Ukraine to Chernobyl in a challenge.

Also in series 14 Clarkson tested the Renault Twingo in Belfast following a complaint from one of the city's residents. Despite catching a cold on the ferry getting there, he admitted he loved the car. However, he did some rather strange things, including driving it "upside down" in the Belfast Sewage System. Clarkson ended up driving the car into Belfast Lough after an attempt to land it on the HSS Stena Voyager after missing boarding times. Throughout the review it was stated (and repeatedly shown) that Ross Kemp was in the boot.

In series 15 episode 3, Clarkson, Hammond and May took turns testing three high performance sports saloons: a Porsche Panamera Turbo, a Maserati Quattroporte, and an Aston Martin Rapide. All three presenters acted as chauffeurs for an actual wedding; the couple were invited to the studio during the airing of the segment (afterwards, they were introduced to the audience and presented with a toilet seat with a picture of the three presenters on its surface).

Раздел 18. Авто музеи мира

Тема 18.1.Авто музеи мира

Практическое занятие 77

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Переведите текст

Nissan

There are five Nissan Galleries throughout Japan with two in Tokyo (Honsha Ginza and the smaller Ginza, both within walking distance of each

other), and one each in Sapporo,Nagoya and Fukuoka. I say “throughout Japan” loosely because there isn’t a Nissan Gallery in Osaka which kind of defies logic. The Galleries showcase examples of Nissan’s current line up of vehicles with the Sapporo Gallery boasting the biggest display with 10 cars, including a R35 Nissan GT-R Spec V and a Z34 Fairlady Z Version NISMO! The Z34 Fairlady Z Version NISMO can also be seen at the Nagoya and Ginza Galleries. All the Nissan Galleries are in the center of each city and very easy to get to by subway or even on foot if you’re lucky enough to be staying in a hotel nearby. The Nissan Gallery website is in Japanese only so if you require more information on how to get there please contact us.
**Note: Nissan Honsha (Headquarters) is moving to the Nissan Global Honsha site inYokohama and will open on August 8th, 2009.
Hours: Open 7 days, 10:00AM – 8:00PM (Sapporo Gallery open from 10:30AM)
Admission: Free

Honda
Another one of Japan’s great automotive collections, the Honda Collection Hall has 350 examples of cars and motorcyles on display from the very first bicycle engine to Formula One cars. It’s not all automotive though withvarious power equipment and even outboard motors and farming machinery on display. Like the History Garage at Toyota Mega Web, the Honda Collection Hall also boasts a restoration room where visitors can watch vehicles being restored and also see completed cars being test driven on the “mini-course”. Honda Collection Hall is located at Twin Ring Motegi in Tochigi prefecture, about 90 minutes north of Tokyo by train. See the access guide for more details.
Note: Opening hours vary so please check the timetable.
Admission: Free (entrance into Twin Ring Motegi costs 1,200 JPY)
Auto Museum - Haynes International Motor Museum – Sparkford, Somerset, England

One of the most impressive collections of rare and powerful automotives in the UK, Somerset's Haynes International Motor Museum showcases engineering excellence from around the world. Everything from Cadillac’s to Bugattis are on display here, with over three hundred fifty total vehicles.

One of the most interesting vehicles on display would have to be the Bricklin SV-1. This gull-winged sports car was actually made in Canada, predating the similar DeLorean by a decade or so, having been manufactured between 1974 and 76. The Bricklins were a pretty cool car, but the company was working with a blatantly absurd business model:

The cars were created at a cost of sixteen thousand Canadian dollars each, but were sold to dealers at a mere five thousand. Let this be a lesson if you ever want to found your own automobile brand; don't sell the cars for a third of their factory cost!

Поставьте глагол в скобках в Present Continuous.

1.- Where arc our children? It's quid al home.
- They (lie) on the carpet and (draw).
2.- What you (do) now?
-I (look for) my key. I can't open the door.
3. Listen! Somebody (sing) a lovely song.
4. Why you (put on) the coat? It's sunny today.
5. Don't make so much noise. I (try) to work.
6. Why you (cry)? Is something wrong?
7. Let's go for a walk. It (not / rain) now.
8. Why you (not / hurry)? I (wait) for you.
9.1 don't speak any foreign language, but I (lean) English now.
10. We (spend) next weekend at home.
11.1 (meet) Liz tonight. She (come) from Cork.
12. He (go) to speak to his parents.

Выучите диалог в парах

Alex: Why are brakes used?
Boris: They are used to stop or to slow the car.
A.: Well, it is one of the most important mechanisms of the car, isn't it?
B.: Of course, the safety of the passengers depends upon their proper performance.
A.: What types of brakes are used today?
B.: Drum brakes, disk brakes and others.
A.: And in what way are they applied?
B.: They are applied by the brake pedal. When the driver pushes down on the pedal they are applied.
A.:T hank you. It was very nice of you to tell me this information.
B.: Don't mention it. I was glad to serve you.

