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АНГЛИЙСКИЙ ЯЗЫК

практикум

для студентов 1 курса специальности 6-05-1042-01

Транспортная логистика заочной формы получения высшего образования

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Данный практикум по английскому языку предназначен для студентов 1 курса специальности 6-05-1042-01 Транспортная логистика заочной формы получения высшего образования. Целью практикума является расширение активного и пассивного словарного запаса обучающихся в процессе самостоятельного изучения иностранного языка общетехнической направленности.

Практикум состоит из трех частей: первая часть представляет собой курс, состоящий из 6 разделов, которые включают тексты и задания, направленные на освоение общетехнической лексики, изучение лексических и грамматических явлений, характерных для научно-технической литературы; развитие навыков письменной и устной речи. Вторая часть включает аутентичные англоязычные тексты для дополнительного чтения и перевода; в третьей части представлен краткий грамматический справочник, который охватывает материал, изучаемый на первом курсе.

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CONTENTS

Unit One	4
Unit Two	9
Unit Three	14
Unit Four	18
Unit Five	24
Unit Six	29
Supplementary reading	34
Грамматический справочник	45
Список использованных источников	72

Unit One

1. Mind the new words and expressions.

1. to assess – оценивать
2. domestication – одомашнивание (животных), приручение
3. emergence – выход; появление
4. emergency – чрезвычайное положение; авария
5. to follow – следовать за
6. hazardous – опасный, рискованный
7. lane – полоса движения
8. to maintain – поддерживать, обслуживать
9. maintenance – содержание и техническое обслуживание; уход; текущий ремонт
10. macadam – щебень
11. onwards – далее
12. pan-continental – пан-континентальный
13. to pave – мостить
14. to span – протянуться
15. stagecoach – дилижанс, почтовая карета
16. strip (air strip) – полоса (взлетно-посадочная полоса)
17. toll – пошлина, сбор, плата за проезд
18. trail – тропа, дорожка, след, временный путь
19. turnpike – главная магистраль; платная автодорога

2. Match the word or word combination with the appropriate definition. Translate into Russian.

road, transport system, a means of transportation, to transport, roadworks

1. any vehicle that you can travel in or on or use to carry goods in
2. take or carry people or goods from one place to another using a vehicle
3. a facility consisting of the means and equipment necessary for the movement of passengers or goods
4. a long, hard surface built for vehicles to travel along
5. building or repair work on a road

2a. Fill in the gaps with the word or word combination from the task 2. Translate the sentences into Russian.

1. Bicycles are a cheap _____ and also keep you fit.
2. They hired a large lorry _____ their furniture to their new house.
3. The _____ _____ in my country needs a lot of improvement.
4. Shakira waved to her mum as the bus drove off down the _____.
5. The _____ were causing long delays for people travelling to work.

3. Read the text and translate it into Russian.

Two major modes are composing the land transport system, roads and railways. Obviously, roads were established first, as rail technology only became available by the 18th century, in the midst of the industrial revolution. Historical considerations are important in assessing the structure of current land transportation networks. Modern roads tend to follow the structure established by previous roads, as it was the case for the modern European road network (especially in Italy, France and Britain) that follows the structure established by the Roman road network centuries before.

The first land roads took their origins from trails which were generally used to move from one hunting territory to another. With the emergence of the first forms of nation-states trails started to be used for commercial purposes as trade expanded and some became roads, especially through the domestication of animals such as horses, mules and camels. The use of wheeled vehicles encouraged construction of better roads. However, a road transport system requires a level of labor organization and administrative control that could only be provided by a central government offering some military protection over trade routes.

By 3,000 BC the first road systems appeared in Mesopotamia and asphalt was used to pave roads in Babylon by 625 BC. The Persian Empire had a road of 2,300 km in the 5th century BC. However, the first major road system was established by the Roman Empire from 300 BC and onwards, mainly for economic, military and administrative reasons. It relied on solid road engineering methods, including the laying of foundations and the construction of bridges. This was also linked with the establishment of pan-continental trading routes, such as the Silk Road, linking Europe and Asia by 100 BC.

Following the fall of the Roman Empire in the 5th century, integrated road transportation fell out of favor as most roads were locally constructed and maintained. Because of the lack of maintenance of many road segments, land transport became a very hazardous activity. It is not until the creation of modern nation-states in the 17th century that national road transportation systems were formally established. The French, through central government efforts, build their Royal Roads system spanning 24,000 km, over which a public transport service of stagecoaches carrying passengers and mail was established. The British, mainly through private efforts, built a 32,000 km system of turnpikes where tolls have to be paid for road usage. A similar initiative was undertaken in the United States in the 19th century and by the early 20th century, a network of 3 million km of roads, most unpaved, was in operation. 1794 marks the beginning of modern road transportation with the first mail coach service between London and Bristol, operating under a timetable.

Also of high significance were technological innovations in road engineering that permitted the construction of reliable and low cost hard surface roads. One such achievement came from the Scottish engineer McAdam who developed a process where hard and waterproof road surfaces were made by cemented crushed stone, bound together either with water or with bitumen. It provided a cheaper, durable, smooth and non-slippery pavement, which considerably improved the reliability and the travel speed on roads. Many roads could be used year round.

Road development accelerated in the first half of the 20th century. By the 1920s, the first all-weather transcontinental highway, the Lincoln Highway, spanned over 5,300 km

between New York and San Francisco. The Germans were however the first to build the modern highway (autobahn) in 1932 with specifications such as restricted access and road separation.

The post-World War Two era represented a period of rapid expansion of road transportation networks worldwide. The most remarkable achievement is without doubt the American Interstate highway system initiated in 1956. Its strategic purpose was to provide a national road system servicing the American economy and also able to support troop movements and act as air strips in case of an emergency. Overall, about 70,000 km of four-lane and six-lane highways were constructed, linking all major American cities, coast to coast. By the 1970s, every modern nation has constructed a national highway system, which in the case of Western Europe resulted in a pan-European system. This trend now takes place in many industrializing countries. For instance, China is building a national highway system that expanded to 25,000 km, with construction taking place at a pace of about 2,000 km per year.

4. Answer the following questions. Translate your answers into Russian.

1. When did trails start to be used for commercial purposes?
2. When and where did the first road system appear?
3. Why did land transport become a very hazardous activity in the 5th century?
4. What were technological innovations of high significance?
5. When did road development accelerate?
6. Every modern nation has constructed a national highway system by the 1970s, hasn't it?

5. Substitute the words in Russian with their appropriate equivalents in English. Then translate the sentences from English into Russian.

1. (Вслед за падением) of the Roman Empire, (объединенные дорожные перевозки) fell out of favor as most roads were locally constructed and maintained.
2. The American (федеральная система скоростных автострад) was to provide a national road system servicing the American economy and also able to (поддерживать) troop movements and act as (взлетная полоса) (в экстренных случаях).
3. The use of (колесных транспортных средств) encouraged construction of better roads.
4. By the 1920s, the first (всепогодное) transcontinental (шоссе) spanned over 5,300 km between New York and San Francisco.
5. (Дорожная транспортная система) requires a level of (организация труда) and administrative control that could be (обеспечено) by a central (правительством) offering some military protection over (торговые пути).
6. The first road systems (появились) in Mesopotamia and asphalt was used (для того, чтобы мостить дороги) in Babylon by 625 BC.
7. Technological innovations in (дорожная техника) permitted the construction of (надежный) and (с низкой себестоимостью) (дороги с твердым покрытием).
8. The Germans were the first to build the modern highway (autobahn) in 1932 with specifications such as (ограниченный доступ) and (разделение дорог).
9. Overall, about 70,000 km of (4-х полосных) (магистралей) were constructed, linking all major American cities, coast to coast.

10. Historical considerations are important (при оценке) the structure of (современная сеть наземных перевозок).

11. The Scottish engineer McAdam (разработал) a process which considerably improved the (надежность) and the (скорость передвижения) on roads and provided a cheaper, durable, (гладкий) and (не скользкую мостовую).

6. Fill in the blanks with the suitable prepositions. Translate the sentences into Russian.

1. The most remarkable achievement is ___ doubt the American Interstate highway system initiated ___ 1956.

2. 1794 marks the beginning ___ modern road transportation with the first mail coach service ___ London and Bristol, operating ___ a timetable.

3. The first land roads took their origins ___ trails which were generally used to move ___ one hunting territory ___ another.

4. The first major road system was established ___ the Roman Empire and it relied ___ solid road engineering methods, including the laying ___ foundations and the construction ___ bridges.

5. The Scottish engineer McAdam developed a process where hard and waterproof road surfaces were made ___ cemented crushed stone, bound together either ___ water or ___ bitumen.

7. Translate the following sentences into Russian. Mind the use of the participles.

1. Cars and trucks have improved in numerous respects, becoming far more reliable, safer and less polluting.

2. Being an engine of commerce, the logistics industry is fueled by the health of the overall economy.

3. Transport companies earn money being engaged in freight transportation instead of writing the accompanying documents.

4. Goods in lots which are too small for the traditional bulk transport can be moved using containers.

5. Indices showing cost developments for different kinds of road transport have to be published regularly.

6. The 1939 World Fair had exhibits indicating that almost everything in transport would operate automatically.

7. Vehicles travelling on the network include automobiles, bicycles, buses, trains, people and aircraft.

8. Translate the following sentences into Russian. Mind the use of the emphatic constructions.

1. It is not until the creation of modern nation-states in the 17th century that national road transportation systems were formally established.

2. It was in the 1950s that the introduction of containerization gave massive efficiency gains in freight transport, permitting globalization.

3. It is only in recent years that traditional practices have started to be questioned in many places.
4. It is the density of development that depends on mode of transport, with public transport allowing for better special utilization.
5. It is different modes of transport that offer different levels of mobility and accessibility in different circumstances.
6. It is the inertial nature of transportation facility development and urban structure adjustments that make it difficult to keep up with a population's rapid shifts to motor vehicle.

9. Translate the sentences into Russian. Mind the use of the modal verbs.

1. If EU wants to have an integrated and prosperous economy, it has to build up an effective transport system.
2. An international haulage is characterized by the use of the so-called quota system meaning that haulers have to obtain the permit to be able to undertake international journeys.
3. Individual public transport users must be prepared to change buses.
4. Transport may not be the top energy-consuming sector but it still eats up a massive 30% of EC energy budgets.
5. Drastic measures should be taken to reduce the rate of 50,000 dead and 1,500,000 injured on European roads every year.
6. A set of high standard rules to protect the environment should be implemented for emissions, noise, clean engines, clean fuels, energy consumption, etc.
7. Small investments in the structure of some East European ports could improve the transport potential between East and West.
8. Enterprises that move freight to commercial facilities such as factories, stores and warehouses usually need to operate in coordination with operations and resource availability at receiving locations.

10. Give the main points of the text. Use the following clichés:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that... .
3. Then the author writes (*states, thinks, notes*) that
4. Further the author says (*states, thinks, notes*) that
5. In conclusion the author states (*writes, thinks, notes*) that
6. I find the text very/*rather* interesting (*important, useful, informative*) because.....

Unit Two

1. Mind the new words and expressions.

1. agreement – соглашение, договор
2. allocation – размещение, распределение
3. authorization – санкционирование, разрешение
4. charge – расходы, издержки, налог, сбор
5. coach – пассажирский автобус, вагон
6. to codify – систематизировать
7. to comply – выполнять, осуществлять
8. crucial – наиболее значительный, важный
9. distorting – искажающий, деформирующий
10. to exercise – использовать, осуществлять, проявлять, применять
11. flexibility – гибкость
12. to hamper – препятствовать, мешать
13. haulage – перевозка, транспортировка
14. impact – сильное воздействие, удар, толчок
15. legislation – законодательство
16. levy (v, n) – сбор, взимание пошлин, налогов
17. saturation – насыщение
18. to settle – регулировать, устанавливать
19. to strive – бороться, прилагать усилия
20. taxation – налогообложение, размер налога
21. toll (v, n) – пошлина, облагать платой за перевозку

2. Match the word or word combination with the appropriate definition. Translate into Russian.

journey, public transport, infrastructure, private transport, vehicle, traffic

1. a system of vehicles such as buses and trains that operate at regular times on fixed routes, charge set fares and are used by the public
2. means of transport that are not available for use by the general public such as your own car
3. the vehicles, pedestrians, ships, or planes moving along a route
4. the basic systems and services, such as transportation and power supplies, that a country or organization uses in order to work effectively
5. the act of travelling from one place to another, especially in a vehicle
6. a machine, usually with wheels and an engine, used for taking people or goods from one place to another, especially on roads

2a. Fill in the gaps with the word or word combination from task 2 in an appropriate form. Translate the sentences into Russian.

1. It's much cheaper to use ___ ___ in the city than drive a car.
2. Most people prefer to use ___ ___ to public transport as it makes them more independent.
3. There was a lot of ___ on the roads this morning.
4. The earthquake caused serious damage to the area's transport ___.
5. The train ___ took them through beautiful countryside.
6. Three ___ were involved in the accidents near my house.

3. Read the text and translate it into Russian.

Day and night, hundreds of thousands of lorries travel across main transport arteries of different countries. This mode of transport has two major and obvious advantages: its flexibility and its ability to carry goods and passengers door-to-door. This is the reason why many transportation companies clearly prefer the road network to distribute their products throughout the countries of European Union.

Road transport is clearly an important factor underpinning the development of the European internal market. The more this market opens up and becomes unified, the more the sector benefits in terms of its own growth.

Every operator in the sector has the right to settle and freely exercise his activities throughout the Union. The specific rules governing European road transport, in particular with regard to taxation and charges, tolls and levies for the use of infrastructure, are made up by distinct national legislations. This regulatory mosaic is composed of numerous elements with unequal costs, distorting competition. It prevents the optimum allocation of resources and hampers competitiveness in this area of economic activity. The overall aim of the EU rules worked out in this sector is to strive for clarity and open up the market in a balanced manner to the benefit of a large number of transport operators.

The road haulage sector is the victim of its own success. Its steady growth — together, of course, with that of car traffic — contributes to the increasingly frequent saturation of the capacity of Europe's roads. The need to share infrastructure with other road users also raises the important question of road safety. Another consequence of fundamental importance for the community is the impact on the environment, in particular in connection with greenhouse gas emissions and climate change. It is not that freight carried by road, using diesel, which is not the most polluting fuel, is the central element of this problem, but the ever-growing number of vehicles operating in European road transport, now over 20 million, is undeniably a contributing factor.

The sector of passenger transport by road shares with the road haulage sector a number of identical rights and obligations: freedom of establishment, access to the market, compliance with conditions of competition, vehicle safety and safe driving. Consequently, many EU rules applying to lorries also concern buses and coaches. Their modal share is limited to approximately 9 % of overall passenger transport (including cars, railways and air traffic). A significant percentage of these is made up of vehicles used for urban or interurban transport that are operated by transport companies under the supervision of the public authorities.

In a sector where safety is of crucial importance, the authorities systematized and simplified the common administration procedures relating to various passenger transport scenarios: national authorization for regular services, possession of a contract for specific regular services (school transport, personnel transport, etc.), holding a road map for occasional services and a certificate for own-account services.

The Interbus agreement is a key instrument for liberalizing the important passenger road transport market between the Union and the countries of central and Eastern Europe. The agreement comprises social, fiscal and technical measures based on non-discrimination among the various contracting parties. It governs not only traffic between the EU and nonmember countries but also among the nonmember countries themselves. As such, it is a major step towards harmonising, within the Europe the rules and procedures which transport operators have to comply with.

Road transport plays a direct role in developing the European internal market. Moreover road transport also has to meet challenges connected with its success: network safety and saturation impact on the environment. The future of road haulage should therefore be viewed in the framework of an overall medium-term vision of the Union's transport policy.

4. Answer the following questions. Translate your answers into Russian.

1. What are the major advantages of lorries?
2. What problems does the road sector have?
3. What procedures has the Union systematized?
4. What is the Interbus agreement?
5. What challenges does road transport have to meet?

5. Substitute the words in Russian with their appropriate equivalents in English. Translate the sentences from English into Russian.

1. The steady growth of (сектора дорожных перевозок) contributes to the (насыщенность) of the capacity of European roads.
2. The authorities (систематизировал) and simplified the (обычные) administration procedures in a sector where (безопасность) is of (чрезвычайно важна)
3. The specific (правила) governing European road transport include (налогообложение) and charges, (пошлины) and (сборы) for the use of infrastructure.
4. Many (правила) applying to (грузовики) also concern buses and (пассажирские автобусы).
5. The ever-growing number of (транспортные средства) operating in European road transport, now over 20 million, is a contributing factor of the (воздействие) on the (окружающая среда), in particular in connection with (парниковый) gas (выбросы) and climate (изменение).
6. The Interbus (соглашение) comprises social, (финансовые и технические меры) based on nondiscrimination among the various (договаривающиеся стороны), it is a major step towards harmonizing, within the Europe (правила и процедуры) which transport operators have to (выполнять).

7. The sector of (пассажирский транспорт) by road shares with the road (перевозки) sector a number of identical (права и обязательства): (доступ) to the market, (безопасность транспортного средства) and (безопасное вождение).
8. The need to (делить) infrastructure with other road (пользователи) raises the important question of (дорожная безопасность).

