

Английский язык

Профессиональная лексика

Пособие для студентов специальности 6-05-0715-10
Технологии транспортных процессов

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Данное пособие по английскому языку предназначено для студентов специальности 6-05-0715-10 Технологии транспортных процессов. Целью пособия является формирование и развитие профессиональной иноязычной коммуникативной компетенции.

Материал пособия сгруппирован по тематическим разделам, отражающим ключевые аспекты профессиональной деятельности будущих специалистов в области транспортных технологий. Каждый раздел включает вступительный этап с лексическими заданиями, основную часть с аутентичными текстами и упражнениями, а также задания, направленные на развитие умений монологической и диалогической речи в профессиональном контексте.

Пособие также включает раздел с текстами для дополнительного чтения по темам раздела и ссылки на интерактивные задания.

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Unit 1

History of Transportation

The history of transportation is closely connected with the development of trade.

1. How did people transport goods and travel long distances before the invention of cars, trains, and airplanes?
2. Why do you think early civilizations developed near rivers and coastlines?
3. What challenges do you think traders faced when traveling long distances in ancient times?
4. What do you know about the famous trade routes of that time: *The Silk Road*, *Grand Canal*, etc.?

1. Here are pictures of land and maritime goods that were commonly traded in the pre-industrial era. What types of goods were primarily transported by land, sea, or both? Fill Column 1 and Column 2 in the table below.

spices (pepper, cinnamon)



silk



precious metals (gold, silver)



jewelry & gemstones



salt



horses & livestock



tea



dried fruits & nuts (dates, almonds, figs)



grain



timber



coffee & cocoa



weapons & armor



1. Trade goods	2. Land, maritime, or both?	3. Reasoning (Why?)

2. In groups, discuss why certain goods were transported in specific ways. Consider factors like weight, perishability, and origin. Use discussion prompts below to help you. Complete Column 3 of the table above.

Discussion prompts.

- **Weight and bulk:** Which items were too heavy to transport efficiently over land?
- **Perishability:** Which goods needed faster transport to prevent spoilage?
- **Origin and availability:** Did the items come from inland areas, making land transport necessary?
- **Trade routes:** How did major trade routes like the Silk Road and Indian Ocean trade networks affect the choice of transport?
- **Risks and costs:** What were the dangers of land vs. maritime transport?

3. Match the words (1-21) with their definitions (a-u) from the following list.

Word/Phrase	Definition
1. animal labor	a. rivers, canals, and seas used for transport
2. waterways	b. an ancient Chinese waterway
3. charter companies	c. goods transported by land, sea, or air
4. river transport	d. an event that changed trade routes
5. land trade routes	e. transport within a continent, away from the coast

6. Columbus's voyage		f. companies granted rights to trade and explore
7. limited technical capabilities		g. the use of animals for work or transport
8. maritime travel		h. transportation by sea
9. the Silk Road		i. a major trade route connecting Asia and Europe
10. bulk trade		j. using rivers for transportation
11. Constantinople's fall		k. transporting goods along the coast
12. overland trading system		l. an eastward journey around Africa
13. maritime networks		m. early transportation had technological restrictions
14. Dutch East India Company		n. a powerful trade company
15. non-perishable goods		o. roads and paths used for trade by land
16. inland transport		p. items that do not spoil quickly (e.g., spices, silk, wine)
17. freight		q. trading large quantities of goods
18. inefficient transport		r. slow or costly movement of goods
19. Vasco da Gama's route		s. trade routes across land
20. coastal shipping		t. a journey leading to the discovery of the Americas
21. the Grand Canal		u. connected sea trade routes

4. Group the same vocabulary according to the given categories.

animal labour	waterways	charter companies	land trade routes
Columbus's voyage	limited technical capabilities		maritime travel
the Silk Road	bulk trade	Constantinople's fall	overland trading system
maritime networks	Dutch East India Company		non-perishable goods
inland transport	freight	coastal shipping	Vasco da Gama's route
river transport	the Grand Canal	inefficient transport	

Types of Transportation	
Important Transport Systems & Routes	
Goods and Trade	
Historical Events and Names	
Challenges & Developments	