Тема 18.2. Авто музеи России.

Практическое занятие 78

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст

The Museum "Auto-USSR" in Chernousovo Museum of automotive equipment under the open sky.
In the Tula region, near the village of Chernousovo on the picturesque Bank of the Mobile river stretches the field.The field is quite considerable, it would be

quite unremarkable if it were not cluttered with lots of vintage cars of various makes and model years.The exhibition consists of large number of restored passenger cars and commercial vehicles produced by the Soviet automotive industry in the period from the 40s to the 90-ies of XX century.
AZLK
Moskvich 3-5-5 - experienced family cars, designed and assembled in small numbers at the factory MZMA / AZLK in Moscow in the first half of the seventies. Differed best, especially for the domestic auto industry, construction, however, due to various reasons in the series none of them went.
Moskvich-400 - is a replica of pre-war "Opel-Cadet C". After the war some of the tooling was shipped from the factory Opel in rüsselsheim, and the remaining stamps did plant ZIS. Rear doors open against the motion, not the standard. "Moskvich-400" was the USSR's first truly mass popular machine, is designed primarily for individual owners. In the frame of the Park GUNS (Department traffic control).
Moskvich-401 is an improved version produced from 1954 to 1956.
Moskvich-402 — Soviet passenger small car that was produced at the Moscow plant of small cars (MZMA) from 1956 to 1958, released 87 658 instances long with modifications.
Moskvich-412 — a cult Soviet and Russian passenger car of a small class, produced in Moscow at the plant MZMA, later renamed AZLK, from 1967 to 1977 in the car factory in Izhevsk from 1968 to 1997. Was, in fact, a modification of the model "Moskvich-408", when I graduated many years together with her and later jointly upgraded in a family of "Moskvich-2140 / 2138".Moskvich-423 — the USSR's first domestic production car with five-door station wagon, produced in the years 57-58. The power of the engine of the first wagon was only 35 HP Moskvich-2138 — Soviet passenger small car that was produced in Moscow plant AZLK from 1976 to 1988. Was a deeply modernized version of the model Moskvich-412. Moskvich-2141 (export name — ALEKO, from the Lenin Komsomol Automobile plant, in the EU is sold under the designation ALEKO) — Soviet and Russian passenger car of the third group of small class (segment D) with a body of type "hatchback", published from 1986 to 1997 at the Automobile plant named after Lenin Komsomol (AZLK). Moskvich-2140 is a basic sedan family "1500". Produced in 1976-1988 gg.; Moskvich-D is a modification of a sedan with deforsirovannom engine under gasoline And-76. Very scarce modification of the relative cheapness and greater prevalence of 76-octane gasoline (especially in the province);Moskvich-214006(214007) — export version

Переведите текст

From the History of Russian Automobile Engineering

The automobile industry in our country has been developed since 1916. Before that time Russia had no automobile industry at all, technical schools had no departments to train specialists in automobile engineering.
But in the history of the automobile such names as Shamshurenkov, Blinov,

Mamin and other Russian experts in mechanics must be remembered.
The first automobile built by Shamshurenkov, a Russian inventor, was put into motion by the pedalling of the driver himself.
Blinov designed and constructed tractor driven by steam engine. Mamin was one of the pioneers in Russian internal combustion engines.
Today Russian automobiles are engineered and built in such a manner that they are able to withstand heavy loads for long periods of operation.
The modern automobile is much more than a means of riding from one place to another. The passenger's safety and comfort must be considered as much as the car's reliable performance and ability to travel on the highways.
The modern automobile must have a steel body and a steel roof and this roof must be insulated against the summer's heat and winter's (old. Ventilation is also of great importance. The comfort and convenience of the driver must be taken into consideration too. The automobile must have a heater with special defrosting devices which insure clear vision to the driver.
The automobile must have great power for riding, have dependable clutch and brakes, have good riding qualities, good lights, dependable starting and ignition systems, low fuel consumption, as well as long service life.

Переведите диалог.

Anton: Where do you study?
Boris: I study at the automobile construction college.
A: Whom does the college train?
B: It trains specialists for the automobile industry.
A: Why did you decide to become a technician?
B: I enjoy working with machines. I enjoy learning about a car. I understand every part of it.
A: What can you tell me about the car?
B: Well, the car of today must be rapid in acceleration, it must have dependable clutch, brakes, and steering system, be stable on the road and have pleasant appearance.
A: Do you enjoy the course?
B: Yes, very much. I have learned a lot of things. For example, I know that the production of the car comprises five phases.
A: What are they?
B: They are designing, working out the technology, laboratory tests, road tests, mass production.
A: And why are laboratory and road tests needed?
B: The cars are subjected to tests in order to meet up-to-date demands.
A: And what are these demands?
B: They are high efficiency, long service life, driving safety, ease of maintenance and so on.
A: I think you will become an expert in automobile engineering.
B: I'll try. The cooperative plan of an academic program with

practice at a plant will help me to become a good specialist.