6. Fill in the blanks with the suitable prepositions. Translate the sentences from English into Russian.

1. The aim of the EU rules worked ___ in this sector has been to strive ___ clarity and open up the market in a balanced manner to the benefit ___ a large number of transport operators.
2. Day and night, hundreds of thousands ___ lorries travel ___ main arteries of many countries.
3. Road transport has the capacity ___ carrying goods door ___ door.
4. The Interbus agreement is a key instrument ___ liberalizing the important passenger road transport market ___ the Union and the countries ___ central and Eastern Europe.
5. This agreement governs not only traffic ___ the EU and non-member countries but also ___ the non-member countries themselves.
6. The Interbus agreement is a major step ___ harmonising, ___ the Europe the rules and procedures which transport operators have to comply with.
7. The modal share ___ EU rules is limited to approximately 9 % ___ overall passenger transport (including cars, railways and air traffic).
- 8 The need to share infrastructure ___ other road users raises the important question ___ road safety.
9. A significant percentage ___ overall passenger transport is made up ___ vehicles used ___ urban or inter-urban transport that are operated ___ transport companies ___ the supervision ___ the public authorities.
10. Many companies prefer the road network to distribute their products ___ the Union.

7. Translate the following sentences into Russian. Mind the use of the modal verbs.

1. Quality assurance must be built into the system, deviations must be defected and corrected before the consignee recognizes the problem, not afterwards.
2. The transport operator has to be able to predict and keep to time windows at both pick-up and delivery locations.
3. The transport market may be characterized as a highly regulated market with primitive mechanisms to match supply and demand.
4. There is little information on how road users might respond to a complex structure of charges and hence how effective a complex system might be.
5. In order to know where you need to get to, you must know where you were presently situated.
6. The challenge is to develop a masterplan on road transport, containing an overall vision on what should be achieved and how it should be achieved.
7. The shift from private car to public transport can be encouraged by a more efficient and comfortable transport system.
8. The role of the taxi in avoiding traffic jams should and could be enlarged.

8. Translate the following sentences into Russian. Mind the use of the passive voice.

1. Changes in the supply of transport services are affected by human technologies, customer demand and external cost.
2. Many characteristics of transport demand are influenced by a multitude of simultaneously occurring tendencies.
3. In Helsinki the road dust problem is mainly blamed on winter sanding and has been addressed since the 1980s.
4. Transport and transporters are influenced by the changes in political and public opinion, by the rapid development of telecommunications and so on.
5. The capacity of existing European waterways is not fully utilized.
6. The need for sustainable mobility and alternative land use policies has recently been recognized.
7. For some agro industries the cost of the raw material waiting at the reception area is affected by the deterioration of the perishable products transported by trucks.

9. Give the main points of the text in 4-7 sentences. Use the following clichés:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that
3. Then the author writes (*states, thinks, notes*) that ...
4. Further the author says (*states, thinks, notes*) that ...
5. In conclusion the author states (*writes, thinks, notes*) that ...
6. I find the text very/*rather* interesting (*important, useful, informative*) because...

Unit Three

1. Mind the new words and expressions

1. bus occupancy – загруженность (вместимость) автобуса
2. clamp (v, n) – фиксировать, зажим
3. congestion – затор, пробка на дороге
4. flat fee – фиксированная оплата
5. fine – штраф, плата
6. fossil fuel – ископаемое топливо
7. enforcement – принудительное применение закона
8. net revenue – чистый годовой доход
9. persistent – стойкий, постоянный, продолжительный
10. ridership – (ж. д) пассажирские перевозки
11. surveillance – наблюдение
12. to track – следить, прослеживать
13. transponder – ретранслятор, радиомаяк

2. Match the word or word combination with the appropriate definition. Translate into Russian.

traffic jam, lane, congestion, cycle lane, diversion, bus lane

1. a division of a road marked off with painted lines and intended to separate single lines of traffic; a narrow rural road
2. part of a road marked off with painted lines, for use by cyclists cycle lanes in our towns and cities.
3. part of a road marked off with painted lines, for use by buses
4. a line of vehicles moving very slowly or not at all
5. the state of being congested
6. a different route used because a road is closed

2a. Fill in the gaps with the word or word combination from task 2 in an appropriate form. Translate the sentences into Russian.

1. I find it quite scary driving in the fast ___ of the motorway.
2. There have been far fewer cyclists killed on the roads since the government introduced ___ in our towns and cities
3. Car drivers are not allowed to use the ___.
4. The ___ was caused by roadworks near the shopping centre.
5. ___ is a serious problem in most cities across the world.
6. The accident closed the road and traffic had to take a two-mile ___ to get into town.

3. Read the text and translate it into Russian.

London's Congestion Charge was introduced on 17 February 2003 with the aims of reducing congestion, improving bus services, improving journey time reliability and improving the efficiency of freight distribution and other services. Drivers entering the center of the city during working hours must pay a flat, once-a-day fee. It is an electronic road pricing system which operates without road-side transponders or on-board units. Vehicles are tracked entering the charged area by video-surveillance cameras, using automatic number plate recognition technology.

The charge not only helps to reduce high traffic flow in the city streets, but also reduces air and noise pollution in the central London area and raises investment funds for London's transport system.

This technology is employed for enforcement in urban and truck charging systems. Drivers entering the charged area between 7 a.m. and 6:30 p.m. Monday to Friday and between 12:00 noon and 6:00 pm Saturday and Sunday must pay £15, in advance or before the end of the day or before midnight on the day you enter the zone. If you forget, you can still pay the fee up to three days later but the price increases to £17.50. You can drive in and out of the congestion zone as many times as you like on the day — you only pay one fee.

Over half a million payments are made each week. Payments may be made by Internet, mobile phone SMS messages or at some petrol stations and shops. On payment, the vehicle's registration number is entered onto a computerized list and cross-checked against the video camera records. Fines are sent out to drivers of cars entering the zone without payment. Persistent non-payers are identified and their vehicles clamped, or in a few extreme cases their vehicles have been crushed.

The impacts of the system were carefully monitored. The main results reported after the first complete year of operation are as follows, and closely in line with the results of the modeling on which the system was designed:

- Congestion within the zone has reduced by 30%, and the volume of traffic within the zone has reduced by 15%;
- Public transport successfully accommodated displaced car users ;
- There were significant improvements to bus services in the zone and more widely throughout London. On the day the congestion charge was introduced in London, 300 extra buses were added to the Central London bus network to give people an alternative to driving and prevent the anticipated chaos. One year later, Livingstone reported that 29,000 more passengers had entered the charging zone by bus during the morning rush hour, compared to a year before. Between 2002 and 2014, the number of private cars coming into the zone fell by 39%;
- Comparative analysis of the many influences on the central London economy suggested that the direct impact of congestion charging on business activity was small;
- Road traffic emissions and fossil fuel consumption in the zone were reduced;
- Traffic entering the charging zone during charging hours was reduced by 18%, and traffic circulating within the zone was reduced by 15% (vehicles with four or more wheels).

As predicted, there were small increases in traffic on the inner ring road, just outside the charging zone, but this was being managed without significant additional congestion. There are no indications of significant increases in traffic outside the charging zone. Improvements

to the bus network made in conjunction with the charging scheme have seen increased ridership both inside the charging zone and more widely. Reduced congestion on the roads enabled more busses to be run with much more reliable journey times. Average bus occupancy increased but over-crowding has been avoided. Most of the net revenues generated by the charge are being invested in bus services. By reducing overall volumes of traffic within the charging zone, and smoothing traffic flows, charging is estimated to be directly responsible for an approximate 12% reduction in emissions of both NO_x and fine particles (PM 10) from road traffic. The reduction in CO₂ emissions from traffic is estimated to be 19%. No significant changes in noise levels have been recorded.

Generally the congestion charge was accepted by the public and by business. The success of the charge resulted in the Mayor proposing to extend the charged area to cover all of central London. The charging system and level of charge stay the same and be applied to a single zone roughly double the size of the present charging area.

4. Answer the following questions. Translate your answers into Russian.

1. Why was London's Congestion Charge introduced?
2. What technology is employed for enforcement in urban and truck charging systems?
3. What were the main results after the first year of charging system operation?
4. How has the ecological situation been improved within the charging zone?
5. What has the success of charge resulted in?

5. Substitute the words in Russian with their appropriate equivalents in English. Translate the sentences from English into Russian.

1. Road (выбросы транспорта) and fossil (потребления топлива) in the zone were reduced.
2. (Водители) entering the center of the city during (в рабочее время) must pay a (фиксированную однодневную плату).
3. Generally the (затор) charge was accepted by the public and by business.
4. The (влияние) of the electronic (система дорожных сборов) were carefully monitored.
5. Vehicles are (отслеживаются) entering the (платная область) by (камеры видео наблюдения) using automatic (технология распознавания номерного знака).
6. Reducing (заторов на дорогах) has enabled more busses to be run with much more (надежный) journey times.
7. No (значительных изменений) in (уровень шума) were recorded.
8. (Затор) and the (интенсивность движения) within the zone (уменьшены).
9. (Штрафы) are sent out to drivers of cars entering the zone (без оплаты).
10. Average (наполняемость автобусов) increased but (переполненность) was avoided.
11. Most of the (чистая прибыль) generated by the charge are being invested in (автобусной службы).
12. By (уменьшения) overall volumes of (движения) within the charging zone, and (сглаживания) traffic (потоков), charging is estimated to be directly (ответственный) for (уменьшение выбросов) from road traffic.

6. Translate the following sentences into Russian. Mind the use of the gerund.

1. For traffic management, there is a great deal of monitoring and an increase in the amount and reliability of information given to users.
2. Varying the charge by distance travelled within the UK ensures that all vehicles contribute equally irrespective of their country of registration or where they last refueled.
3. By easing traditional impediments to the international movement of goods, the TIR system encourages the development of international trade.
4. A market observation system for monitoring the transport market in case of disturbances enabling adequate interventions is needed.
5. There is little scope for reducing the annual tax on vehicle ownership further.
6. The extent of feeling unsafe when using public transport is relatively high.
7. 300 extra buses were added to the Central London bus network to give people an alternative to driving and prevent the anticipated chaos.
8. Whatever the mode of transport, getting round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and stressful activity.

7. Translate the following sentences into Russian. Mind the use of participle II.

1. Air pollution caused by intensive car, lorry and air traffic is finally starting to worry those who are most exposed to it.
2. One of the main measures considered by logistics managers of agro industries with continuous process is related to truck waiting times in the reception area.
3. The total journey time by public transport consists of the time taken to get to or from bus-stop, the waiting time and the time on board the vehicle.
4. 300 extra buses were added to the Central London bus network to give people an alternative to driving and prevent the anticipated chaos.
5. Based on a literature study and laboratory tests, full scale tests should be carried out on existing roads.
6. The investigation carried out is based on the data from the road surface measurements made on stale roads and accidents reported by the police.

8. Give the main points of the text in 4-7 sentences. Use the following clichés:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that... .
3. Then the author writes (*states, thinks, notes*) that
4. Further the author says (*states, thinks, notes*) that
5. In conclusion the author states (*writes, thinks, notes*) that
6. I find the text very/*rather* interesting (*important, useful, informative*) because.....

Unit Four

1. Mind the new words and expressions

1. approach – подход; подъезд
2. avoidance – избежание, уклонение
3. to back – поддерживать, подкреплять
4. collision – столкновение
5. to encourage – поощрять, поддерживать
6. to enforce – обязывать, вводить в действие
7. grade – уровень, степень
8. image-recognition – распознавание изображений
9. interchange – пересечение (дорожно-транспортное)
10. intersection – перекресток, пересечение
11. grade-separated intersection – дорожная развязка в двух уровнях
12. junction – перекресток, пересечение дорог
13. grade junction – пересечение дорог на одном уровне
14. lane – полоса движения;
15. HOV – High Occupancy Vehicle – машина, в которой едут два и более человека, включая водителя
16. obstruction – препятствие, затруднение продвижению
17. offending – нарушающий
18. rush hour – час пик
19. ticket – квитанция за нарушение правил уличного движения
20. to issue ticket – выдать квитанцию
21. time-consuming – отнимающий много времени
22. turnpike road – главная магистраль
23. underpass – подземный переход, тоннель, путепровод
24. overtake – обгонять

2. Match the word or word combination with the appropriate definition. Translate into Russian.

ring road, rush hour, roundabout, transportation, junction, freeway

1. a period at the beginning and end of the working day when large numbers of people are travelling to or from work.
2. a vehicle or system of vehicles, such as buses, trains, etc. for getting from one place to another
3. a road which circles a town or city and enables you to go faster from one point to another.
4. a public road, often with multiple lanes, especially an important road that joins cities or towns together
5. where two roads meet
6. a road junction at which traffic moves in one direction around a central island to reach one of the roads converging on it

2a. Fill in the gaps with the word or word combination from task 2 in an appropriate form. Translate the sentences into Russian.

1. During the ___ ___ the journey may take up to twice as long.
2. What form of ___ are you going to use to get to the airport?
3. I usually take the ___ ___ to visit my brother as the roads through town are always congested.
4. The traffic in the city centre moved slowly but once Raul hit the ___ there was less traffic and he was able to drive much faster.
5. Aksel only just missed the car that pulled out in front of him at the ___.
6. The traffic flowed much better when they replaced the traffic lights with a ___.

3. Read the text and translate it into Russian.

The higher the speed of a vehicle, the more difficult collision avoidance becomes and the greater the damage if a collision does occur. Therefore, many countries of the world limit the maximum speed allowed on their roads. Vehicles are not supposed to be driven at speeds which are higher than the posted maximum.

To enforce speed limits, two approaches are generally employed. In the USA, it is common for the police to patrol the streets and use special equipment (typically a RADAR Gun) to measure the speed of vehicles, and “pull over” any vehicle found to be in violation of the speed limit. In Brazil and some European countries, there are computerized speed-measuring devices spread throughout the city, which will automatically detect speeding drivers and take a photograph of the license plate (or number plate), which is later used for applying and mailing the ticket.

Another mechanism that was developed in Germany is the green wave, which is an indicator that shows the optimal speed to travel for the synchronized green lights along that corridor. This encourages drivers to travel at the posted limit in order to minimize stopping. During business days in most major cities, traffic congestion reaches great intensity at predictable times of the day due to the large number of vehicles using the road at the same time. This phenomenon is called rush hour, although the period of high traffic intensity may exceed one hour.

Some cities adopt policies to reduce rush-hour traffic and pollution and encourage the use of public transportation. For example, in Sao Paulo, Brazil each vehicle has a specific day of the week in which it is forbidden from traveling the roads during rush hour. The day for each vehicle is taken from the license plate number, and this rule is enforced by traffic police and also by hundreds of strategically positioned traffic cameras backed by computerized image-recognition systems that issue tickets to offending drivers.

In the United States and Canada, several expressways have a special lane (called an “HOV Lane” - High Occupancy Vehicle Lane) that can only be used by cars carrying two (some locations-three) or more people, and several cities offer a public telephone service where citizens can arrange rides with others depending on where they live and work. The purpose of these policies is to reduce the number of vehicles on the roads and thus reduce rush-hour traffic intensity. Uncontrolled traffic occurs in the absence of lane markings and traffic control signals. On roads without marked lanes, drivers tend to keep to the

appropriate side if the road is wide enough. Drivers frequently overtake others. Obstructions are not uncommon.

In large cities, moving from one part of the city to another by means of ordinary streets and avenues can be time-consuming since traffic is often slowed by at-grade junctions, tight turns, narrow marked lanes and lack of a minimum speed limit. Therefore, it has become common practice for larger cities to build expressways or freeways, which are large and wide roadways with limited access, that typically run for long distances without at-grade junctions.

The words expressway and freeway have varying meanings in different jurisdictions and in popular use in different places; however, there are two different types of roads used to provide high-speed access across urban areas.

The freeway (in USA usage) or motorway (in UK usage) is a divided multi-lane highway with fully-controlled access and grade-separated intersections (no stops). Some freeways are called expressways, superhighways, or turnpikes, depending on local usage. Access to freeways is fully controlled; entering and leaving the freeway is permitted only at grade-separated interchanges.

The expressway (when the name does not refer to a freeway or motorway) is usually a broad multi-lane avenue, frequently divided, with some grade-level intersections (although usually only where other expressways or arterial roads cross).

Motor vehicle drivers wishing to travel over great distances within the city will usually take the freeways or expressways in order to minimize travel time. When a crossing road is at the same grade as the freeway, a bridge (or, less often, an underpass) will be built for the crossing road. If the freeway is elevated, the crossing road will pass underneath it.

Minimum speed signs are sometimes posted (although increasingly rare) and usually indicate that any vehicle traveling slower than 40 mph (~65 km/h) should indicate a slower speed of travel to other motor vehicles by engaging the vehicle's four-way flashing lights. Alternative slower-than-posted speeds may be in effect, based on the posted speed limit of the highway/freeway.

4. Answer the questions below. Translate your answers into Russian.

1. What approaches are used to enforce speed limits?
2. How do the authorities in Sao Paulo, Brazil reduce rush-hour traffic and pollution?
3. What is HOV Lane?
4. What is difference between freeway and expressway?

5. Replace the words in Russian with their appropriate equivalents in English. Translate the sentences from English into Russian.