5. Read the text. Did you have the same ideas when answering questions at the beginning of the unit?

Transportation in the Pre-Industrial Era (Pre-1800s)

Before the Industrial Revolution at the end of the 18th century, even with limited technical capabilities, transportation enabled the setting of empires and trade routes. In the pre-industrial era transport relied on animal labour for land and wind for maritime travel. Quantities and speeds were minimal: horses averaged 8 km/h and carried 125 kg, while camels could carry 200 kg. Waterways were the most efficient transport systems available and cities next to rivers and bays could trade over long distances – this helped maintain political, economic, and cultural cohesion over a larger territory. The first Civilizations arose along rivers like the Nile, Indus, and Huang He, trading high-value, non-perishable goods such as spices, silk, and wine. The most active overland trading routes formed a system that would eventually be known as the Silk Road.

Poor land transport limited most trade to a local scale, with cities relying on resources within a 50 km radius. Exceptions, like the Roman and Chinese empires, built transport networks to control large territories. Rome's coastal shipping and roads supported Mediterranean trade, while China's Grand Canal connected regions and is partly functional today.

Maritime transportation was the most efficient way to move freight and passengers, though long-distance trade involved risks. Ancient Greece developed early financing and insurance systems like “bottomry”, which combined loans with insurance. By the 13th century, maritime networks spanned Europe and China, supporting bulk trade of goods like grain, wool, and timber.

The fall of Constantinople (the capital of the Byzantium Empire (Eastern Roman Empire)) became a critical geopolitical event to the Turks. The city acted for centuries as a trade hub. Its fall disrupted the traditional land trade routes to Asia prompting European powers to find alternative maritime routes. One trade route alternative, followed by Columbus in 1492, was to sail to the west across the Atlantic.

The other alternative, followed by Vasco de Gama in 1497, was to sail to the East by rounding the African continent. These events sparked exploration and colonization by Spain, Portugal, and later Britain, France, and the Netherlands. Charter companies like the Dutch East India Company established global trade networks, enabling Europe to dominate international trade.

Despite these advances, pre-industrial freight volumes were negligible compared to today. For example, the Venetian fleet's total cargo wouldn't fill a modern container ship. Maritime and river transport were dominant throughout the pre-industrial era while inland transport remained inefficient until late 18th-century canals boosted regional trade.

6. Study these words from the text. They belong to different parts of speech. Find them in the text and give their Russian equivalents:

verbs:

to enable, to rely on, to average km/h, to maintain, to involve risks, to span, to disrupt, to prompt, to spark, to establish, to dominate, to remain, to boost, to control

adjectives:

critical (event), negligible, inefficient

noun:

cohesion, a trade hub, an alternative

7. Complete the sentences with a suitable form of the words above (Exercise 6). Some words can be used more than once. In some sentences more than one answer is possible. Translate the sentences into Russian.

1. The development of new trade networks _____ setting of empires and trade routes.

2. In ancient times, traders often _____ on pack animal labour or long-distance travel, using horses and camels to carry goods.

3. Early sailboats _____ on wind for their movement, with travel dependent on favorable winds.

4. Caravans typically _____ at around 4 to 8 km/h, depending on the terrain.

5. Strong roads and sea routes helped the Roman Empire _____ political, economic, and cultural _____ across its vast territories.

6. Cities in medieval Europe often _____ on local farms and forests for the majority of their resources.

7. The Chinese empire invested in canals to _____ large territories and manage trade in Asia.

8. Long voyages across the seas _____, including piracy and harsh weather.

9. The famous Silk Road _____ 6,400 km, connecting markets from China to Europe.

10. The fall of Constantinople in 1453 was a _____ geopolitical event, changing the course of European and Asian trade.

11. Venice became _____ in the medieval period, acting as a central point for the trade of goods.

12. The Ottoman Empire's expansion in the 15th century _____ the traditional land trade routes, forcing Europeans to find new maritime routes.