Ответьте на вопросы.
1 . What college do you study at?
2. What will you become after graduating from the college?
3. What will you deal with?
4. What phases does the production of the automobile comprise?
5. Why are the cars subjected to laboratory and road tests?
6. What qualities must the car have?
7. What units must the car have?

Задайте вопросы к предложениям.

1. I study at the automobile construction college.
2. After graduating from the college I'll become a specialist in automobile construction.
3. I11 deal with manufacturing automobiles.
4. The production of the automobiles comprises the following phases: designing, working out technological processes, laboratory and road tests and mass manufacturing.
5. The automobile must meet up-to-date requirements.
6. The car must have high efficiency, long service life, pleasant appearance and driving safety.
7. The car must have smooth-acting clutch, silent gearbox, dependable braking and steering systems, dependable ignition system.

Переведите диалог:

DIALOGUE
Alex: Why are brakes used?
Boris: They are used to stop or to slow the car.
A.:Well, it is one of the most important mechanisms of the car, isn't it?
B.: Ofcourse, the safety of the passengers depends upon their proper performance.
A.:What types of brakes are used today?
B.: Drum brakes, disk brakes and others.
A.: And in what way are they applied?
B.: They are applied by the brake pedal. When the driver pushes down on the pedal they are applied.

Тема 18.3. Авто музеи США.

Практическое занятие 79

Образовательная цель: добиться прочного усвоения знаний по теме. Развивающая цель: научить анализировать, правильно употреблять термины

Переведите текст

Detroit's Auto Museums

It’s hard to imagine an industry that shaped a culture as much as the auto industry shaped America’s in the 20th century. It eliminated trams and created suburbs. It introduced the assembly line and the hourly wage. It spawned a transient nation of road trips, motels, drive-in ‘movie theatres’ and family summer holidays.

It all had its roots in Detroit, where Henry Ford, John and Horace Dodge, Walter Chrysler, Ransom Olds and other inventive minds tinkered with the horseless carriage in the late 1800s and early 1900s, creating one of the most powerful industries in the world. The global headquarters of the ‘Big Three’—Ford, Chrysler and General Motors—remain in metropolitan Detroit, inextricably linking the city and its automotive legacy. The Motor City is where the latest, greatest designs are unveiled every January at the North American International Auto Show; it’s where more than 40,000 classic and special-interest cars show up for the annual Woodward Dream Cruise in mid-August (the largest automotive event in the world, attracting 1.7 million car enthusiasts); and it’s where an array of fascinating museums and tours chronicle the origins and rise of it all.

The star has long been the Henry Ford Museum and Greenfield Village, part of a vast complex known collectively as ‘The Henry Ford’ in Ford’s home town (and now Detroit suburb) of Dearborn. The 81-acre Greenfield Village features an amalgamation of some of America’s most significant historic buildings—including Thomas Edison’s laboratory and the cycle shop where the Wright Brothers invented the aeroplane—both of which were moved here and painstakingly rebuilt. Inside an enormous eight-acre exhibit hall, the museum once dubbed ‘Ford’s Attic’ includes everything from one of the largest steam locomotives ever built to an exhaustive car collection that traces the automobile’s evolution and its effect on society.

The Henry Ford is also the departure point for a tour of the Ford Rouge Factory (named after the adjacent River), Detroit’s only public tour of a vehicle-manufacturing plant. The original 1.5-mile-long Rouge plant is an icon of the Industrial Age. Built in 1917, it employed a staggering 100,000 workers and was considered ‘the first wonder of the industrialised world’, where raw materials came in by freighter at one end and finished automobiles came out the other. Recent additions to the vast complex mean you’ll begin with a virtual-reality theatre experience before watching F-150 trucks being assembled along

a quiet and spotless factory floor.

Also in Dearborn, the Automotive Hall of Fame is the Cooperstown (home of the Baseball Hall of Fame) of the auto industry, paying homage to the people who affected and advanced the industry. Here too are the anecdotes: when Henry Ford couldn't make a $5,000 (£3,200) payment to the Dodge brothers' machine shop, he instead paid them in Ford Company stock—profits from which the brothers later used to start their own car company.

Suburban Auburn Hills is home to DaimlerChrysler headquarters and the Walter P. Chrysler Museum. A railroad mechanic, Chrysler got his start in the auto industry when he became smitten at an auto show with a $5,000 (£3,200) Locomobile. He had it shipped to his home, where he immediately took it apart and reassembled it. Along with a gleaming collection of DeSotos, Hudsons and muscle cars, this museum does a good job of explaining the evolution of auto engineering and design with a variety of hands-on displays about aerodynamics and other advancements. A timeline illustrates the endless string of start-ups and mergers that track the worldwide auto industry, with Motor City at the helm.