1. (Цель) of these policies is to (уменьшить) the number of vehicles on the roads and thus reduce (интенсивность движения в час пик).
2. (Знаки ограничения минимальной скорости) are sometimes posted and usually indicate that any (транспортное средство) traveling slower than 40 mph (~65 km/h) should indicate a slower (скорость) of travel to other motor vehicles by engaging the vehicle's (аварийные огни).

3. In some European countries there are (компьютеризированные устройства измерения скорости) spread throughout the city, which will automatically (определяют) speeding drivers and take a photograph of the (номерной знак) which is later used (для предъявления квитанции).
4. The freeway is a divided (многополостная) highway (с полностью контролируемым доступом) and (с дорожной развязкой в двух уровнях) (no stops).
5. Many countries of the world (ограничивают) the maximum (разрешенная скорость) on their roads.
6. The police patrol the streets and use special (оборудование) to detect any vehicle found to be in (нарушение скоростного режима).
7. Uncontrolled traffic occurs (при отсутствии разметки) and traffic control signals.
8. When a crossing road is (на том же уровне) as the freeway, (мост) or (тоннель, путепровод) will be built for the crossing road.
9. (Зеленая волна) in Germany is an indicator that shows (оптимальная скорость движения) for the synchronized green lights along that corridor.
10. This rule is enforced by traffic police and also by hundreds of (стратегически расположенными) traffic cameras (поддерживаемые) computerized image-recognition systems that (печатает квитанция) to (нарушающим) drivers.
11. (Доступ) to freeways is fully controlled; (въезд и выезд с автострады) is permitted only at grade-separated interchanges.
12. In large cities, moving from one part of the city to another by means of ordinary streets and (проспектами) can be (отнимающим много времени) since traffic is often (замедляется) by at-grade (перекрестках), tight (поворотах), narrow marked lanes and lack of a minimum (ограничение скорости).

6. Fill in the blanks with the appropriate prepositions. Translate the sentences from English into Russian.

1. Several cities offer a public telephone service where citizens can arrange rides ____ others depending ____ where they live and work.
2. Vehicles are not supposed to be driven ____ speeds which are higher than the posted maximum.
3. Freeways are large and wide roadways ____ limited access, that typically run ____ long distances ____ at-grade junctions.
4. Motor vehicle drivers wishing to travel ____ great distances ____ the city will usually take the freeways or expressways in order to minimize travel time.
5. If the freeway is elevated, the crossing road will pass ____ it.
6. ____ business day ____ most cities, traffic congestion reaches great intensity ____ predictable times ____ the day ____ the large number ____ vehicles using the road ____ the same time.
7. In some cities each vehicle has a specific day ____ the week ____ which it is forbidden ____ traveling the roads ____ rush hour.

7. Translate the sentences into Russian, paying attention to the different meanings of 'that'.

1. Distinguishing by vehicle type ensures that the charge relates both to road damage costs and to environmental costs.
2. Manufactures will use EDI (electronic data interchange) to link their distribution more closely with those of internal and external partners.
3. A balance needs to be struck between the requirements of the Customs authorities on the one hand and those of the transport operators on the other.
4. The great disadvantage of the bus is that it must share roads with other vehicle.
5. It is a well-known fact that men in general drive more than women.
6. One of the reasons why the original TIR system had to be modified was that in the early 1960's a new transport technique emerged: the marine container.
7. Transport is such a visible activity and such a politically sensitive one that is important public policy questions.

8. Translate the following sentences into Russian. Mind the use of the infinitive.

1. Vehicles are not supposed to be driven at speeds which are higher than the posted maximum.
2. To enforce speed limits, two approaches are generally employed.
3. This encourages drivers to travel at the posted limit in order to minimize stopping.
4. Some cities adopt policies to reduce rush-hour traffic and pollution and encourage the use of public transportation.
5. The purpose of these policies is to reduce the number of vehicles on the roads and thus reduce rush-hour traffic intensity.
6. The tonnage transported is expected to decrease due to lighter products, and the average distance of transport is expected to increase due to the exploitation of scale economy in production costs.
7. For this traffic information to be of most value it must be accurate, up-to-the minute and communicated immediately to drivers already on the road.
8. The government does not intend the new charge to increase the overall cost of road freight haulage for domestic operators in the UK.

9. Translate the sentences into Russian. Mind the use of the modal verbs.

1. If the developed country wants to have an integrated and prosperous economy, it has to build up an effective transport system.
2. An international haulage is characterized by the use of the so-called quota system meaning that haulers have to obtain the permit to be able to undertake international journeys.
3. Individual public transport users must be prepared to change buses.
4. Transport may not be the top energy-consuming sector but it still eats up a massive 30% of energy budgets.
5. Drastic measures should be taken to reduce the rate of 50,000 dead and 1,500,000 injured on European roads every year.

6. A set of high standard rules to protect the environment should be implemented for emissions, noise, clean engines, clean fuels, energy consumption, etc.
7. Small investments in the structure of some East European ports could improve the transport potential between East and West.
8. Enterprises that move freight to commercial facilities such as factories, stores and warehouses usually need to operate in coordination with operations and resource availability at receiving locations.

10. Give the main points of the text in 4-7 sentences. Use the following cliches:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that... .
3. Then the author writes (*states, thinks, notes*) that
4. Further the author says (*states, thinks, notes*) that
5. In conclusion the author states (*writes, thinks, notes*) that
6. I find the text very/*rather* interesting (*important, useful, informative*) because.....

Unit Five

1. Mind the new words and expressions

1. to account for – объяснять, служить причиной
2. consumption – потребление, расход, издержки, затраты
3. feasible – вероятный, возможный, осуществимый
4. fluid – подвижный, изменчивый, нестабильный
5. to guzzle – потреблять что-либо чрезмерно
6. incentive – стимул, мотив
7. to offset – возмещать, компенсировать
8. particulate – твёрдая частица
9. payout – выплата
10. performance – эксплуатационные характеристики
11. to plug in – подключать, включать в сеть
12. powertrain – силовая передача, трансмиссия
13. regenerative braking –рекуперативное торможение
14. runoff – отходы (промышленные)
15. sprawl – разрастание города (застройка прилегающих территорий)
16. soot – сажа, копоть
17. vehicle fleet – парк транспортных средств

2. Match the word or word combination with the appropriate definition. Translate them into Russian.

traffic, vehicle, unreliable, traffic light, timetable, infrastructure

1. a machine, usually with wheels and an engine, used for taking people or goods from one place to another, especially on roads
2. the vehicles, pedestrians, ships, or planes moving along a route
3. the basic systems and services, such as transportation and power supplies, that a country or organization uses in order to work effectively
4. a set of automatically operated red, amber and green lights for controlling traffic at road junctions and pedestrian crossings
5. a plan of the times when particular events are to take place
6. something or someone that is not trustworthy or efficient

2a. Fill in the gaps with the appropriate word or word combination from the task 2. Translate the sentences into Russian.

1. Three ___ were involved in the accidents near my house.
2. There was a lot of ___ on the roads this morning.
3. The earthquake caused serious damage to the area's transport ___.
4. I have to drive through ten sets of ___ ___ on the way to work and if I'm late, you can be sure they'll all stop on red.

5. Peter's interview was at 9.30 a.m. and the ____ showed that the early train would get him there in plenty of time.
6. Our local bus service is very ____ and is usually running late.

3. Read the text and translate it into Russian.

Transport is a major use of energy, and transport burns most of the world's petroleum. Transportation accounts for 2/3 of all US petroleum consumption.

The transportation sector generates 82 percent of carbon monoxide and 56 percent of NO_x emissions and over one-quarter of total US greenhouse gas emissions. Hydrocarbon fuels also produce carbon dioxide, a greenhouse gas widely thought to be the chief cause of global climate change, and petroleum-powered engines, especially inefficient ones, create air pollution including nitrous oxides and particulates (soot).

Although vehicles in developed countries have been getting cleaner because of environmental regulations, this has been offset by an increase in the number of vehicles and more use of each vehicle.

Other environmental impacts of transport systems include traffic congestion and automobile-oriented urban sprawl, which can consume natural habitat and agricultural lands. Toxic runoff from roads and parking lots can also pollute water supplies and aquatic ecosystems.

Alternative propulsion can reduce pollution. Low pollution fuels may have reduced carbon content, and thereby contribute less in the way of carbon dioxide emissions, and generally have reduced sulfur, since sulfur exhaust is a cause of acid rain. The most popular low-pollution fuels at this time are biofuels: gasoline-ethanol blends and biodiesel. Hydrogen petroleum is an even lower-pollution fuel that produces no carbon dioxide, but producing and storing it economically is currently not feasible. Plug-in hybrids are energy-efficient vehicles that are going to be in the mass production.

Another strategy is to make vehicles more efficient, which reduces pollution and waste by reducing the energy use. Electric vehicles use efficient electric motors, but their range is limited by either the extent of the electric transmission system or by the storage capacity of batteries. Electrified public transport generally uses overhead wires or third rails to transmit electricity to vehicles, and is used for both rail and bus transport. Battery electric vehicles store their electric fuel onboard in a battery pack. Another method is to generate energy using fuel cells, which may eventually be two to five times as efficient as the internal combustion engines currently used in most vehicles. One more effective method is to streamline ground vehicles, which spend up to 75% of their energy on air-resistance, and to reduce their weight.

Regenerative braking is possible in all electric vehicles and recaptures the energy normally lost to braking, and is becoming common in rail vehicles. In internal combustion automobiles and buses, regenerative braking is not possible, unless electric vehicle components are also a part of the powertrain; these are called hybrid electric vehicles.

To achieve real environmental objectives, attention should be focused on all motor vehicles, not just new vehicles. Features such as on board diagnostics systems can monitor engine output, while regular technical inspection reveals if vehicles are well-maintained and operating under optimal conditions.

It takes about ten years for the national vehicle fleet to be renewed. Providing incentives to replace old gas-guzzling vehicles with newer, fuel-efficient models, for instance payouts to scrap old vehicles, would speed up the process of fleet renewal and help reduce carbon gas emissions.

Oil companies are improving their petrol and diesel products, such as lowering sulfur content, to increase fuel efficiency, comply with the new environmental regulations and respond to new developments in engine technology. Alternative fuels such as natural gas produce lower CO₂ emissions. On the other hand, some experts think that plant-based fuels may not provide the answer to CO₂ emissions because of their negative overall energy and environmental performance from cultivation to final use. Motor vehicles achieve optimal performance where traffic flow is most fluid.

Ways of improving traffic fluidity, reducing congestion and hence lowering fuel consumption are:

- building new road infrastructure where necessary;
- improving current infrastructure;
- installing road signs providing both directions and information on the road network to allow tourists to choose the best route.

In the United States, for example, Intelligent Transport Systems (ITS) are being installed in 75 of the largest urban areas, an investment that should help reduce journey times by 15%.

Shifting travel from automobiles to well-utilized public transport can reduce energy consumption and traffic congestion. Walking and bicycling instead of traveling by motorized means also reduces the consumption of fossil fuels. While the use of these two modes generally declines as a given area becomes wealthier, there are some countries (including Denmark, Netherlands, Japan and parts of Germany, Finland and Belgium) where bicycling comprises a significant share of trips. Some cities with particularly high modal shares of cycling are Copenhagen (33%) and Groningen (50%). A number of other cities, including London, Paris, New York, Sydney, Bogota, Chicago and San Francisco are creating networks of bicycle lanes and bicycle paths, but the value of such devices for utility cycling is highly controversial.

4. Answer the following questions. Translate your answers into Russian.

1. What are the major environmental impacts of transport system?
2. How can pollution be reduced?
3. What are the most popular low-pollution fuels?
4. What is the most effective way to generate energy?
5. How can real environmental objectives be achieved?
6. What are the major ways of improving traffic fluidity?

5. Substitute the words in Russian with their appropriate equivalents in English. Translate the sentences from English into Russian.

1. Shifting travel from automobiles to well-utilized public transport can reduce (потребление энергии) and (пробки на дорогах).

2. Although vehicles in (развитых странах) have been getting cleaner because of (нормативы по окружающей среде), this has been (компенсировать) by an (увеличение) in the number of vehicles.
3. Ways of improving (подвижность трафика), (уменьшение заторов) and lowering (потребление топлива) include building new (дорожная инфраструктура), (улучшение) current infrastructure and (установка дорожных знаков).
4. (Характеристики) such as on board diagnostics systems can (контролировать) (КПД двигателя).
5. (Нефтяные) companies are (улучшают) their (бензиновый) and diesel products, such as (снижение содержания серы), to (увеличить эффективность топлива) and respond to new (разработки) in engine technology.
6. Hydrocarbon (топливо) produce carbon dioxide, a (парниковый газ) thought to be the main (причина) of (глобальное изменение климата), and (бензиновые двигатели) create (загрязнение воздуха).
7. (Для достижения) real environmental (целей), (внимание) should focus on all (моторные транспортные средства), not just new vehicles.
8. Motor vehicles achieve optimal (эксплуатационных характеристик) where (транспортный поток) is most (оживленный).

6. Fill in the blanks with the appropriate prepositions. Translate the sentences from English into Russian.

1. To achieve real environmental objectives, attention should be focused ___ all motor vehicles.
2. Regular technical inspection reveals if vehicles are well-maintained and operating ___ optimal conditions.
3. Electric vehicles use efficient electric motors, but their range is limited ___ either the extent ___ the electric transmission system or ___ the storage capacity ___ batteries.
4. Toxic runoff ___ roads can pollute aquatic ecosystems.
5. It takes ___ ten years ___ the national vehicle fleet to be renewed.
6. Installing road signs providing both directions and information ___ the road network allows tourists to choose the best route.
7. Shifting travel ___ automobiles ___ well-utilized public transport can reduce energy consumption and traffic congestion.
8. A number ___ cities are creating networks ___ bicycle lanes, but the value ___ such devices ___ utility cycling is highly controversial.

7. Translate the following sentences into Russian. Mind the use of the participle.

1. All papers mentioned provided valuable insight into the car rental business.
2. The costs of idle drivers and wasted fuel of the trucks while waiting in the lines are all important, but in second place if compared to the storage costs.
3. Changes in the manufacturing flow process lead to shorter cycle times, meaning improved responsiveness and efficiency of demand to customers.
4. Increasing volumes of traffic mean an increased safety risk.

5. The form of public transport chosen by the individual passenger depends on comfort, information and personal general preference for the form of transport.
6. The longer the journey time, the greater the disadvantage which passengers experience when changing buses.
7. Obviously, this deterioration is most marked in highly industrialized and densely populated areas.

8. Translate the following sentences into Russian. Mind the use of the passive voice.

1. In mass production industries, most of the production plans are based on the estimation of market demand.
2. The project, Noise Innovation Program is being carried out by the Dutch Road Laboratory, which is expected to cost 55 million euro.
3. Importance is placed on making use of each other's' expertise and special equipment.
4. Voices are now heard calling for a significant and lasting way to reduce the consumption of energy by transport.
5. Transport is not viewed in isolation, but is closely linked with policies including those covering the environment, energy and safety.
6. Most seaport, inland waterways and pipelines networks are designed and realized specifically for movement of freight.
7. A comparison has been made between the transportation of containers by rail in the US and in Europe.

9. Translate the following sentences into Russian. Mind the use of the compound prepositions and conjunctions.

1. Both passenger and goods transport have rapidly increased in the past years.
2. The poor state of road equipment, which has clearly been a cause of accidents, is not at all acceptable either in social or economic terms.
3. The management of car deployment is highly complex due to the connection of car availability across time, the station network and different car groups.
4. It is neither possible nor rational to develop a public transport system where all passengers can travel from door-to-door without exchanging buses.
5. Traffic signs and management systems are deteriorating due to intensive use, in part through damage and by poor maintenance.
6. A corporate station operates by means of staff and cars that are both part of the car rental company.

10. Give the main points of the text in 4-7 sentences. Use the following clichés:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that... .
3. Then the author writes (*states, thinks, notes*) that
4. Further the author says (*states, thinks, notes*) that
5. In conclusion the author states (*writes, thinks, notes*) that
6. I find the text very/*rather* interesting (*important, useful, informative*) because.....

Unit Six

1. Mind the new words and expressions.

1. adverse – неблагоприятный, вредный
2. to affect – наносить вред, влиять
3. to cancel out – свести на нет
4. constraint – ограничение
5. to drive apart – отдалять друг от друга
6. hazardous – опасный, рискованный
7. to hinder – мешать, препятствовать, задерживать, затруднять
8. intersection – перекресток, пересечение
9. log-jam – узкое место
10. node – узел, узловая точка
11. to play down – преуменьшать, умалять
12. relevant – существенный, важный
13. substantial – существенный, важный, значительный
14. smoothing – сглаживание, выравнивание
15. threshold – порог; ворота, вход
16. throughput – пропускная способность

2. Match the word or word combination with the appropriate definition. Translate into Russian.

speed limit, bottleneck, bus service, car crash, speed camera, bus route

1. a place where a road becomes narrow or a place where there is often a lot of traffic, causing the traffic to slow down or stop
2. the fastest rate at which you are allowed to drive in a particular area
3. camera set up by a road to photograph cars exceeding the speed limit
4. a bad incident involving vehicles that happens unexpectedly and unintentionally, typically resulting in damage or injury
5. the fixed, regular journey made by a bus
6. a public facility whereby the general public can travel on a bus from one place to another along set routes for a fixed fee

2a. Fill in the gaps with the word or word combination from task 2 in an appropriate form. Translate the sentences into Russian.

1. The roadworks were causing a serious ____ on the main road into town.
2. If you are caught exceeding the ____ ____, you will have to pay a fine.
3. Most drivers slow down when they are approaching a ____ ____.
4. Two people were taken to hospital following the ____ ____ on the freeway.
5. One of the reasons why I decided to move to my new address is because it's on the main ____ ____ into town.
6. There is a good ____ ____ into town from where I live.

3. Read the text and translate it into Russian.

Transport or transportation is the movement of people and goods from one place to another. The term is derived from the Latin *trans* (“across”) and *portare* (“to carry”). Industries which have the business of providing equipment, actual transport, transport of people or goods and services used in transport of goods or people make up a large broad and important sector of most national economies, and are collectively referred to as transport industries.

Transport is more than just another sector of the economy. Transport is the core of society. It gives a structure to space and our concept of space. It shapes and reflects our ways of life and our cultures. It contributes to economic development, whereas the economy depends on goods transportation. The functioning of society largely depends on the quality and design of the transportation system. A defective system will hurt society badly.

The field of transport has several aspects: infrastructure, vehicles, and operations. Infrastructure includes the transport networks (roads, railways, airways, waterways, canals, pipelines, etc.) that are used, as well as the nodes or terminals (such as airports, railway stations, bus stations and seaports).

An automobile is a wheeled passenger vehicle that carries its own motor. Different types of automobiles include cars, buses, trucks, and vans. Some include motorcycles in the category, but cars are the most typical automobiles. As of 2002 there were 590 million passenger cars worldwide (roughly one car for every ten people) of which 170 million in the U.S (roughly one car for every two people).

The automobile was thought of as an environmental improvement over horses when it was first introduced in the 1890s. In 2006, the automobile was recognized as one of the primary sources of world-wide air pollution and a cause of substantial noise pollution and adverse health effects. Because of the much higher densities of people and activities, environmental, economic, public health, social and quality of life considerations and constraints are important in cities.

Urban transport has been led by professional transport planners and traffic experts. This has led in most cities to a substantial overbuilding of the road and supporting infrastructure, which has maximized throughput in terms of the numbers of vehicles and the speeds with which they pass through and move around in the built-up areas. Too much infrastructure and too much smoothing for maximum vehicle throughput means that in many cities there is too much traffic and many - if not all - of the negative impacts that come with it.

The situation is most critical in the urban transport sector. Here, it is not just a matter of constraints on comfort and freedom to choose the means of transport - human safety and even freedom of movement are involved. Although urban networks are neither permanently nor totally log-jammed, congestion is a general phenomenon affecting all types of traffic and means of transport. Traffic jams - now inseparable from the urban scene - complicate the use of cars, buses and trams.

Whatever the mode of transport, getting round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and stressful activity. Congestion is a daily fact on major roads, motorways, and at important traffic intersections. Although statistics shows a fall in accidents, the absolute numbers involved

are still unacceptably high. In reality, the theoretically faster ride on the motorway is frequently cancelled out by congestion. Moreover, safety conditions created to cope with fewer and slower vehicles are inadequate to deal with present conditions. The quality of freight and passenger transportation and the economic function are affected. The most common negative factors here are:

Lack of safety. The safety aspect in transportation is often – and wrongly - played down. It is highly relevant, particularly to road transport. Every year, 50,000 people are killed and a further 1,500, 000 are injured on European roads. The economic cost aside, this is totally unacceptable in human and social terms. Although figures have fallen in the long term, the annual body count is still far too high. The quality of safety on European roads is low.

Noise: Transport is a prime source of noise and vibration. These factors grow fast with traffic volume. In certain areas the noise levels now hinder normal work and living. Hence, instead of uniting people, transport can actually drive them apart. Indeed, it has actually transformed some residential areas into human deserts, particularly where these adjoin major urban arteries, highways, railway lines and airports. The quality of life in dormitory towns is affected.

Traffic density. Paradoxically, above a certain threshold, traffic density also hinders social relations. Very busy roads through villages and built-up areas can make trip hazardous and actually restrict free movement.

4. Answers the following questions. Translate your answers into Russian.

1. What is the origin of the term ‘transportation’?
2. What aspects does the field of transportation have?
3. What is important in cities to help public transport perform properly?
4. What are the main problems of urban transport sector?

5. Substitute the words in Russian with their appropriate equivalents in English. Translate the sentences from English into Russian.

1. (Затор) is a daily fact on major roads, (автомагистралях), and at important traffic (перекрестках).
2. The quality of (безопасности) on many roads of different countries is low.
3. Getting round in certain (городских) areas is becoming an increasingly (отнимающий много времени), difficult, uncomfortable, (опасный) and stressful activity.
4. The (качество) of life in (спальных районах) is affected by.
5. The (качество) of (грузоперевозок) and passenger transportation and the economic function are (наносится вред).
6. The (безопасность) aspect in transportation is highly (существенный) particularly to road transport.
7. In 2006, the automobile (был признан) as one of the primary sources of world-wide (загрязнение воздуха) and a (причина) of (существенное) noise pollution and (вредное влияние на здоровье).
8. Transport is a prime (источник шума) and vibration.

9. (Городские транспортные пробки) - now (неотделимы) from the (городских) scene - (усложняют) the use of cars, buses and trams.
10. In reality the theoretically faster ride on the motorway is frequently (сводится на нет) by congestion.
11. Too much infrastructure and too much smoothing for maximum (пропускной способности автомобилей) means that in many cities there is too much traffic and many negative (воздействия).

6. Fill in the blanks with the appropriate prepositions. Translate the sentences from English into Russian.

1. Transport contributes ___ economic development, as the economy depends ___ good transportation.
2. Very busy roads ___ villages and built-up areas can make trip hazardous.
3. Transport or transportation is the movement ___ people and goods ___ one place ___ another.
4. Traffic jams are now inseparable ___ the urban scene and complicate the use ___ cars, buses and trams.
5. Safety conditions created to cope ___ fewer and slower vehicles are inadequate to deal ___ present conditions.
6. Paradoxically, ___ a certain threshold, traffic density hinders social relations.
7. Congestion is a daily fact ___ major roads, motorways, and ___ important traffic intersections
8. Transport has actually transformed some residential areas ___ human deserts.

7. Translate the sentences into Russian. Mind the use of the verbs in passive voice.

1. The automobile was thought of as an environmental improvement over horses when it was first introduced in the 1890s.
2. In 2006, the automobile was recognized as one of the primary sources of world-wide air pollution and a cause of substantial noise pollution and adverse health effects.
3. Urban transport has been led by professional transport planners and traffic experts.
4. Since 90% of all traffic information is perceived visually, special attention must be paid to the visibility of traffic signs and systems.
5. The term is primarily intended to be used when goods are to be carried by rail or road, but it may be used for any mode of transport.
6. In the 20th century signals were automated, at first with electromechanical devices and later with computers.
7. Transport is affected by international economic shifts, by tourism and by changes in the balance of trade.
8. Incidents or near collisions with other vehicles or objects, or driving off the road are not unusual when mobile phones are used while driving.

8. Translate the following sentences into Russian. Mind the use of the infinitive.

1. High quality road transport is expected to increase while general haulage will decrease.

2. The success of express transport is likely to be more dependent on the quality of the service offered than on speed.
3. Automatic vehicle identification will be used to help track vehicles and shipments.
4. The charge is expected to vary according to distance travelled, vehicle type and road type.
5. In order to reduce the extent of feeling unsafe on journeys by public transport it may be necessary to implement several measures.
6. Competitive efficiency is considered to be in the centre of current transport policy.
7. Driver fatigue or falling asleep is recognized to be among the most important causative factors in road crashes, next to alcohol, speeding and inattention.
8. Buses are believed to be potentially flexible and cost effective method of public transport offering many advantages over rail.

9. Give the main points of the text in 4-7 sentences. Use the following clichés:

1. The text deals with
2. First the author points out (*writes, states, considers, says, describes*) that... .
3. Then the author writes (*states, thinks, notes*) that
4. Further the author says (*states, thinks, notes*) that
5. In conclusion the author states (*writes, thinks, notes*) that
6. I find the text very/*rather* interesting (*important, useful, informative*) because.....

Supplementary Reading

1. Translate the following text into Russian

Road rules and traffic regulations in Belarus

1. All roads in Belarus are divided into two types - national and local. The length of national roads is about 15,500 km, while the length of local roads exceeds 70,000 km. Passenger cars can use all roads in the country free of charge.

2. Additional fees are charged only for the use of certain road sections that are located along the border with other states. For example, a part of the Brest -Minsk road that passes the border of the Russian Federation (M1/E30) is a toll road. The toll ranges from 4 to 15 euro and depends on the type of vehicle.

3. The payment point has a special machine with a barrier. The barrier is lowered automatically immediately after the vehicle has passed it. Therefore, you need to stop, drop coins into the machine and wait until it opens again. The payment can be made in Belarusian or Russian rubles, as well as in euros and U.S. dollars.

4. When it comes to speed limit, the maximum allowed speed in the city is 60 km/h, while on country roads the speed limit is 90 km/h. On highways, the maximum permitted speed is 110 km/h.

5. Motorists with driving experience of less than two years cannot exceed the speed of 70 km/h, even if the type of the road allows developing higher speed. In some cities, the maximum allowed speed in the territory of residential areas is 20 km/h. Of course, in that case drivers will be warned about the limit by appropriate signs.

6. Speed control is carried out by means of cameras and radar, the presence of which is notified by appropriate road signs. Police patrols with radar devices are also frequent guests on local roads. Their mobile stations can be located virtually anywhere, and they change their location several times a day.

2. Translate the following text into Russian

Traffic Control

Nearly all roadways are built with devices meant to control traffic. Most notable to the motorist are those meant to communicate directly with the driver. Broadly, these fall into three categories: signs, signals or pavement markings. They help the driver navigate; they assign the right-of-way at intersections; they indicate laws such as speed limits and parking regulations; they advise of potential hazards; they indicate passing and no passing zones; and otherwise deliver information and to assure traffic is orderly and safe. 200 years ago these devices were signs, nearly all informal. In the late 19th century signals began to appear in big cities at a few highly congested intersections. They were manually operated, and consisted of semaphores, flags or paddles, or in some cases colored electric lights, all modeled on railroad signals. In the 20th century signals were automated, at first with electromechanical devices and later with computers. Signals can be quite

sophisticated: with vehicle embedded in the pavement, the signal can control and coordinate the turning movements of heavy traffic in the most complex of intersections.

In the 1920s traffic engineers learned how to coordinate signals along a thoroughfare to increase its speeds and volumes.

In the 1980s, with computers, similar coordination of whole networks became possible. In the 1920s movement markings were introduced. Initially they were used to indicate the road's centerline.

Soon after they were coded with information to aid motorists in passing safely. Later, with multilane roads they were used to define lanes. Other uses, such as indicating permitted turning movements and pedestrian crossing soon followed.

In the 20th century traffic control devices were standardized. Before then every locality decided on what its devices would look like and where they would be applied. This could be confusing, especially to traffic from outside the locality. In the United States standardization was first taken at the state level, and late in the century at the federal level.

Each country has a Manual of Uniform Traffic Control Devices (MUTCD) and there are efforts to blend them into a worldwide standard. Besides signals, signs and markings, other forms of traffic control are designed and built into the roadway. For instance, curbs and rumble strips can be used to keep traffic in a given lane and median barriers can prevent left turns and even U-turns.

3. Translate the following text into Russian

Cars and trucks are major sources of noise pollution in most cities. Most developed countries have had vehicle noise emission regulations since 1970s. Technological progress in engines and exhaust systems has made these vehicles considerably quieter. For example, the EU allowable noise level of a modern truck is approximately equivalent to that of the typical car in 1970. Nonetheless, the noise created by motorized transportation remains a significant impact on urban residents' health and quality of life. Noise is often cited as the main nuisance in urban areas, and traffic noise is the worst offender (a German study suggests that 65% of the population is adversely affected by road traffic noise, with 25% seriously affected). As an indication, residential property values are measurably lower near noise-producing main roads, highways and railroad tracks.

A recent study of Austrian schoolchildren found that the low but continuous noise of everyday local traffic can cause stress in children and raise blood pressure, heart rates. The research, conducted by US and European researchers, was the first major study of the non-auditory health effects of typical ambient community noise. Besides vehicle engines and exhaust pipes, much of the noise produced by vehicles today, especially in highway operations, results from the movement of vehicles through the air, and the contact of tires with the road. The former can be reduced by aerodynamic vehicle body designs (which also have the effect of improving fuel efficiency and reducing emission). The latter can be reduced through tire thread designs and improvements in pavement surface textures (which also have the effect of draining water more effectively and so reducing the risks of accident).

Noise barriers can also minimize the impact of vehicle noise. Aircraft are another important source of noise. Major airports typically handle hundreds of thousands of aircraft arrivals and departures per year. Most of these aircraft are jet-propelled. In most of

the developed world, increasingly stringent aircraft engine noise regulations have succeeded in reducing the total noise exposure at most large airports. This is much less true, however, for the developing world. In many cases, aircraft that can no longer meet developed-world noise standards are sold to developing world operators and continue their noisy existence.

4. Translate the following text into Russian

Traffic Management System

An advanced traffic management system (TMS) is a context-aware technology that successfully coordinates traffic across city arteries by using real-time data from connected road infrastructure and predictive analytics. This traffic control software and urban wireless connectivity serve as the foundation for implementing an intelligent transportation management system. Today's traffic management systems are under pressure to innovate and become leaner, greener, and more integrated. But what kind of technology is used to create such systems? In this article, we will discuss all you need to know about traffic management system.

What Is an Intelligent Traffic Management System?

An intelligent transportation system (ITS) is an advanced application that seeks to provide new services that relate to various types of transportation and traffic management. This will help users be better informed and use transportation networks in a safer, more coordinated, and "smarter" way. Some of these technologies include alerting emergency personnel in the event of an accident, deploying cameras to police traffic laws, and signs that indicate speed limit changes depending on the situation.

Although the term "advanced intelligent traffic system" can refer to any mode of transportation, the European Union directive 2010/40/EU defined an intelligent traffic system as a system in which information and communication technologies are used in the field of road transport, including infrastructure, vehicles, and users, as well as advanced traffic management and mobility management, as well as interfaces with other modes of transportation.

Furthermore, you can apply ITS to a variety of transport contexts (e.g., road transport, traffic management, mobility, etc.) to increase productivity and security. Furthermore, there has been a worldwide uptake of ITS technology to improve traffic flow and cut travel times.

How Do Traffic Management Systems Work?

Sensors, cameras, cellular routers, and automation are used in these systems to monitor and automatically divert traffic, reducing congestion.

5. Translate the following text into Russian

The primary purpose of traffic control systems is to protect the safety of persons nearby or in traffic. A road system with no traffic controls leads to more accidents and injuries.

Road Traffic Control Systems collect and analyze driving information from nearby vehicles. They also perform optimal traffic signal control in response to the constantly changing road traffic situation and provide useful traffic information to drivers through

analysis of the data obtained. Ensuring smooth traffic flow by reducing vehicle driving time and the number of times vehicles come to a halt will result in benefits such as a reduction in road traffic accidents and a reduction in air pollution, which will contribute significantly to a safe and comfortable road traffic environment.

ITS enables more complex traffic control systems than standard timed traffic lights. Intelligent traffic lights are one control device that uses traffic data collected at the local intersection and future traffic information provided by RSUs to create a dynamic time schedule to maximize traffic flow through an intersection. Variable speed restrictions are another type of control mechanism. These systems work by dynamically adjusting the speed limits of roads based on weather, road conditions, or the presence of congestion regions to reduce traffic density in congested areas. Finally, because traffic in many metropolitan areas is not symmetrical, you can use dynamic lanes to provide more inbound or outbound lanes depending on the traffic flow.

Primary components of the traffic system include the following:

- Road users: this includes drivers, pedestrians, cyclists, and passengers, as well as private and commercial vehicles.
- Street and highways
- Traffic control equipment
- The general environment. The general environment influences traffic activities, but they are difficult to evaluate. Drivers and vehicles are beyond the control of traffic engineers, while roadway and traffic system design controls are important to their professional practice.

6. Translate the following text into Russian

Road traffic management is a logistics industry that deals with traffic from one location to another, arranging and monitoring it in the safest and most effective manner possible. One of the fundamental difficulties of highway traffic management is accommodating traffic in a safe and effective manner in order to reduce or eliminate crashes. There are various types of traffic management used on the highway, depending on its location, function, and length.

The principles of traffic management include:

- Agree on a road hierarchy on which to base future traffic management.
- Reduce the community's exposure to traffic.
- Reduce the environmental impact of commercial vehicles.
- Ensure easy access to property and businesses.
- Make room for pedestrians and bikers.
- Create an intervention policy for the implementation of local area management programs.
- Ensure appropriate data is accessible to consider traffic management concerns properly.
- Make sure to conduct comprehensive consultation while assessing traffic management challenges.
- Offer low-cost traffic management systems.
- Increase access to commercial and recreational facilities while minimizing the impact on local people.