Дополните предложения словами в скобках.

1.I have heard about the writer before, (never)
2.Have you tried to discuss the matter with him? (ever)
3.Mr. Smith has left. (Just)
4.He has gone, (already)
5.They have been to London, (many times)
6.I've trusted (доверял) him. (always)
7. Have you seen your friend? (this morning)
8. I haven't finished my test, (yet)

Дайте развернутые ответы на вопросы:

1.What time do you get up?
2.What's the first thing you do when you get out of bed?
3.What do you have for breakfast?
4.When do you leave for school?
5.How do you get to school?
6.What's your favorite subject? Why?
7.Who do you sit next to at school?
8.Who would you like to sit next to?
9.When do you go home?
10. Do you go home at the same time every day?
11. What's the first thing (that) you do when you get home?
12.How much homework do you get each day?
13.How long do you watch television each day?
14.What are your favorite programmes?
15.How often do you go out with your friends?

Употребите *say* или *tell:*

1.Jane_____, "I don't know these people."
2.Listen to what I'm going to_____.
3.I'm going to_____you what to do next.
4.You shouldn't_____anyone about it.
5.She_____me not to open the door to anyone and not to answer the phone.
6._____them how to do the job.
7. He_____us a funny story.
8."What did you_____?"
9.It's_____that Bill Gates is one of the richest men in the world.
10. He's good at_____ing jokes.
11. _____it again, please.

Тема 18.4. Авто музеи Германии.

Практическое занятие 80

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины.

Переведите текст

Mercedes-Benz

Near Stuttgart, Germany in Untertürkheim within what is now DaimlerChrysler's main factory sits the Mercedes-Benz Museum. There are no Mercedes-Benz flags in the shopwindows nor do you see the Mercedes name bandied about, yet when you arrive at the factory gates there is no mistaking the fact that you are in the presence of some very serious automotive minds. Mercedes might lack the flair of Ferrari but certainly is more than a match in their record of success. To get to the museum you must use a special bus that takes you from just outside the factory to the museum's main entrance. The museum itself is a modern glass and steel structure that displays around 100 cars. Admission is free and the cars you'll see span the history of the automobile, for it was near this site that the very first gas-powered automobiles were built. Gottlieb Daimler, Karl Benz and Wilhelm Maybach strove to harness the internal combustion engine into a practical vehicle for personal transportation. Here you will see the results of their labour. The museum has a small store and a cafe. The store has a number of items such as die-cast cars that cannot be purchased anywhere else. Mercedes-Benz is very proud of the fact that they invented the first practical automobiles and upon entering the museum that is what you'll see. Be sure to grab one of their wireless radios for a description of all of the exhibits. The museum has angled floors that lead you up through the museum and the cars are arrayed in a more or less historical order. The displays are very straightforward and not as descriptive as those are in the

Galleria Ferrari. The thinking may be that the cars stand on their own merit or that you should have picked up a radio!
There is also a display of current models including the cute "Smart Car" which was originally the result of a partnership between Swatch and Daimler-Benz. The 58-mpg car has won numerous awards in Europe and can be purchased in many "mouth watering" colors. If a computer can be called an iMac then this car should be called an iCar. A number of governments are using this car as a basis for car-sharing plans. SwissAir has a program for first-class passengers to use this car at their destination while returning it to the airport upon their departure. The Smart Car is only 2.5 meters long and has excellent visibility combined with a very small turning circle and a semi-automatic transmission. The car has a top speed of 85 mph, accelerates from 0 to 60 in 10.2 seconds. The Smart Car features a state of the art Tridion alloy safety framework, ABS braking and a rear mounted Mercedes manufactured 599cc suprex-turbocharged 3 cylinder in-line petrol engine complete with catalytic converter.

Прочтите текст, а затем, ответьте на вопросы, приведенные ниже.

The automobile is made up of three basic parts: the engine, the body and the chassis. The engine is the source of power and makes the car move.
The chassis consists of the transmission and running gear (frame, springs and wheels). The transmission carries the power from the engine to the wheels. It consists of the clutch, gearbox, propeller shaft, rear axle, final drive and differential. The transmission also includes the steering system and brakes.
The body has the hood, fenders, the heater and so on.

1. What main components is the automobile made up of?
2. What is the source of power?
3. What units does the chassis include?
4. What duty is performed by the frame?
5 . What does the transmission do?
6. What mechanisms does the transmission consist of?
7. What is the function of the steering system?
8. Why are brakes necessary?
9 . What is the function of the clutch?
10 . What is the function of the gearbox?
11. What types of gearboxes do you know?
12. What is the function of a differential?
13. What purposes do brakes serve?
14. What parts has the body?
15. How is the car body attached to the frame?