- Align the traffic management policy with the rest of the council's policies.
- Create a foundation for future choices on pending traffic management challenges.
- Set up a system for regular policy reviews.
- Provide a mechanism for coordinating and facilitating the traffic control plan.

The Policy Aims to:

1. Ensure adequate traffic flow and access into and through the Town of Cottesloe that maximizes road safety and local amenity.
2. The establishment of a procedure for carrying out necessary traffic management works in a cost-effective and equitable way.
3. Incorporation of the traffic management policy into the Strategic Plan of the Council

7. Translate the following text into Russian

Roads, streets, and paths are an important part of our communities and are available to everyone. They allow us to move around in order to do what we want or need to accomplish in our lives. To guarantee that this occurs successfully and that traffic on these routes does not harm our communities, the entire system of travelers, vehicles, and travel routes must be carefully regulated. No one would argue against the notion that traffic signals, or traffic management signals, play a crucial role in keeping a large number of people safe. It benefits not only people who ride or drive in various modes of transportation, but also benefits pedestrians who cross the street every day.

Other Importance of Traffic Management Include:

- Promoting the safety of passengers, drivers, and pedestrians.
- Maintaining the order of traffic movement at an intersection.
- It aids in the reduction of the frequency and severity of certain types of accidents.
- Because it instructs drivers and pedestrians when to go and when to halt, it helps keep traffic flowing smoothly. This helps keep things from coming to a dead stop on a daily basis.
- It also reduces the number of accidents and fatalities.

Recently, traffic signals have become unquestionably necessary due to their importance in our daily lives. Traffic control signals are increasingly being employed on construction and industrial sites where there is regular traffic movement. Besides the obvious applications on roads and highways, factories, and even grocery store checkout lanes can all benefit from the incorporation of Traffic Management signals.

In a factory setting, such signals typically contain two or more colors to represent the varying status, process, etc. Typical colors for a 2 status beacon are red/green or red/amber/green for a 3 status beacon. However, this is not set in stone. The signals and colors are frequently set in accordance with requirements from standards such as BS EN 842 and BS EN 981 but are ultimately determined by the end user's application.

8. Translate the following text into Russian

Transport systems are the primary arteries of a country's economy. Many people refer to them as the lifeline of a nation. A well-knit and coordinated transport system has a significant role in sustaining the growth and development of a city and a country. Present-day transport systems comprise several modes, including rail, road, shipping, waterways, and air. That means transport systems must link various routes to make it easier for people to move. The essentials of a good transport system in a city are many.

Affordability represents the relative cost of available transit options compared to the average income of residents. In other words, the monthly transport ticket prices should be low compared to the average monthly income of the user. The best way of ensuring overall urban mobility in a high-density city is to manage the affordability of private transport. That can help control congestion and make the entire transport system sustainable. Relatively high fares mean that public transport is beyond the reach of low-income earners. In such cases, poor people may have to spend up to a fifth of their income on transportation. Furthermore, an expensive transport system may not be sustainable as it may reduce passenger flows and increase the cost of goods.

One of the most crucial features of an efficient transport system is availability. Availability represents the set of indicators that measure the various transit options available to residents in a city. A typical transport system should have dense subways or rail systems in populated areas and road infrastructure in less populated areas. Availability is also crucial because it measures the performance of a transport system to deliver goods and services when needed. It can encourage firms to locate near one another, bring companies closer to their supply chain, reduce commuting times, and reduce living costs. Furthermore, availability means that transit service is within a reasonable distance from where users are and want to be.

9. Translate the following text into Russian

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Efficiency is one of the essential features of the modern transport system in cities. It measures how quickly and reliably it will take for a person to complete a trip either by public or private transport. As transport systems grow, it becomes essential to ensure their efficiency to give users the confidence of having quick and reliable transportation. Efficient transportation systems enable the movement of people and goods while minimising time, cost, and energy.

Convenience is one of the most critical features of transport systems. Convenience complements efficiency to describe the quality of services provided by transport systems in a city. A fundamental consideration for people when choosing to travel is physical comfort. People need to use a modern transport system at any time for all passenger categories. In many situations, an increase in transport convenience helps to reduce the

unit costs of travel and provides benefits equivalent to an increase in travel speed. Comfort starts from the ticketing system, whereby passengers can use an accessible payment system for all types of public transport. It then comes down to transfers to allow people to connect their current transport networks or find metro stations with ease.

Transportation safety is one of the primary characteristics of a transportation system and an essential element of all urban mobility aspects for all people. Security in a transport system reduces fatalities and severe injuries on public roads. Passengers should perceive being safe from crime and traffic while on the road. The security class of a transport system consists of three aspects. These include: Safety from crime, whereby there is staff, police, lighting, visible monitoring, proper layout on the roads, and easily identifiable help points. Safety from accidents, whereby there is visibility or presence of support systems, avoidance of hazards, and active safeguarding.

When a transport system is safe, it can significantly minimise risks, accidents, or injuries and reduce the impacts on the economy.

10. Translate the following text into Russian

Transport systems are the primary arteries of a country's economy. Many people refer to them as the lifeline of a nation. A well-knit and coordinated transport system has a significant role in sustaining the growth and development of a city and a country. Present-day transport systems comprise several modes, including rail, road, shipping, waterways, and air. That means transport systems must link various routes to make it easier for people to move. The essentials of a good transport system in a city are many.

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When a transport system is safe, it can significantly minimise risks, accidents, or injuries and reduce the impacts on the economy.

Arguably, speed is the most critical contributing factor to a sound transport system. Speed determines mobility. It is one of the primary reasons many people prefer using cars to move from Point A to Point B and why cars are faster than other modes of transportation. But in the shortest trips, especially in towns and cities, it becomes quicker to cycle because vehicles tend to move slowly due to the speed limits imposed. For longer distances within urban districts and links between city centres, people prefer using the train or metro to move faster. The increased traffic in most towns means that passengers use public transport to move quickly. But when it comes to road trips, using a car for the journey makes sense. In general, speed is the most decisive factor driving mobility. However, higher speed does not mean people save time. What people gain from more incredible speed travelled is the greater distance travelled. Some of the essentials of a good transport system include affordability, availability, efficiency, convenience, safety, and speed. When a transport system is affordable, it can increase passenger flows and reduce

the cost of goods. A safe transport system minimises fatalities and severe injuries on public roads. But one of the most critical contributing factors to a sound transport system is speed because it helps drive mobility.

11. Translate the following text into Russian

Mobility has always been a fundamental component of the economic and social life of societies. Contemporary economic processes are accompanied by a significant increase in mobility and higher levels of accessibility. A historical perspective on the evolution of transport systems underlines the impacts of technological innovations and how transportation improvements were interdependent with economic, social, and spatial changes. Thus, the current transport systems are the outcome of a long historical evolution marked by periods of rapid changes where new transport technologies were adopted.

Following the industrial revolution in the 19th century, transportation systems were mechanized with the development of steam engine technology, which permitted the setting of networks servicing regions. This process was further expanded in the 20th century with global air transport, container shipping, and telecommunication networks. However, this requires the capacity to manage, support, and expand the mobility of passengers and freight as well as their underlying information flows. Societies have become increasingly dependent on their transport systems to support a wide variety of activities, ranging from commuting, tourism, supplying energy needs, and distributing parts and final goods. Developing transport systems has been a continuous challenge to satisfy mobility needs, support economic development, and participate in the global economy.

The unique purpose of transportation is to overcome space, which is shaped by human and physical constraints such as distance, time, administrative divisions, and topography. In an ideal world, transportation would come at no effort in terms of cost and time with unlimited capacity and spatial reach. Under such circumstances, geography would not matter. However, geography can be a significant constraint to transport in the real world since it trades space for time and money. From the mobility of a person using an automobile or a public transit system to commute to their place of work to the mobility of cargo being shipped across the Pacific as part of an international trade transaction; both are bound to a similar set of constraints.

12. Translate the following text into Russian

The Importance of Transportation

Transport represents one of the most essential human activities worldwide as it allows us to mitigate the constraint of geography. It is an indispensable component of the economy and plays a major role in supporting spatial relations between locations. Transport creates links between regions and economic activities, between people and the rest of the world, generating value. It is composed of core components, which are the modes, infrastructures, networks, and flows. These components are fundamental for transportation, but they also underline that geography remains a salient force shaping transportation despite significant technological, social, and economic changes.

Transport is a multidimensional activity whose importance is:

Historical. Transport modes have played different historical roles in the rise of civilizations (Egypt, Rome, and China), their trading networks, the development of societies, and national defense. As such, transportation offers a valuable perspective to understand historical processes at any scale; from the community to the nation.

Social. Transport modes facilitate access to healthcare, welfare, and cultural events, thus performing a social service. They shape social interactions by favoring or inhibiting the mobility of people. Higher mobility implies the potential for extended social interactions. Transportation thus supports and may even shape social structures.

Economic. The evolution of transport has been linked to economic development. It is an industry in its own right, such as car manufacturing, air transport companies, or railways. The transport sector is also an economic factor in producing goods and services. It contributes to the added value of economic activities, facilitates economies of scale, influences land (real estate) value, and the specialization of regions. Transport is a factor shaping economic activities and is also shaped by them, underlining their reciprocity.

Environmental. Despite the apparent advantages of transport, its environmental impacts are also significant. They include negative impacts on air and water quality, noise level, and public health. All decisions relating to transport need to be evaluated, considering the corresponding environmental costs and how they can be mitigated. Transportation is, therefore, a dominant factor in contemporary environmental issues, including sustainability and decarbonization.

13. Translate the following text into Russian

Today, people spend the majority of their time outside of their home environments, they travel daily to work, and they go frequently to the shopping centers and attractions, without forgetting the displacements to the center of the city. This certainly caused an imbalance in the daily mobility that led to the development of parking services to avoid unnecessary driving around the city center to simply search for a parking space. This, on the one hand, causes additional carbon dioxide emissions and damages the environment of the city's ecosystem. On the other hand, it increases the driver's frustration and traffic congestion in the city, which will certainly cause traffic accidents.

Recently, the cities are growing at an exponential rate due to the changing global economy and modern life. Information and communication technologies play a crucial role in sustainability plans and urban development of cities. New technologies and various smart devices connected to the network (the Internet of things or IoT) provide modern and solid solutions with the aim of creating smart cities and optimizing the efficiency of urban operations and services connected to citizens. Smart cities are used in all areas of life, including medical facilities, industry, hospitals, offices, transport, and parking lots. In recent years, the number of vehicles has increased in a frightening manner which has caused several major problems for the development of cities causing traffic jams, accidents, and even illnesses due to the frustration and stress of the drivers. These problems are due, on the one hand, to poor management of road traffic in cities, especially at road intersections based on traditional traffic light management systems, and, on the other hand, to unnecessary movement of drivers when looking for free parking spaces in congested areas of cars that only injects more traffic into the roads. So, an intelligent and connected system based on the deployment and implementation of wireless sensor

networks (WSNs) at road intersections and also in car parks in order to make roads and cities smarter is being developed. This system is different from existing systems, because it regroups two intelligent systems (the traffic light control system and the intelligent parking system) into a single innovative system in order to connect citizens to roads and parking spaces in their city remotely and in real time using only one mobile application.

14. Translate the following text into Russian

In terms of driving every country has its own rule and regulations and as a foreigner one must always ensure that such rules and regulations are followed to the letter, for your own safety as well as the safety of those around you. Generally in Europe the major road signs comply with the Vienna International Convention, thus foreign citizens that visit The Republic of Belarus from the European Union should already be familiar with road signs and should be able to navigate themselves accordingly.

Nevertheless, there is more to driving in a foreign country than just being familiar with their road signs, one should also take into consideration speed limits, parking, traffic lights, drunk driving (dui offenses) limit amongst other factors. This information is provided to layout the basics of driving in Belarus, things to do and not do, and how to be the perfect driver (or as far as perfection goes) in The Republic of Belarus.

When driving in Belarus the driver must always ensure that they carry the following, important documentations as failure to do so can incur an on the spot fine, such documents are a valid driver's licence and your IDP, proof of ID such as your passport, ownership documents of vehicle and last but not least third party insurance. If you are a foreign citizen you must service your car before driving it and there are specific places that carry out this service. Once the checks are conducted you will be issued a certificate that your car has passed the test and is fit to drive on the roads. All of the above must be original otherwise they will not be accepted as valid forms of documentation which in turn could inhibit ones ability to drive in Belarus but on top of that the chances of getting fined for not adhering to such a rule is high.

15. Translate the following text into Russian

Like many European countries in Belarus driving takes place on the right side of the road and overtaking takes place on the left, therefore for most foreign citizens coming from within Europe this should not be an issue, however for UK citizens this might be somewhat problematic but with extra care and practice it becomes second nature.

Although a common practice when driving, seatbelts must be worn especially for front seat passengers, and by law children under the age of 12 are not permitted to seat in the front and young children are required to have a child seat in the car. It is also important to bear in mind that when travelling by car in Belarus during the bitterly cold winter months that your vehicle is fitted with snow tyres and this is absolutely compulsory and is expected of all drivers.

The traffic lights in Belarus are the same as those used internationally; it is the 3 colour traffic light system. As a driver in Belarus always ensure that you stay within your lane, sometimes the space can be a little bit tight but to avoid collisions and the endless

paperwork and headaches that come with it, it is best to steer within your own line as it is not uncommon for there to be roads with traffic going in the same direction.

Beware of speed limits! In built up areas you are permitted to go up to 60km/h, in residential areas a speed limit of 20km/h stands. The speed limits in the outside built up areas differ, for a car travelling on the motorway you are permitted to go up to 110km/h but it drops slightly to 90km/h on the national roads. Speed needs to be controlled and you need to stay within your limits, there are often traffic police in areas you would least expect and they are there to monitor speed and will stop and fine those that are breaking the rules-so don't be a rule breaker!

16. Translate the following text into Russian

In terms of parking your car in Belarus they have recently introduced parking meters, although these are not yet available at all parking facilities, some are in existence. In some places there are valets on hand who will issue you with a parking ticket manually stating what time you have parked your car and then on your return to pick up your car you will have to pay accordingly. In most shopping centers parking is free. The parking regulations in Belarus are in accordance with the Vienna Conventions on Road Traffic and most if not all European Citizens that are in possession of a driving licence should be familiar with it, as it is the standard set of traffic rules.

Cars that are illegally parked can be and are towed away by police. Fines are recorded and in case you commit the same act again then penalties can be doubled, thus it is best to avoid illegal parking.

Unfortunately in Belarus there are not many designated parking spaces for disabled drivers therefore one has to make do with the spaces that are on hand. In places like the airport(s) and some of the newer shopping centers, disabled parking spaces are available.

Avoid using your car horn as much as possible, the Belarusians do not take to kindly to it as they perceive the use of the horn as being sworn at, it is not a common practice and generally road rage is at a minimum, something that some foreigners might find surprisingly pleasant.

Belarus also has a zero alcohol limit, so do not drink and drive under any circumstances. In some European countries there is some leeway in terms of how much alcohol you can drink and drive but Belarus has zero tolerance and individuals not abiding by this rule could ultimately find themselves spending the night in the comfort of a prison cell, so keep your limits to 0.00%, for further information get in contact with the DUI Law Firm Gainesville Georgia.

ГРАММАТИЧЕСКИЙ СПРАВОЧНИК

Структура простого повествовательного предложения

Простое повествовательное распространенное предложение в английском языке имеет строгий порядок слов. Каждый член предложения занимает определенное место, условно обозначаемое римской цифрой:

I – подлежащее

II – сказуемое

III – прямое дополнение

IIIo – косвенное беспредложное дополнение, которое обычно предшествует прямому дополнению

IV – предложное дополнение или обстоятельство;

0 – обстоятельство, если оно стоит перед дополнением в начале предложения.

I

II

III

IV

[Road transport] [plays] [an important role] [in big cities]

Определение условной цифры не имеет, т.к. оно может входить в состав любой из вышеперечисленных групп. В зависимости от его положения по отношению к слову, которое оно определяет, мы условно называем определение «левым» или «правым».

В именной группе, состоящей из цепочки существительных, не разделенных ни предлогом, ни запятой, последнее слово, как правило, будет являться основным, а все остальные слова будут определениями к основному слову.

Перевод такой группы следует начинать с последнего существительного, а предшествующие слова могут переводиться на русский язык как левыми, так и правыми определениями.

Например:

The road transport – *наземный транспорт;*

The road transport system – *система наземного транспорта;*

Corrosion losses – *потери от коррозии.*

Предложение может начинаться только с групп подлежащего или обстоятельства. Наличие групп **I**, **II** обязательно! Групп **III** и **IV** может не быть.

В зависимости от места в предложении одно и то же слово может быть различным членом предложения.

1. **The speed camera measures the speed of vehicles inside the city.** – *сказуемое (измеряет)*

2. **They took measures to improve the work of the speed cameras.** – *прямое дополнение (меры)*

3. **The measures taken were not enough.** – *подлежащее (меры)*

Признаки сказуемого в предложении

Анализ предложения следует начинать с выделения группы сказуемого. Его признаки:

1. Все формы вспомогательных (*to be, to have, to do*) и модальных глаголов (*can, may, must, ought, shall, will, should, would*).

Это правило, из которого нет исключений!

2. Окончание глагола **-(e)s** в 3-ем лице ед. ч. **Present Simple**. Не путать с окончанием **-(e)s** множественного числа в существительных.

The **result** of his work leaves to be desired. – существительное (мн.ч.) (*результаты*)

His bad work **results in** our lagging behind. – **Present Simple** глагола (*приводит к*)

3. Окончание глаголов – **ed (Past Simple)**, либо II-ая форма неправильных глаголов. Не путать с Participle II (причастие II)!

He **played** a great game. – **Past Simple** (*сыграл*)

The game **played** wasn't honest. – **Participle II** (*сыгранная*)

He **read** this book. – **Past Simple** (*прочитал*)

The book **read** wasn't interesting. – **Participle II** (*прочитанная*)

4. Подлежащее, выраженное личным местоимением.

5. Наречие, стоящее перед сказуемым или после него.

We still leave behind for future generations a beautiful world.

6. Прямое (*беспредложное*) дополнение, которое занимает III место и всегда стоит после группы сказуемого.

The infrastructure plays an important role in bus service.

ПОРЯДОК СЛОВ В ПОВЕСТВОВАТЕЛЬНОМ ПРЕДЛОЖЕНИИ

Повествовательные предложения служат для того, чтобы сообщить что-то собеседнику или читателю. Они содержат утверждение какого-либо факта (повествовательные утвердительные предложения) или отрицание какого-либо факта (повествовательные отрицательные предложения). В английском языке повествовательные предложения имеют твердый порядок слов, т. е. каждый член предложения имеет свое определенное место.

Поскольку место слова определяет его роль в предложении, следует при построении английского предложения располагать слова в строго определенном порядке. Следующий порядок слов является обычным для английского повествовательного предложения:

- 1) подлежащее,
- 2) сказуемое,
- 3) дополнения,
- 4) обстоятельства:

The students (подлежащее) <i>Студенты</i>	carried out (сказуемое) <i>провели</i>	the experiment (дополнение) <i>эксперимент</i>	yesterday. (обстоятельство) <i>вчера.</i>
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Определение не имеет постоянного места в предложении и может стоять при любом члене предложения, выраженном существительным

A steamer of 10,000 tons has arrived at the port. Пароход в 10 000 тонн прибыл в порт.

*We have found an **important** information.* Мы нашли важную информацию.

*They live in a **new** house.* Они живут в новом доме.

Структура общего вопроса

Вспомогательный глагол, модальный глагол	Подлежащее	Сказуемое (или его часть)	Второстепенные члены предложения	Ответ на вопрос
Is	your friend	a student?		Yes, he is.
Are	you	reading	a book now?	No, I am not.
Do	our students	go	to the sportsground?	Yes, they do.
Does	Kate	live	in Minsk?	No, she does not.
Did	you	see	that film yesterday?	No, I did not.
Do	they	have	these devices?	Yes, they do.
Has	his friend	translated	the text?	Yes, he has.
Will	they	go	to the cinema today?	No, they will not.
Must	we	read	newspapers every day?	Yes, we must.

Структура специального вопроса

Вопросительное слово	Вспомогательный глагол, модальный глагол	Подлежащее	Остальная часть сказуемого	Второстепенные члены предложения
Where	do	you	go	every morning?
What	can	one	get	in the library?
What book	did	you	read	yesterday?
What	is	he	doing	now?
Why	were	you	absent	yesterday?
When	do	you	have to leave	for London?
When	will	you	go	to London?

Структура разделительного вопроса

Вопрос	Ответ, выражающий	
	согласие	несогласие
Your friend speaks English, doesn't he?	Yes, he does.	No, he doesn't.
You have finished your work, haven't you?	Yes, I have.	No, I haven't.
Your friend doesn't speak English, does he?	No, he doesn't.	Yes, he does.
You haven't finished your work, have you?	No, I haven't.	Yes, I have.

Структура вопроса к подлежащему или к определению подлежащего

Вопросительное слово- подлежащее или определение подлежащего	Сказуемое	Второстепенные члены предложения
Who	is absent	today?
Whose book	is	on the table?
What	is	on the desk?
What season	comes	after summer?
Who	will go	to the theatre?
Who	saw	the film yesterday?
Who	is speaking?	right now?
Who	has been	to London?

Времена действительного залога

Для выражения времени совершения действия — настоящего, прошедшего и будущего — английский глагол имеет своеобразную систему глагольных времен (Tenses). Глагольные времена делятся на четыре группы:

1. Группа «неопределенных» времен (Indefinite Tenses). Эта группа состоит из настоящего неопределенного времени (Present Indefinite Tense), прошедшего неопределенного времени (Past Indefinite Tense) и будущего неопределенного времени (Future Indefinite Tense):

Present Indefinite	Past Indefinite	Future Indefinite
<i>I write letters every day.</i> Я пишу письма каждый день.	<i>I wrote a letter yesterday.</i> Я писал (написал) письмо вчера.	<i>I will write a letter tomorrow.</i> Я буду писать (напишу) письмо завтра.

Времена группы Indefinite употребляются, в отличие от времен других групп, только для констатации факта совершения действия в настоящем, прошедшем и будущем, без указания на его длительность, законченность и безотносительно к какому-либо другому действию или моменту. В русском языке этим временам соответствуют времена глагола как несовершенного, так и совершенного вида, в зависимости от смысла предложения.

2. Группа «длительных» времен (Continuous Tenses). Эта группа состоит из настоящего длительного времени (Present Continuous Tense), прошедшего длительного времени (Past Continuous Tense) и будущего длительного времени (Future Continuous Tense):

Present Continuous	Past Continuous	Future Continuous
<i>I am writing a letter (at the present moment).</i> Я пишу письмо (в на стоящий момент).	<i>I was writing a letter at five o'clock.</i> Я писал письмо в пять часов.	<i>I will be writing a letter at five o'clock.</i> Я буду писать письмо в пять часов.

Времена группы Continuous употребляются для выражения длительного действия, которое началось до определенного момента в настоящем, прошедшем или будущем и которое все еще совершается, совершалось или будет совершаться в этот момент. Они описывают действие в процессе его совершения, выражая, таким образом, незаконченное длительное действие. В русском языке этим временам соответствуют времена глагола несовершенного вида.

3. Группа «совершенных» времен (Perfect Tenses). Эта группа состоит из настоящего совершенного времени (Present Perfect Tense), прошедшего совершенного времени (Past Perfect Tense) и будущего совершенного времени (Future Perfect Tense):

Present Perfect	Past Perfect	Future Perfect
<i>I have written the letter.</i> Я (уже) написал письмо (к настоящему моменту).	<i>I had written the letter by five o'clock.</i> Я (уже) написал письмо к пяти часам.	<i>I will have written the letter by five o'clock.</i> Я (уже) напишу письмо к пяти часам.

Времена группы Perfect выражают действие, совершенное к определенному моменту в настоящем, прошедшем или будущем. В русском языке этим временам соответствуют времена глагола совершенного или несовершенного вида, в зависимости от смысла предложения.

4. Группа «совершенных длительных» времен (Perfect Continuous Tenses). Эта группа состоит из настоящего совершенного длительного времени (Present Perfect Continuous Tense), прошедшего совершенного длительного времени (Past Perfect Continuous Tense) и будущего совершенного длительного времени (Future Perfect Continuous Tense):

Present Perfect Continuous	Past Perfect Continuous	Future Perfect Continuous
<i>I have been writing the letter for an hour.</i> Я пишу письмо (уже) час.	<i>I had been writing the letter for an hour when he came.</i> Я писал письмо (уже) час, когда он пришел.	<i>I will have been writing the letter for an hour when he comes.</i> Я буду писать письмо (уже) час, когда он придет.

Времена группы Perfect Continuous употребляются для выражения длительного действия, начавшегося до определенного момента в настоящем, прошедшем или будущем и длившегося известный период времени, включая этот момент. Времена этой группы могут выражать длительное действие, продолжавшееся известный период времени и закончившееся непосредственно перед определенным моментом в настоящем, прошедшем или будущем. В русском языке этим временам соответствуют времена глагола несовершенного вида.

Таким образом, английский глагол имеет для выражения настоящего, прошедшего и будущего времени в изъявительном наклонении действительного залога 12 глагольных времен:

https://drive.google.com/open?id=1sH5hfMvb_KzZ3v7x6zcQBH8tsYtvp-5i

Образование времен страдательного залога

1. Если подлежащее обозначает лицо или предмет, совершающий действие, то глагол употребляется в форме действительного залога:

The sun attracts the planets. Солнце притягивает планеты.

Lomonosov discovered the law of conservation of matter. Ломоносов открыл закон сохранения материи.

Если же подлежащее обозначает лицо или предмет, подвергающийся действию со стороны другого лица или предмета, то глагол употребляется в форме страдательного залога:

The planets are attracted by the sun. Планеты притягиваются солнцем.

The law of conservation of matter was discovered by Lomonosov. Закон сохранения материи был открыт Ломоносовым.

2. Времена страдательного залога образуются при помощи вспомогательного глагола **to be** в соответствующем времени и формы причастия прошедшего времени (Past Participle) смыслового глагола. Таким образом, при спряжении глагола в страдательном залоге изменяется только глагол **to be**, смысловой же глагол имеет во всех временах одну и ту же форму — Past Participle. Следовательно, время, в котором стоит глагол в страдательном залоге, определяется формой, в которой стоит вспомогательный глагол **to be**:

https://drive.google.com/open?id=1sH5hfMvb_KzZ3v7x6zCQBH8tsYtvp-5i

При образовании вопросительной формы вспомогательный глагол ставится перед подлежащим: *Was it shown?* Если вспомогательный глагол употребляется в сложной форме (*have been, will have been* и т. д.), то только первый вспомогательный глагол ставится перед подлежащим: *Has it been shown? Will it have been shown?*

При образовании отрицательной формы частица **not** ставится после вспомогательного глагола: *It was not shown.* Если вспомогательный глагол употреблен в сложной форме (*have been, will have been* и т. д.), то частица **not** ставится после первого вспомогательного глагола: *It has not been shown, It will not have been shown.*

МОДАЛЬНЫЕ ГЛАГОЛЫ И ИХ ЭКВИВАЛЕНТЫ

Модальными называются глаголы, которые выражают не действие, а отношение говорящего к действию, выраженному последующим инфинитивом, т.е. возможность, вероятность или необходимость совершения действия. Модальные глаголы имеют следующие особенности:

1. Смысловой глагол стоит после них без частицы **to**:

New technologies must be used.

2. Вопросительную и отрицательную формы образуют без помощи вспомогательного глагола:

Can you solve the problem?

I cannot solve this problem.

3. Не изменяются по лицам и числам.

He } *must complete the work on the road in time.*
They }

4. Не имеют неличных форм: инфинитива, причастия, герундия.

5. Не имеют формы будущего времени, а глагол **must** не имеет и формы прошедшего времени. Для восполнения недостающих форм модальные глаголы имеют равнозначные словосочетания, которые называются эквивалентами модальных глаголов.

Таблица модальных глаголов и их эквивалентов

Модальный глагол	Значение	Present Simple	Past Simple	Эквивалент
can may	возможность, способность совершения действия	can may	could might	to be able (to) to be allowed (to)
must	долженствование, т.е. необходимость совершения действия	must	--	to be (to) to have (to)
ought (to) should	долженствование (для выражения морального долга)	ought (to) should	-- --	-- --

СОГЛАСОВАНИЕ ВРЕМЕН

В английском языке время глагола в придаточном предложении зависит от времени, в котором употреблен глагол в главном предложении. Употребление времен в придаточных предложениях, главным образом дополнительных, подчиняется следующим правилам, называемым правилами последовательности времен:

Если сказуемое главного предложения выражено глаголом в одной из форм настоящего времени (обычно **Present Indefinite** или **Present Perfect**) или будущего времени (обычно **Future Indefinite**), то глагол в придаточном предложении употребляется в любом времени, которое требуется по смыслу:

<i>He knows that</i>	<i>you are busy.</i>	Он знает, что	вы заняты.
	<i>you were busy.</i>		вы были заняты.
	<i>you will be busy.</i>		вы будете заняты.
<i>He has said that</i>	<i>he receives letters from her.</i>	Он сказал, что	он получает от нее письма.
	<i>he has received a letter.</i>		он получил письмо.
	<i>he received a letter yesterday.</i>		он получил письмо вчера.
	<i>he will receive a letter tomorrow.</i>		он получит письмо завтра.
<i>He will think that</i>	<i>you do it.</i>	Он подумает, что	вы это делаете.
	<i>you have done it.</i>		вы это сделали.
	<i>you did it yesterday.</i>		вы это сделали вчера.
	<i>you will do it.</i>		вы это сделаете.

Инфинитив (*the Infinitive*) - это неличная форма глагола, которая называет действие, но не указывает на лицо, число и наклонение. Формальный признак инфинитива - частица **to**, которая в некоторых случаях опускается. В английском языке имеются следующие формы инфинитива:

	Active Voice	Passive Voice
Simple	to use	to be used
Continuous	to be using	-
Perfect	to have used	to have been used
Perfect Continuous	to have been using	-

Перевод инфинитива на русский язык зависит от его функции в предложении. Инфинитив в английском предложении может выполнять следующие функции:

1. **Подлежащего.** Стоит перед сказуемым, переводится на русский язык неопределенной формой глагола или существительным:

To complete this laboratory experiment will not take much time. Завершить этот лабораторный эксперимент не займет много времени.

To build good roads is one of the most important tasks. Строительство хороших дорог - одна из наиболее важных задач.

2. Части сказуемого:

а) именной части составного именного сказуемого после глагола-связки **to be**. Переводится неопределенной формой глагола или существительным:

The task is to keep low pressure. Задача заключается в том, чтобы поддерживать низкое давление.

Another possibility was to use quartz. Другая возможность заключалась в применении кварца.

б) часть составного модального сказуемого после модальных глаголов и их эквивалентов:

The vibration must be eliminated. Вибрацию нужно (следует) устранить.

в) часть составного глагольного сказуемого, после глаголов, обозначающих начало, продолжение или конец действия:

The temperature begins to rise sharply. Температура начинает резко повышаться.

3. Дополнения (простого). Переводится неопределенной формой глагола:

The geologist helped to calculate the stability of the building. Геолог помог рассчитать устойчивость здания.

4. а) **Обстоятельства цели.** Отвечает на вопрос *для чего?; с какой целью?*. Может вводиться союзами **in order (to)**; и **so as (to)** - чтобы; для того чтобы. Переводится на русский язык инфинитивом с союзами *для того чтобы, чтобы* или отглагольным существительным с предлогом *для*.

(In order) to understand the phenomenon the laws of motion should be considered. Чтобы понять это явление (для понимания этого явления), необходимо рассмотреть законы движения.

б) **Обстоятельства следствия.** В этой функции инфинитив соотносится с наречиями **too** - слишком; **enough, sufficiently** - достаточно. Инфинитив имеет модальный оттенок возможности и переводится на русский язык неопределенной формой глагола с союзом *чтобы, для того чтобы* и с добавлением глагола *мочь*:

Some molecules are large enough to be seen in the electron microscope. Некоторые молекулы достаточно большие, что их можно было увидеть через электронный микроскоп.

The foundation is too unstable to install existing machines. Основание слишком неустойчиво, чтобы можно было устанавливать существующее оборудование.

5. Определения, которое стоит после определяемого существительного. Может переводиться на русский язык:

а) существительным (когда инфинитив в активном залоге):

Gases have the ability to become ionized. Газы обладают способностью к ионизации.

б) неопределенной формой глагола (когда инфинитив в активном залоге):

Energy is defined as the capacity to do work. Энергия определяется как способность совершать работу.

в) придаточным определительным предложением (когда инфинитив в страдательном залоге), сказуемое которого имеет оттенок долженствования, возможности или будущего времени:

The apparatus to be assembled is very complicated. Прибор, который нужно (можно) собрать (будут собирать), очень сложный

Примечание:

1. Как определение к порядковым числительным и к прилагательному **last** инфинитив переводится личной формой глагола в том времени, в котором стоит сказуемое английского предложения:

Newton was the first to discover the basic laws of motion. Ньютон первым открыл основные законы движения.

2. Если инфинитив в функции определения выражен глаголом, соответствующий эквивалент которого в русском языке требует после себя предлога, то этот предлог при переводе на русский язык ставится перед союзным словом *который*:

Here are some more figures to be referred to later. Вот еще несколько цифр, на которые будут ссылаться позже.

Сложные обороты с инфинитивом

Сложное дополнение (или Объектный падеж с инфинитивом) (Complex Object)

должно выражать:

1. Мнение, суждение, предположение: (инфинитив с частицей “to”)

to assume – допускать, предполагать,

to believe – думать, полагать, считать,

to consider – считать, полагать,

to declare – заявлять, объявлять,

to expect – думать, полагать, предполагать,

to find – считать, полагать,

to know – считать, полагать,

to prove - доказывать,

to suppose – думать, полагать, предполагать,

to think – думать, полагать, считать.

2. Чувственное восприятие (после них инфинитив стоит без частицы "to"):

to see - видеть,

to hear - слышать,

to feel – чувствовать,

to notice - замечать,

to observe - наблюдать,

to watch - наблюдать.