. Найдите в тексте эквиваленты следующих предложений.
1.Автомобиль состоит из трех основных частей: двигателя, шасси и кузова.
2.Двигатель — источник энергии.
3.Шасси состоит из трансмиссии и ходовой части.

4.Трансмиссия передает энергию от двигателя к колесам автомобиля.
5.Она состоит из сцепления, коробки передач, карданного вала, заднего моста, главной передачи и дифференциала.
6.Кузов имеет капот, крылья, отопитель

Тема 18.5. Автомобили всего мира.

Практическое занятие 81

Образовательная цель: добиться прочного усвоения знаний по теме.
Развивающая цель: научить анализировать, правильно употреблять термины

Прочитайте и переведите текст:

Cars are an essential part of many people's lives nowadays. Since their appearance many things have changed. Travelling from one place to another became easier and faster. Besides when we go by car, comfort during the trip is guaranteed. There are many types of cars: small, large, cargo cars, minivans, jeeps. All of them are multifunctional. First and the most important role of the car is driving to work and back. Many people in big cities live in the suburbs but work in the downtown. That's why every morning and evening people use personal cars. When the road traffic is heavy they can use public transport. Second role of the car is to travel to long distances, for instance, to other cities or countries. There are, of course, other ways of travelling: by bus, by train, by plane. However, only cars let us feel comfortable and free on the way. Many people choose cars because of the beautiful view from the window. The only disadvantage of distant travels by car is the price of gasoline. In many countries it's usually high. Another good reason for having a car is going to large supermarkets. When the family is big and there are several pets, it's simply vital to buy a lot of food. Many families go shopping for food at weekends and cars are very useful on such days. I should say that cars have brought a lot>of problems, such as air pollution and traffic jams. However, they gave people more freedom of movement and comfort. When I grow up, I want to have a car of my own. I hope by that time cars will be electric and less harmful for the environment.

Вставьте предлоги.

1. Barbara plays ...the piano well.
2....my mind, it was the most stupid thing he could do.
3. Translate these words... English... Russian.

4. My brother gave the money ... me.
5. Learn this poem... heart.
6. At last I opened the can... a knife.
7. I go to school... foot, but yesterday I went to school, bus
8. Winnie-the-Pooh is written ... Alan Milne.
9. Give … him that book, please.
10. My aunt lives ... the ground floor … a fourteen-storey block … flats
11. What is that ring made...?
12. ... general, they both think that they don't have a bad life

Вставьте слова that, what.

1. You have everything ... you want.
2. Do you want to know the news ... my brother told me yesterday?
3. Do you want to know ... my brother told me yesterday?
4. Chris knows ... Dad wants to tell him.
5. Chris knows ... Dad wants to speak to him about the accident.
6. My neighbour said ... he had seen a new magazine about computers.
7. He told me ... articles were interesting in the magazine.
8. He explained them ... he was speaking about.
9....we saw surprised us.
10. The things... we saw surprised us.
11.If your uncle sees... you've done, he' 11 be cross with you.
12. If your uncle sees the damage..you've done, he'll be angry with you.

Раздел 19. Тюнинг автомобилей.

Тема 19.1. Тюнинг автомобилей.

Практическое занятие 82

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Car tuning is modification of the performance or appearance of a vehicle. For actual "tuning" in the sense of automobiles or vehicles, see [engine tuning]. Most vehicles leave the factory set up for an average driver's expectations and conditions. Tuning, on the other hand, has become a way to personalize the characteristics of a vehicle to the owner's preference. Cars may be altered to provide better fuel economy, produce more power, or to provide better handling.

Car tuning is related to [auto racing], although most [performance cars] never compete. Tuned cars are built for the pleasure of owning and driving. Exterior modifications include changing the aerodynamic characteristics of the vehicle via side skirts, front and rear bumpers, spoilers, splitters, air vents and light weight wheels.

Areas of modification
The essence of modification of a tuner car is an attempt to extract the greatest possible performance—or the appearance of high performance—from the base motor vehicle through the addition, alteration or outright replacement of parts. Although this largely involves modifying the engine and management systems of the vehicle to increase the power output, additional changes are often required to allow the vehicle to handle this power, including stiffened suspension, widened tires, better brakes, improved steering and transmission modifications such as the installation of a short shifter. Although largely invisible from outside the vehicle, certain modifications such as low profile tires, altered suspension, and the addition of spoilers can change the overall appearance of the car, as well as adding downforce to increase traction.

Audio
A stock audio system is one specified by the manufacturer when the vehicle was built in the factory. A custom audio installation can involve anything from the upgrade of the radio to a full-blown customization based around the audio equipment. Events are held where entrants compete for the loudest, highest quality reception or most innovative sound systems.

Interior

All cars competing in each class must adhere to a strict set of regulations. As in some well known racing events, like NASCAR and NHRA, sanctioned events often require a minimum vehicle weight. In such cases the interior is stripped, and the required weight is achieved by adding ballast that allows precise control over weight distribution.

Along with weight requirements, safety requirements are present . Requirements differ for different classes. Roll cages, fire extinguishers, reinforced bucket seats, seat harnesses, and the like are some of the required safety modifications. Roll cages may be difficult to install when the original equipment interior is present. Some tuners will have "gutted" interiors. Some tuners omit features that many ordinary drivers would find desirable or necessary, such as audio systems, air conditioning and soundproofing.

Engine tuning
Main article: Engine tuning
Engine tuning is the process of modifying the operating characteristics of an engine. In a typical engine set-up, there are various mechanical and electronic elements such as the intake manifold, spark plugs, Mass air flow/ Volume air flow, etc. Modern engines employ the use of an ECM to provide the best balance between performance and emissions. Via the OBD communications protocol, the electronically controlled aspects of the engine can be modified in the process known as 'mapping'. Mapping can either be performed by changing the software within the ECU (chip tuning via firmware modification), or by providing false data via plug-in hardware (piggybacking). Mechanical components can also be replaced, such as turbochargers or superchargers.

Other standalone engine management systems are available. These systems replace the factory computer with one that is user programmable.

Improper, incorrect and poorly executed engine modifications can have a detrimental effect on performance. Mechanical and electrical components will suffer or simply fail as a result. An example would be the use of an air compressor such as a turbocharger to increase the volume of air used in power stroke of the otto cycle. In a typical chemical reaction, the air-fuel ratio must be a minimum of 14:1 (see Stoichiometry). If higher ratios are used, higher pressures and temperatures are observed in the cylinders, which can quickly push an engine beyond its intended design limits. Neglecting such operating parameters can lead to premature failure, such as warped cylinder heads and walls (temperature related), disintegrated piston rings, cracked or bent connecting rods and crankshafts (excessive amount of torque applied), total cooling system failure, engine fire, engine detonation, engine seizing, and even blowouts. This can all lead to very expensive repairs, as well as being very dangerous.

Suspension tuning
Suspension tuning involves modifying the springs, shock absorbers, swaybars,

and other related components of a vehicle. Shorter springs offer greater stiffness and a lower center of gravity at the possible cost of unwanted changes of suspension geometry. Stiffer shock absorbers improve the dynamic weight shifting during cornering and normally have shorter internals to stop them from bottoming out when shorter springs are used. Stiffer sway bars reduce body roll during cornering, thus improving the grip that the tires have on the surface by reducing suspension geometry changes caused by roll; this also improves handling response due to faster weight shifting (similar to stiffer springs.) The danger with overly stiff swaybars is the lifing of the inner wheel, which changes traction of that end at a discontinuous rate. By increasing the roll resistance of on end, weight transfer is concentrated at that end, causing it to slip more than the other. This effect is used to control the over/under steer characteristic as well as to reduce roll. Other components that are sometimes added are strut bars, which improve the body stiffness and help better maintain the proper suspension geometry during cornering. On some cars certain braces, anti-roll bars, etc., can be retrofitted to base model cars from sports models.

For offroad vehicles, the emphasis is on lengthening the suspension travel and installing larger tires. Larger tires, with or without larger wheels, increase ground clearance, ride over short obstacles and holes more smoothly, provide more cushioning and decrease ground loading which is important on soft surfaces.

These suspension modifications are in contrast to Lowriders with hydraulic or pneumatic suspensions. Lowriders use another type of suspension tuning in which the height of each individual wheel can be rapidly adjusted by a system of rams which, in some cases, makes it possible to "bounce" the wheels completely clear of the ground.

Body tuning

Body tuning involves adding or modifying spoilers and a body kit in order to improve the aerodynamic performance of a vehicle. Through the generation of downforce, cornering speeds and tire adhesion can be improved, often at the expense of increased drag. To lighten the vehicle, bodywork components such as hoods and rear view mirrors may be replaced with lighter weight components.

Often, body modifications are done mainly to improve a vehicle's appearance, as in the case of non-functioning scoops, wide arches or other aesthetic modification. Aftermarket spoilers or body kits rarely improve a car's performance. The majority, in fact, add weight and increase the drag coefficient of the vehicle, thus reducing its overall performance.

Increasing the wheel track width through spacers and wide body kits enhance the cars cornering ability. Lowering the center of gravity via suspension modifications is another aim of body tuning. Often, suspension tuners unfamiliar with spring dynamics will cut stock springs, producing a harder,

bouncy ride. It is also common to lower the car too far, beyond the optimal height for performance, purely for appearance.