3. Желание, просьбу, требование, приказание: (инфинитив с частицей "to")

to want – хотеть,

to wish - желать,

to desire - желать,

to like (would/should like) - хотеть,

to require - требовать,

to order – приказывать,

to hate – ненавидеть, не выносить,

to ask – просить.

4. Разрешение, принуждение: : (инфинитив с частицей "to")

to allow – позволять,

to let – позволять (без частицы "to"),

to permit - разрешать,

to enable - позволять,

to cause - заставлять,

to force - заставлять,

to make – заставлять (без частицы "to").

Оборот "сложное дополнение" после глаголов первых трех групп переводится придаточным дополнительным предложением с союзами *что, чтобы, как*. При этом дополнение становится подлежащим, а инфинитив – сказуемым придаточного предложения:

The ancients thought a molecule to be the smallest particle of a substance. Античные ученые думали, что молекула – это наименьшая частица вещества.

During the experiment they saw the temperature fall rapidly. Во время опыта они видели, что (как) температура быстро падала.

We want them to take part in this conference. Мы хотели, чтобы они приняли участие в этой конференции.

При переводе на русский язык оборота "сложное дополнение" после глаголов **to make, to cause, to force**, как правило, сохраняется порядок слов английского предложения.

An increase in temperature makes particles of any substance move more rapidly. Повышение температуры заставляет частицы любого вещества двигаться быстрее.

При переводе оборота "сложное дополнение" после глаголов **to allow, to enable, to permit** можно:

1) сохранить порядок слов английского предложения, если инфинитив имеет форму активного залога:

This enables the scientists to state the laws of planetary motion. Это позволило ученым сформулировать законы движения планет.

2) переводить инфинитив сразу после сказуемого, если он имеет форму страдательного залога:

*This enabled **the laws of planetary motion to be stated.*** Это позволило сформулировать законы движения планет.

Сложное подлежащее (или Именительный падеж с инфинитивом) (Complex Subject)

должно быть выражено:

1. Личной формой глаголов, обозначающих умственную деятельность или чувственное восприятие, в страдательном залоге:

to assume - предполагать,
to believe – думать, полагать,
to consider - считать,
to claim – заявлять, утверждать,
to conclude – делать вывод,
to declare - объявлять,
to expect - ожидать,
to find - оказываться,
to feel – полагать, считать,
to formulate – формулировать, излагать,
to guess - полагать,
to hear - слышать,
to know - знать,
to mention – упоминать, ссылаться,
to notice – замечать, упоминать,
to observe - замечать,
to predict - предсказывать,
to prove - доказывать,
to say - говорить,
to see - видеть,
to suggest - предполагать,
to suppose - предполагать,
to think – предполагать,
to report – сообщать,
to estimate – считать, полагать.

2. Глаголами в действительном залоге.

to appear - казаться,
to seem - казаться,
to happen - случаться,
to prove - оказываться,
to turn out – оказываться.

3. Выражениями:

to be likely - вероятно,
to be unlikely - маловероятно,
to be certain - определенно,

to be sure - конечно.

Возможны два способа перевода оборота «сложное подлежащее»:

1. Перевод начинается со сказуемого, которое переводится неопределенно-личным предложением (соответствует 3-му лицу множественного числа, например, *сообщают, предположили, известно* и т.п.). Сам оборот переводится придаточным дополнительным предложением с союзом *что* (реже *чтобы, как*), в котором инфинитив становится сказуемым.

2. Порядок слов английского предложения сохраняется, инфинитив переводится сказуемым, а сказуемое английского предложения переводится вводным предложением с союзом *как*:

The prices are expected to fall.

1. Ожидают, что цены упадут (будут падать).

1. Цены, как ожидают, упадут (будут падать).

This reaction turned out to lead to good results.

1. Оказалось, что эта реакция дает хорошие результаты.

2. Эта реакция, как оказалось, дает хорошие результаты.

Примечания:

1. Глагол *to find* в обороте «сложное подлежащее» часто переводится *оказываться*:

Coal was found to be rather abrasive.

Оказалось, что уголь имеет значительные абразивные свойства.

2. Если в обороте «сложное подлежащее» глагол **to prove** стоит в активном залоге, он имеет значение *оказываться*, если в страдательном залоге, то он означает *доказывать*:

Gold proved to be unattacked by moisture. Оказалось, что на золото не действует влага.

Gold was proven to be unattacked by moisture. Доказали, что на золото не действует влага.

3. Если в обороте «сложное подлежащее» инфинитив выражен глаголом-связкой **to be**, то глагол **to be** можно не переводить:

The interpretation was found to be convincing. Объяснение оказалось убедительным.

ПРИЧАСТИЕ (THE PARTICIPLE)

Причастие (*the Participle*) – это неличная форма глагола, которая обладает признаками как прилагательного, так и глагола. К глагольным свойствам причастия относится его способность иметь прямое дополнение, определяться наречием и иметь формы времени (которое носит относительный характер) и залога.

Формы причастия

	Participle I		Participle II (or Past Participle)
	Simple	Perfect	
Active Voice	asking	having asked	-
Passive Voice	being asked	having been asked	asked

Причастие в английском предложении может выполнять функции:

- 1) левого или правого определения (Participle I, Simple и Participle II);
- 2) обстоятельства (все формы причастия);
- 3) части составного сказуемого.

Причастие, за которым следуют поясняющие слова (дополнение или обстоятельство), образует причастный оборот. Функции определения и обстоятельства может выполнять как одиночное причастие, так и причастный оборот.

Функция определения

1. Participle I, Simple; Active Voice без поясняющих слов, как правило, стоит перед определяемым существительным и переводится на русский язык причастием действительного залога настоящего времени.

*The distance from the initial point to the **travelling** body is called the co-ordinate of the body.* Расстояние от начальной точки до движущегося тела называется координатой этого тела.

2. Participle I, Simple, Passive Voice в функции определения употребляется реже, чем Participle I, Active Voice и, как правило, стоит после определяемого существительного. Переводится на русский язык причастиями, оканчивающимися на *-мый* или *-щийся* (*-вишийся*), или придаточным определительным предложением.

*The investigations **being carried out** were of great importance.* Проводимые (Проводившиеся) исследования имели большое значение.

3. Participle II, Passive Voice в функции определения без поясняющих слов может стоять как после определяемого существительного, так и перед ним. Переводится на русский язык страдательным причастием с окончанием *-мый, -ный, -тый*.

*The problem **considered*** }
*The **considered** problem* } *was of great interest.*

Рассматриваемая (Рассмотренная) проблема представляла большой интерес.

Примечания:

1. Причастный оборот, т.е. причастие с поясняющими словами, в функции определения стоит, как правило, после определяемого существительного и переводится на русский язык соответствующим причастным оборотом или придаточным определительным предложением.

Electrons forming an atom are in motion. Электроны, образующие атом, находятся в движении.

The problems discussed at the conference were interesting. Проблемы, обсужденные (которые обсуждались) на конференции, были интересными.

2. Одиночные причастия в функции определения, стоящие в английском языке после определяемого существительного, при переводе ставятся перед определяемым словом.

The substance obtained was pure. Полученное вещество было чистым (не содержало примесей).

3. В функции правого определения Participle II, образованное от глаголов, имеющих после себя предлог, переводится на русский язык определительным придаточным предложением, начинающимся с соответствующего предлога, который ставится перед относительным местоимением *который*.

The data referred to in this paper are reliable. Данные, на которые ссылаются, заслуживают доверия.

4. Если после глагольной формы с окончанием **-ed** стоит предлог с последующим существительным, то это, как правило, Participle II.

The work performed by this scientist showed good results. Работа, выполненная этим ученым, дала хорошие результаты.

5. Если в предложении рядом стоят две глагольные формы с окончанием **-ed**, то первая форма, как правило, является причастием в функции определения, а вторая – сказуемым в Past Simple.

The substance obtained contained some admixtures. Полученное вещество содержало примеси.

Функция обстоятельства

1. Participle I, Simple, Active Voice в функции обстоятельства переводится деепричастием несовершенного вида (*что делая?*) или придаточным обстоятельственным предложением. В этой функции данная форма причастия часто имеет перед собой союзы **when, while**. В этом случае возможен перевод с предлогом *при* + существительное.

When working with the microorganisms we found that they produced a variety of antibiotics.

Работая с микроорганизмами, При работе с микроорганизмами Когда мы работали с микроорганизмами,	} мы убедились, что они вырабатывают различные антибиотики.
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2. Participle I Perfect, Active Voice в функции обстоятельства переводится на русский язык деепричастием совершенного вида (*что сделав?*) или придаточным обстоятельственным предложением, сказуемое которого должно предшествовать действию, выраженному сказуемым английского предложения.

Having passed a short distance the car stopped. Пройдя короткое расстояние, автомобиль остановился. (После того как автомобиль прошел короткое расстояние, он остановился).

3. Participle I Simple, Passive Voice в функции обстоятельства переводится на русский язык, как правило, придаточным обстоятельственным предложением, в котором английское причастие становится сказуемым.

Being invited too late he could not take part in the conference. Так как его пригласили слишком поздно, он не смог принять участие в конференции.

4. Participle I Perfect, Passive Voice в функции обстоятельства переводится на русский язык придаточным обстоятельственным предложением с союзом *после того как*.

Having been tested the new equipment was installed in the shops. После того как новое оборудование было испытано, его установили в цехах.

5. Participle II, Passive Voice в функции обстоятельства, как правило, вводится союзами **when, while** *когда*, **if** *если*, **unless** *если...не*, **until** *пока...не*, **though** *хотя* и др. Причастные обороты с предшествующими союзами переводятся на русский язык придаточным обстоятельственным предложением с соответствующим союзом или отглагольным существительным с предлогами *при* (для союзов **when, while**), *без* (для союза **unless**).

When heated, magnetized steel loses its magnetism. Когда магнитную сталь нагревают, она теряет свои магнитные свойства. (При нагревании магнитная сталь теряет свои магнитные свойства).

Unless heated this substance does not melt. Если это вещество не нагревают, оно не плавится.

Без нагревания это вещество не плавится.

Participle II с предшествующим союзом *as* в функции обстоятельства переводится обычно краткой формой страдательного причастия с союзами *как; так, как*.

He solved the problem as stated above. Он решил эту задачу, как указано выше.

Participle II от глаголов **to give, to see, to state** в функции обстоятельства, стоящего в начале предложения, переводится следующим образом: **given** *если дано; если имеется; при условии*; **seen** *если рассматривать*; **stated** *если сформулировать*.

Given the weight and the specific gravity of a body you can calculate its volume. Если дан (имеется) вес и удельный вес тела, вы можете вычислить его объем.

Независимый причастный оборот

Это оборот, в котором перед причастием стоит существительное в общем падеже или личное местоимение в именительном падеже, т.е. стоит свое собственное подлежащее, отличное от подлежащего всего предложения. К этому подлежащему и относится действие, выраженное причастием. Независимый причастный оборот логически связан с предложением и выполняет в нем функцию обстоятельства. Независимый причастный оборот всегда отделяется запятой и может стоять в начале или в конце предложения.

Если независимый причастный оборот стоит в начале предложения, то он переводится на русский язык придаточным обстоятельственным предложением с союзами: *когда; если; так как; после того, как; хотя* и др.

Если независимый причастный оборот стоит в конце предложения, то он переводится самостоятельным предложением с союзами: *а, и, но, причем* или без них.

В обоих случаях причастие переводится личной формой глагола в функции сказуемого.

The road conditions being unchanged, the automobile can travel at a constant speed. Когда (если) дорожные условия не изменяются, автомобиль может двигаться с постоянной скоростью.

The term "speed" means the rate of motion, the term "velocity" meaning the speed in a definite direction. Термин "speed" означает темп движения, а термин "velocity" означает скорость в определенном направлении.

Примечания:

1. Независимый причастный оборот может вводиться предлогом **with**, который на русский язык не переводится.

With the experiments having been carried out, they started new investigations. После того как опыты были закончены, они начали новые исследования.

2. В независимом причастном обороте -ing форма глагола **to be (being)** может опускаться при переводе.

The work (being) finished, he went home. Когда работа была закончена, он пошел домой.

Сложное дополнение (или Объектный падеж) с причастием

выражено, как правило, глаголами чувственного восприятия: **to feel, to hear, to see, to notice, to observe, to watch** и др.

They watched the temperature gradually rising. Они следили (за тем), как температура постепенно повышалась.

Оборот "сложное дополнение с причастием" переводится на русский язык придаточным дополнительным предложением с союзом *что* или *как*, причем причастие становится сказуемым (т.е. передается личной формой глагола), а дополнение – подлежащим этого придаточного предложения.

Хотя оборот "сложное дополнение с причастием" переводится, как и оборот "сложное дополнение с инфинитивом", между этими оборотами имеется смысловая разница. Причастие выражает длительный характер действия, т.е. действие в процессе его совершения, а инфинитив выражает в большинстве случаев законченное действие. Поэтому оборот с причастием переводится на русский язык придаточным предложением с глаголом несовершенного вида, а оборот с инфинитивом – придаточным предложением с глаголом совершенного вида (иногда может переводиться и глаголом несовершенного вида).

Сравните:

They saw the temperature gradually rising. Они видели, что (как) температура постепенно повышалась.

They saw the temperature gradually rise. Они видели, что температура постепенно повысилась.

Сложное подлежащее (или именительный падеж) с причастием

выражено, как правило, глаголами, обозначающими умственную деятельность или чувственное восприятие: **to assume, to consider, to expect, to feel, to see, to observe, to notice** и др.

Перевод следует начинать со сказуемого, которое переводится неопределенно-личным предложением (соответствует 3-ему лицу множественного числа, например, считают, наблюдали и т.п.). Сам оборот переводится придаточным дополнительным предложением с союзом *как* или *что*, в котором причастие становится сказуемым.

He was seen repairing the engine. Видели, как (что) он ремонтировал двигатель.

Герундий (THE GERUND)

Voice	Simple	Perfect
Active Voice	asking	having asked
Passive Voice	being asked	having been asked

Герундий (*the Gerund*) – это неличная форма глагола, совпадающая с формами причастия I (Simple и Perfect) и обладающая свойствами как глагола, так и существительного. Как глагольная форма, герундий может выражать категории залога и времени, может иметь при себе прямое дополнение и определяться наречием. К именным свойствам герундия относятся следующие:

- а) перед герундием может стоять предлог;
- б) герундию может предшествовать существительное в общем или притяжательном падеже или притяжательное местоимение;
- в) герундий может выполнять такие же синтаксические функции, что и существительное, т.е. функцию подлежащего, части сказуемого, дополнения, обстоятельства и определения.

Итак, герундий или герундиальный оборот (т.е. герундий с зависимыми словами) может выполнять в предложении следующие функции:

1. **Подлежащего.** В этой функции герундий переводится на русский язык отглагольным существительным или инфинитивом.

Lifting this heavy weight is impossible without necessary appliances. Поднятие этого тяжелого груза (Поднять этот тяжелый груз) невозможно без использования необходимых приспособлений.

2. Части сказуемого:

а) составного именного после глагола **to be** и сочетания глагола **to be** с предлогами **for** и **against**. В этой функции герундий переводится на русский язык отглагольным существительным или инфинитивом, а после предлогов **for** и **against** – *придаточным предложением*.

One of the effects of heat is changing a solid into liquid. Один из результатов воздействия тепла – это превращение твердого тела в жидкость.

They are against postponing the negotiations. Они против того, чтобы переговоры были отложены.

They are for discussing this problem as soon as possible. Они за то, чтобы эту проблему обсудили как можно быстрее.

б) составного глагольного после глаголов, указывающих на начало, продолжение или конец процесса, а также после глаголов **to like, to love, to hate, to prefer, to avoid, to enjoy** и после сочетаний **to be worth..., to be busy....**

*They have finished **discussing** the results of the experiment.* Они окончили обсуждать результаты эксперимента.

*He likes **taking part** in conferences.* Ему нравится принимать участие в конференциях

*It is worth **entering into** a contract with this company.* Стоит заключить контракт с этой компанией.

*He was busy **drawing up** a contract.* Он был занят составлением контракта.

3. **Дополнения прямого и предложного.** В этой функции герундий можно переводить отглагольным существительным, инфинитивом или придаточным дополнительным предложением.

*This forging press needs **repairing**.* Этот штамповочный пресс нуждается в ремонте.

*He insisted on **using** these substances in the experiment.* Он настаивал на использовании этих веществ в эксперименте.

4. **Обстоятельства.** В этой функции перед герундием всегда стоит предлог: **in** при, во время, в процессе; **on** после, по; **by** при помощи, посредством, путем; **after** после; **before** до, перед; **without** без...

*In **solving the problem** he made some mistakes.* При решении (Решая) задачи он допустил несколько ошибок.

*On **reaching the boiling point** the water temperature is no longer increased.* После достижения (Достигнув) точки кипения температура воды больше не повышается.

*One can perform work **by lifting a weight**.* Можно совершить работу, поднимая груз (посредством поднятия груза).

*Gas volume can be changed **without changing its temperature**.* Объем газа можно изменить, не изменяя (без изменения) его температуру.

5. **Определения.** Определяет существительное и, как правило, вводится предлогом **of** (реже предлогом **for**). Переводится на русский язык существительным в родительном падеже, инфинитивом или придаточным предложением.