Competition cars may have light weight windows, or the windows may be completely removed, as auto glass adds significant weight high up. Plastic windows are much more vulnerable to scratches which reduces service life.

Tires
Tires have large effects on a car's behavior and are replaced periodically, therefore tire selection is a very cost-effective way to personalize an automobile. Choices include tires for various weather and road conditions, different sizes and various compromises between cost, grip, service life, rolling resistance, handling and ride comfort.

Detuning
Detuning is returning a modified car to its original factory status or reducing its performance in a particular area of tuning. For example, a car may be "detuned" to allow increased traction where the track grip is not sufficient to handle the increased power of the tuned engine.

Переведите предложения на русский язык. В разделе б) обратите внимание на перевод пассивных конструкций (см. образец выполнения 1).

а) 1. The Science Museum houses the earliest English locomotive actually built (1784).
2. Cambridge University was exclusively for men until 1871.
б) 1. In the 1970s, most colleges of the Cambridge University opened their doors to both men and women, and almost all colleges now are mixed, but it will be many years before there are equal members of both sex.
2. The colleges are not connected with any particular study.

Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого.
Переведите предложения на русский язык (см. образец выполнения 2).

1. Every college is governed by a dean.
2. A college is a group of buildings forming a square with a green lawn in the centre.
3. Mary (queen) had been living quietly in Suffolk (Саффолк – графство) while England was governed by a group of Protestant nobles acting as regents for the boy king.
4. The dominating factor in Cambridge is its well-known University, a center of education and learning, closely connected with the life and thought of Great Britain.

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

русский язык.

5. In order to enter the university, one must first apply to a college and become a member of the university through a college.
6. Students studying literature, for example, and those trained for physics may belong to one and the same college.
7. The fact is that one is to be a member of a college in order to be a member of the University.
8. There are many libraries at Cambridge, and in one of them among the earliest books by Shakespeare and other great writers one may see an early description of Russia by an Englishman on diplomatic service there (in 1591) and a Russian reading book of the 17-th century.

Тема 19.2. Чип - тюнинг.

Практическое занятие 83

Образовательная цель: научить применять знания в решении практических задач.
Развивающая цель: прививать уменья и навыки учебной работы.

Прочитайте и переведите текст:

Chip tuning refers to changing or modifying an erasable programmable read only memory chip in an automobile's or other vehicle's electronic control unit (ECU) to achieve superior performance, whether it be more power, cleaner emissions, or better Fuel efficiency. This makes use of the engine manufacturer to generally use a conservative electronic control unit map to allow for individual engine variations as well as infrequent servicing and poor-quality fuel. Vehicles with a remapped electronic control unit may be more sensitive to fuel quality and service schedules.

This was done with early engine computers in the 1980s and 1990s. Today, the term chip tuning can be misleading, as people will often use it to describe ECU tuning that does not involve swapping the chip. Modern electronic control units can be tuned by simply updating their software through a standard interface, such as On Board Diagnostics. This procedure is commonly referred to as engine or electronic control unit tuning. Electronic control units are a relatively recent addition to the automobile, having first appeared in the late 1970s.

As technology advanced, so did the electronics that go into cars. The electronic control unit in a modern automobile, together with advanced engine technology, makes it possible to control many aspects of the engine's operation, such as spark timing and fuel injection. The electronic control unit may also control electronic throttle control (drive-by-wire), poppet valve timing, boost control (in turbocharged engines), Anti-lock braking system, the automatic transmission, speed governor (if equipped), and the Electronic Stability Control system.

Performance gains are realized by adjusting the ignition timing advance. Different timing may result in better performance. However, to cope with advanced timing, one must run high-octane gasoline to avoid pre-ignition detonation or pinging. Manufacturers design for a specific timing and this may limit performance accordingly.

In addition, changing fuel maps to coincide with the stoichiometric ratio for gasoline combustion may also realize performance increase. Most manufacturers tune for optimum emissions (running rich to protect the catalytic converter) and fuel economy purposes which can limit performance.

Cars with a turbo fitted can have the requested and allowable boost levels raised, these applications usually have the most effect if the turbo fitted is a low pressure turbo which leaves the most room for improvement.

Another reason to change the electronic control unit map is if there are engine, intake, or exhaust modifications to the car. These "bolt-on" modifications alter the way that the engine flows, often causing the air to fuel ratio to change. Without re-mapping the fuel tables, some of the performance gains from the modifications may not be realized.

A poorly tuned electronic control unit can result in decreased performance, driveability, and may even cause engine damage.

The most common way to "upgrade" the electronic control unit is using either plug in modules as mentioned above or using a specialist tuner who will use an On Board Diagnostics Flash tool. These devices generally plug into the diagnostic port although in some cases the reprogramming is done directly on the circuit board. Maps are supplied by tuners.