*There are different methods **of obtaining** forgings.* Существуют различные методы получения штамповок.

*Energy is defined as capacity **for doing** work.* Энергия определяется как способность выполнять работу.

*A thermometer is an instrument **for measuring** temperature.* Термометр – это прибор для измерения температуры.

Герундиальный комплекс (Сложный герундиальный оборот)

Стоящее перед герундием существительное в общем или притяжательном падеже или притяжательное местоимение указывает на предмет или лицо, производящее действие, которое выражено герундием. Такой сложный оборот можно назвать герундиальным комплексом, который может выполнять в предложении функцию подлежащего, именной части составного именного сказуемого, дополнения, обстоятельства, определения. Как правило, герундиальный

комплекс переводится на русский язык придаточным предложением, причем существительное в общем или притяжательном падеже или притяжательное местоимение соответствует в русском языке подлежащему придаточного предложения, а герундий – сказуемому.

We know of work and energy being closely related. Мы знаем, что работа и энергия тесно связаны между собой.

I. Newton's having formulated this law was of great importance. То, что И. Ньютон сформулировал этот закон, имело огромное значение.

Примечание:

1. После таких глаголов как **to like, to dislike, to prefer** в качестве дополнения может употребляться как герундий, так и инфинитив:

I like skiing in winter.

I like to ski in winter.

2. После таких глаголов как **to avoid, to intend, to need, to mind** возражать, **to remember, to enjoy, to require, to finish, to excuse, to deny, to forgive, cannot help, to postpone** в качестве дополнения употребляется только герундий.

Would you mind my smoking?

3. Глаголы **to stop, to forget** в зависимости от того, следует ли за ними герундий или инфинитив имеют разное значение:

He stopped to speak to me. Он остановился, чтобы поговорить со мной.

He stopped speaking. Он перестал разговаривать.

4. Только герундий употребляется после следующих глаголов с предлогами, а также после следующих словосочетаний с предлогами:

to depend on	to think of	to be interested in
to insist on	to go on	to be pleased (displeased) at
to know of	to give up	to be proud of
to object to	to consist in	to be busy in
to prevent from	to be capable of	to be surprised at
to thank for	to be fond of	to be worth of

Сравнение герундия и причастия

	Герундий	Причастие
Подлежащее	<i>Heating copper wire from 0° to 100° increases its resistance by 40%.</i> Нагревание медной проволоки от 0° до 100° увеличивает ее сопротивление на 40%.	-
Обстоятельство	<i>In heating copper wire from 0° to 100° its resistance is increased by 40%.</i> При нагревании медной проволоки от 0° до 100° ее сопротивление увеличивается на 40%.	<i>Heating copper wire from 0° to 100° we increase its resistance by 40%.</i> Нагревая медную проволоку от 0° до 100°, мы увеличиваем ее сопротивление на 40%.
Определение	<i>The boiling point of water is one hundred degrees Centigrade.</i> Точка кипения воды – 100 градусов Цельсия.	<i>Boiling water is changing into steam.</i> Кипящая вода превращается в пар.

Эмфатические конструкции

Эмфатической конструкцией называют такую синтаксическую конструкцию, которая служит для выделения или усиления значения того или иного члена предложения. Такая конструкция помогает поставить логическое ударение на ту часть высказывания, которая несет основную смысловую нагрузку.

It is/was + word or phrase

1. Выделение подлежащего, прямого и косвенного дополнений и обстоятельств (эмфатическая конструкция «it is . . . that, which, who, whom»). Сочетание «it is ... that» употребляется для выделения одного из членов предложения. Выделяемый член предложения ставится между двумя частями конструкции, которая по форме представляет собой сложноподчиненное предложение. Конструкция «it is ... that» на русский язык не переводится, она лишь указывает границы выделяемой части предложения. В русском языке таким предложениям соответствует простое предложение, в котором перед выделяемым членом добавляются усилительные слова «именно», «как раз», «только» (чаще при выделении обстоятельства времени), «лишь»; в предложениях с отрицанием — «вовсе не», «совсем не».

It is different modes of transport that offer different levels of mobility and accessibility in different circumstances. – Именно различные виды транспорта предлагают другой уровень мобильности и доступности при разных обстоятельствах

It was the Dutch physicist, Christian Huygens, who first offered an explanation for the phenomena. - Не кто иной, как голландский физик Кристиан Хуигенс, первым предложил толкование данного явления.

Обратите внимание, что если после эмфатического it is ... стоит слово only или другое усилительное слово, то оно употребляется вместо «именно» при переводе всего предложения.

It was only with the help of a small lantern that we managed to find the box. - Только с помощью фонарика нам удалось отыскать ящик.

2. Эта же эмфатическая модель часто употребляется с глаголом в отрицательной форме в сочетании с союзами not till, not until, которая, несмотря на отрицательную форму, имеет положительный смысл и обычно переводится на русский язык с использованием усилительных наречий «только после ...», «только когда ...».

It was not until Einstein discovered the connection between gravitation and inertia that the mystery Newton could not understand was solved. - Только когда Эйнштейн открыл взаимосвязь между гравитацией и инерцией, была разгадана тайна, которую не мог понять Ньютон.

It was not until about 1911 that a first really successful theory of atomic structure was suggested by Rutherford. - Только после 1911 года Резерфордом была предложена первая поистине успешная теория структуры атома.

3. Похожая эмфатическая модель представляет собой сложноподчинённое предложение, части которого соотносятся между собой как подлежащее и дополнение простого предложения: *What... [главное предложение] is (was, will be)... [придаточное предложение]*.

What is more important for road infrastructure is how well bus service is organized in city. – Но более важным является для инфраструктуры то, насколько хорошо организовано автобусное сообщение.

4. Эмфатическими также являются предложения с двойным отрицанием. При их передаче на русский язык используется прием антонимического перевода, то есть отрицательное высказывание на языке оригинала становится утвердительным на языке переводе.

The case is not improbable. - Этот случай весьма вероятен

Отрицание *not*, употребляемое перед прилагательным или наречием с отрицательными приставками *un-, in-, il-, im-, ir-, dis-* и т.д. имеет усилительное значение, и все сочетание обычно соответствует русскому «вполне, весьма, довольно + прилагательное (наречие)».

<i>not uncommon</i>	довольно обычный
<i>not infrequently</i>	довольно часто
<i>not impossible</i>	весьма возможно

В некоторых случаях возможен также и перевод «не ... не» («не кажется неизбежным»). Подобное же значение имеет сочетание *not + without + существительное*

It is not without significance that ... Также весьма важно, что ...

5. Эмфатическими также являются отрицательные конструкции с определенными лексическими сопроводителями, например, усилительным наречием *too* перед прилагательным или наречием. В данном случае эмфаза также переводится с помощью приёма лексического добавления.

The danger of greenhouse effect cannot be too often emphasized. - Необходимо постоянно (неустанно) указывать на опасность глобального потепления для человечества.

СЛОВООБРАЗОВАНИЕ БЕЗ ИЗМЕНЕНИЯ ПРОИЗНОШЕНИЯ И НАПИСАНИЯ СЛОВА

В английском языке во многих случаях слова, являющиеся различными частями речи, совпадают в произношении и написании. Вопрос о том, какой частью речи является такое слово, разрешается на основании его формальных и синтаксических признаков.

Такое совпадение форм особенно часто встречается у существительных и глаголов:

Существительные	Глаголы
<i>answer</i> ответ	<i>to answer</i> отвечать
<i>change</i> изменение	<i>to change</i> менять
<i>measure</i> мера	<i>to measure</i> мерить
<i>order</i> приказ	<i>to order</i> приказывать
<i>place</i> место	<i>to place</i> помещать
<i>purchase</i> покупка	<i>to purchase</i> покупать
<i>work</i> работа	<i>to work</i> работать

Совпадение форм встречается также у прилагательных и глаголов:

Прилагательные	Глаголы
<i>clean</i> чистый	<i>to clean</i> чистить
<i>dirty</i> грязный	<i>to dirty</i> грязнить
<i>empty</i> пустой	<i>to empty</i> опустошать
<i>free</i> свободный	<i>to free</i> освобождать

В некоторых случаях совпадение форм встречается у нескольких частей речи. Так, например, слово **light** может быть существительным со значением *свет*, прилагательным — *светлый* и глаголом — *зажигать, освещать*.

СЛОВООБРАЗОВАНИЕ ПРИ ПОМОЩИ ИЗМЕНЕНИЯ МЕСТА УДАРЕНИЯ

Формы многих существительных совпадают с формами глаголов, но отличаются от них ударением — существительные имеют ударение на первом слоге, а соответствующие им глаголы на втором:

Существительные	Глаголы
<i>'increase</i> увеличение	<i>to inc'rease</i> увеличивать (-ся)
<i>'decrease</i> уменьшение	<i>to dec'rease</i> уменьшать (-ся)
<i>'export</i> экспорт	<i>to ex'port</i> экспортировать
<i>'import</i> импорт	<i>to im'port</i> импортировать
<i>'insult</i> оскорбление	<i>to in'sult</i> оскорблять

СЛОВООБРАЗОВАНИЕ ПРИ ПОМОЩИ ЧЕРЕДОВАНИЯ ЗВУКОВ

Многие существительные и глаголы, образованные от одного корня, различаются чередованием последнего согласного звука, который является глухим в существительном и звонким в глаголе. При этом в ряде случаев чередование

последнего согласного звука сопровождается чередованием корневого гласного звука и изменением написания слова:

Существительные	Глаголы
<i>excuse</i> [iks'kju:s] извинение	<i>to excuse</i> [iks'kju:z] извинять
<i>use</i> [ju:s] употребление	<i>to use</i> [ju:z] употреблять
<i>advice</i> [əd'vaɪs] совет	<i>to advise</i> [əd'vaɪz] советовать
<i>belief</i> [bi'li:f] вера, убеждение	<i>to believe</i> [bi'li:v] верить, думать
<i>life</i> [laɪf] жизнь	<i>to live</i> [lɪv] жить
<i>proof</i> [pru:f] доказательство	<i>to prove</i> [pru:v] доказывать
<i>choice</i> [tʃɔɪs] выбор	<i>to choose</i> [tʃu:z] выбирать
<i>loss</i> [lɒs] потеря	<i>to lose</i> [lu:z] терять

Некоторые существительные и глаголы различаются только чередованием корневых гласных звуков при соответствующем изменении написания слова:

Существительные	Глаголы
<i>blood</i> [blʌd] кровь	<i>to bleed</i> [bli:d] кровоточить
<i>food</i> [fu:d] пища	<i>to feed</i> [fi:d] питать (-ся)
<i>shot</i> [ʃɒt] выстрел	<i>to shoot</i> [ʃu:t] стрелять
<i>song</i> [sɒŋ] песня	<i>to sing</i> [sɪŋ] петь

СЛОВООБРАЗОВАНИЕ ПРИ ПОМОЩИ АФФИКСОВ

Образование слов может происходить при помощи аффиксов — префиксов и суффиксов. Префиксы стоят в начале слова, а суффиксы — в конце слова.

Префиксы изменяют значение слова, но не меняют его принадлежности к той или иной части речи:

<i>order</i> (существительное) порядок	<i>disorder</i> (существительное) беспорядок
<i>happy</i> (прилагательное) счастливый	<i>unhappy</i> (прилагательное) несчастный
<i>to appear</i> (глагол) появляться	<i>to reappear</i> (глагол) вновь появляться

Суффиксы служат для образования одной части речи из другой:

<i>beauty</i> (существительное) красота	<i>strength</i> (существительное) сила	<i>beautiful</i> (прилагательное) красивый	<i>to strengthen</i> (глагол) усиливать (-ся)
(существительное) счастливый	<i>happy</i> (прилагательное) счастливый	<i>happiness</i> (существительное) счастье	
(прилагательное) спокойный	<i>calm</i> (прилагательное) спокойный	<i>calmly</i> (наречие) спокойно	
<i>to read</i> (глагол) читать		<i>reader</i> (существительное) читатель	

Наиболее употребительные префиксы

Префиксы	Значение	Примеры	Перевод
un-	отрицательное	unequal unimportant	неравный неважный
	противоположное действие	to unload to unpack	разгружать распаковывать
in-	отрицательное	inexperienced inability	неопытный неспособность
il-	отрицательное	illogical	нелогичный

ir-		illegal	незаконный
im-		irresponsible	безответственный
		irregular	нерегулярный
		immovable	неподвижный
		impossible	невозможный
dis-	отрицательное	to disapprove to dislike	не одобрять не любить
	противоположное действие	to disappear to disconnect	исчезать разъединять
non-	отрицательное	non-conductor non-ferrous	непроводник цветной
re-	снова, заново, вновь	to reconstruct to re-export to re-open to re-read to resell to re-use	перестраивать реэкспортировать вновь открывать перечитывать перепродавать вновь использовать
mis-	неправильно, неверно	to misuse to mishear to misinform to misunderstand	неправильно употреблять ослышаться неправильно информировать неправильно понимать
over-	сверх, чрезмерно	to overload to overpay to overvalue overproduction	перегружать переплачивать переоценивать перепроизводство
under-	недостаточно	to underpay to undervalue underproduction	оплачивать низко недооценивать недостаточное производство
pre-	перед, ранее	prehistoric pre-war to preheat	доисторический довоенный предварительно нагревать
post-	после	post-war	послевоенный
anti-	анти-, противо-	antifriction antiphase anti-aircraft antiwar	антифрикционный противофаза противовоздушный антиверный
counter-	контр-, противо-	to counteract counteraction countershaft counter-pressure counter-offer	противодействовать противодействие контрпривод противодавление контрпредложение
inter-	между, взаимно	intergranular international interdependent intertown intercoagulation interaction	межзернистый международный зависящий один от другого междугородный взаимная коагуляция взаимодействие
sub-	под-	subprogram subscale subdivision submarine	подпрограмма подокалина подразделение подводный

Наиболее употребительные суффиксы

Суффиксы существительных

Суффикс	Значение	Пример	Перевод
-er, -or	обозначение лица	buyer inventor producer seller supplier	покупатель изобретатель производитель продавец поставщик
-ist	обозначение принадлежности к политическому или научному направлению	idealist terrorist extremist physicist	идеалист террорист экстремист физик
-ee	обозначение лица, на которое направлено действие	addressee consignee payee trustee	адресат грузополучатель получатель платежа доверенное лицо
-ian	обозначение национальной принадлежности	Russian Belarusian Bulgarian Hungarian Norwegian	русский белорус болгарин венгерец норвежец
-age	обозначения отвлеченных существительных	leakage marriage passage	утечка брак проход
-ance, -ence		importance difference insistence resistance	важность различие настойчивость сопротивление
-dom		freedom wisdom kingdom	свобода мудрость королевство
-hood		brotherhood childhood manhood motherhood neighbourhood	братство детств мужественность материнство соседство
-ion (-ation, -tion, -sion, -ssion)		connection combination introduction production restriction transmission	соединение комбинация введение производство ограничение передача
-ment		agreement development government improvement payment settlement	согласие, соглашение развитие управление, правительство улучшение платеж урегулирование
-ness		coldness darkness	холодность темнота

		weakness	слабость
-ship		friendship leadership membership	дружба руководство членство
-ure		departure pleasure pressure	отъезд удовольствие давление

Суффиксы прилагательных

Суффикс	Значение	Пример	Перевод
-able, -ible	возможность подвергнуться действию, указанному соответствующим глаголом	changeable eatable comparable convertible	изменчивый съедобный сравнимый обратимый
-al		central cultural intellectual postal	центральный культурный интеллектуальный почтовый
-ant, -ent		different insistent resistant	различный настойчивый сопротивляющийся
-ful	наличие качества	beautiful careful fruitful useful	красивый заботливый плодородный, плодovitый полезный
-less	отсутствие качества	hopeless useless fruitless shameless homeless helpless	безнадежный бесполезный бесплодный бесстыдный бездомный беспомощный
-ish	1) национальная принадлежность	Danish Polish Scottish Swedish	датский польский шотландский шведский
	2) слабой степени качества	reddish brownish stoutish	красноватый коричневатый толстоватый
-ive		active comparative effective restrictive talkative	деятельный сравнительный действительный ограничительный разговорчивый
-ous		courageous dangerous famous glorious	смелый опасный знаменитый, известный славный
-y		cloudy dirty foggy frosty rainy	облачный грязный туманный морозный дождливый

		sunny thirsty windy	солнечный жаждущий ветреный
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Суффиксы глаголов

Суффикс	Значение	Пример	Перевод
-en	<i>делать или делаться, становиться</i>	to blacken to sharpen to shorten to strengthen to widen	чернить (делать черным) точить (делать острым) укорачивать (делать коротким) усиливать (делать сильным) расширять (делать широким)
-fy		to falsify to simplify to purify	фальсифицировать упрощать очищать
-ize		to characterize to crystallize to sympathize	характеризовать кристаллизовать (-ся) сочувствовать

Суффиксы наречий

Суффикс	Значение	Пример	Перевод
-ly		easily weekly firstly	легко еженедельно во-первых
-wise		crosswise clockwise	крест-накрест по часовой стрелке
-ward (-wards)	направление	backward afterwards homewards	назад потом, позже домой, на родину

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