An alternative to modifying the on-board chip is adding an external device, often known as a tuning box. The abilities of the external devices generally reflect on-board chip modifications, with the advantage that they can be easily removed to restore the vehicle to standard. Adding an external tuning box is generally only possible on modern engines with external management ports.[1]

Перепишите следующие предложения; подчеркните в каждом из них глагол-сказуемое и определите его видо-временную форму и залог. Переведите предложения на русский язык. В разделе б) обратите внимание на перевод пассивных конструкций (см. образец выполнения 1).
а) 1. The singing of the Latin hymn has gone on for more than 350 years.
2. Cambridge university is like a federation of colleges.
б) 1. University is seen as a time to be independent.
2. If, for instance, any one leaves a cat to starve in an empty house while he goes for his holiday, he can be sent to prison.

Перепишите следующие предложения; подчеркните Participle I и Participle II и установите функции каждого из них, т.е. укажите, является ли оно определением, обстоятельством или частью глагола-сказуемого. Переведите предложения на русский язык (см. образец выполнения 2).

9. The lawns are closely cropped, their flower beds primly cultivated, and their trees neatly pruned.
10. The London buses first came into the streets in 1829 and they were horse-drawn omnibuses, with three horses.
11. The sign of the London underground - a red circle crossed with a blue stripe can be seen on the buildings or just under a staircase leading straight under the ground.
12. When running along London streets omnibuses manage to maneuver very well without running into one another.

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

13. In London one can see many buses, cars and taxes in the streets.
14. You'll have to find the bus stop yourself and remember to look for the number of the bus on the post at the bus stop.
15. You must remember the number of the bus, because in busy street there may be four or five bus stops close together.
16. Double-deckers (omnibuses) have seats for 65 people and only 5 people are allowed to stand when the seats are full.

4. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

4.1. Рекомендуемая литература.

4.1.1. Основная литература:

1. Беляева, И. В. Иностранный язык в сфере профессиональной коммуникации : учебное пособие для СПО / И. В. Беляева, Е. Ю. Нестеренко, Т. И. Сорогина ; под редакцией Е. Г. Соболевой. — 2-е изд. — Саратов, Екатеринбург : Профобразование, Уральский федеральный университет, 2019. — 131 c. — ISBN 978-5-4488-0409-0, 978-5-7996-2848-2. — Текст : электронный // Электронно-библиотечная система IPR BOOKS : [сайт]. — URL: http://www.iprbookshop.ru/87805.html. — Режим доступа: для авторизир. пользователей

2. Английский язык : учебное пособие для СПО / М. А. Волкова, Е. Ю. Клепко, Т. А. Кузьмина [и др.]. — Саратов : Профобразование, 2019. — 113 c. — ISBN 978-5-4488-0356-7. — Текст : электронный // Электронно-библиотечная система IPR BOOKS : [сайт]. — URL: http://www.iprbookshop.ru/86190.html. — Режим доступа: для авторизир. пользователей

3. Мерфи Р. Грамматика сборник упражнений. Практическая грамматика «Кембридж», 2014

4.1.2. Дополнительная литература:

1. Кузнецова, Т. С. Английский язык. Устная речь. Практикум : учебное пособие для СПО / Т. С. Кузнецова. — 2-е изд. — Саратов, Екатеринбург : Профобразование, Уральский федеральный университет, 2019. — 267 c. — ISBN 978-5-4488-0457-1, 978-5-7996-2846-8. — Текст : электронный // Электронно-библиотечная система IPR BOOKS : [сайт]. — URL: http://www.iprbookshop.ru/87787.html. — Режим доступа: для авторизир. пользователей

2. Беликова, Е. В. Английский язык : учебное пособие для СПО / Е. В. Беликова. — Саратов : Научная книга, 2019. — 191 c. — ISBN 978-5-9758-1889-8. — Текст : электронный // Электронно-библиотечная система IPR BOOKS : [сайт]. — URL: http://www.iprbookshop.ru/87072.html. — Режим доступа: для авторизир. пользователей

Иностранный язык профессионального общения (английский язык) : учебное пособие / И.Б. З. Кошеварова, Е.Н. Мирошниченко, Е.А. Молодых и др. ; Министерство образования и науки РФ, Воронежский государственный университет инженерных технологий. - Воронеж : Воронежский государственный университет инженерных технологий, 2018. - 141 с. - Библиогр. в кн. - ISBN 978-5-00032-323-6 ; То же [Электронный ресурс]. - URL: http://biblioclub.ru/index.php?page=book&id=488007

4.1.4. Интернет-ресурсы:

1. http://anglonet.ru/ - английский язык онлайн
2. http://engblog.ru/ - онлайн школа изучения английского языка
3. http://english-club.tv – клуб изучения английского языка.