13. The fall of Constantinople _____ powers of Spain and Portugal to seek _____ to sea routes to Asia.

14. Columbus's voyages _____ exploration and the beginning of European colonization in the Americas.

15. Britain's rise in maritime power allowed it to _____ in global trade by the 18th century.

16. Pre-industrial trade volumes were _____ when compared to today's shipping capacities.

17. Despite the development of some infrastructure, inland transportation systems _____ until the late 18th century.

18. The construction of canals in the 18th century helped _____ regional trade and improve trade in certain regions.

8. Translate the sentences from Russian into English. Make use of the target vocabulary (Exercise 6).

1. Развитие транспорта способствовало созданию империи и торговых путей.

2. Торговцы использовали труд животных для перевозки товаров на большие расстояния.

3. Караваны, пересекающие пустыню, обычно двигались со средней скоростью 5 км/ч.

4. Эффективные транспортные системы помогали древним империям поддерживать (сохранять) политическую, экономическую и культурную целостность.

5. Морская торговля была сопряжена с рисками, такими как нападения пиратов, штормы и непредсказуемая погода.

6. Шелковый путь был крупной сухопутной торговой сетью, которая охватывала (простиралась) Европу и Китай, связывая отдаленные рынки.

7. Падение Константинополя в 1453 году стало судьбоносным геополитическим событием, изменившим мировые торговые пути.

8. Оно подтолкнуло такие державы, как Испания и Португалия, искать новые морские торговые пути.

9. Венеция была торговым центром средневековой Европы, способствовавшим обмену товарами между Востоком и Западом.

10. Морской путь вокруг Африки стал альтернативой сухопутной торговли с Азией.

11. Экспедиции Колумба дали толчок исследованиям и последующей колонизации, что привело к европейской экспансии в Америку.

12. К XVIII веку Британия занимала доминирующее положение в международной торговле, контролируя ключевые рынки и морские пути.

13. По сравнению с современными морскими грузоперевозками, объемы средневековой торговли были ничтожно малы, поскольку небольшие деревянные суда перевозили лишь ограниченное количество грузов.

14. Наземные перевозки оставались неэффективными вплоть до строительства каналов в конце XVIII века.

15. Развитие новых транспортных маршрутов способствовало росту региональной торговли и укреплению местной экономики.

9. Look through the text again to answer the questions.

1. What were the main modes of transportation before the Industrial Revolution?
2. What were the limitations of land transport in the pre-industrial era?
3. Why was maritime transport important for long-distance trade and exploration?
4. What were some of the early financing and insurance systems developed for maritime trade?
5. How did the fall of Constantinople and the voyages of Columbus and Vasco da Gama change European exploration?
6. How did charter companies like the Dutch East India Company help European countries dominate world trade?
7. How much trade was there in the pre-industrial era compared to today?

10. Make an oral summary of the text. Make use of the following prompts.

- In the pre-industrial era, transportation relied on ____.
- The most efficient transport system was ____, because ____.
- One of the most important land trade routes was ____.
- Rome and China built transport networks to ____.
- Maritime trade was important because ____, but it involved ____.
- The fall of Constantinople in 1453 changed trade because ____.
- One alternative trade route was ____.
- Charter companies like the Dutch East India Company helped ____.

Unit 2

Modes of Transport

1. Transport is the movement of people and goods from one place to another. Nowadays, there are many different forms of transport to get from A to B. Look at the word cloud picture below and list six modes of transport.



2. Look through the advantages and disadvantages of transport modes in the table below and guess which mode it describes.

	✓	✗
1)	• door-to-door delivery • accessibility • fairly fast • cost-effective for short distances	• air pollution and greenhouse gas emissions • limited capacity/weight • high costs for long distances • delays due to traffic congestion and weather conditions
2)	• cost-effective for long distances • global connectivity • large capacity • suitable for various cargo types	• slow speed • limited accessibility • environmental risks (spills, accidents) • risk of piracy and security issues • affected by weather conditions
3)	• unaffected by weather conditions • ideal for transporting liquids and gases • safe and reliable	• limited flexibility • restricted to specific goods • regular maintenance • environmental risks

4)	• fast • global reach • safety • suitable for high-value, fragile and perishable goods	• expensive • affected by weather conditions • limited cargo capacity
5)	• high capacity • cost-effective for long distances • low risk of accidents • reliable and timely	• slow • not suitable for short distances • limited accessibility
6)	• reduced traffic congestion • eco-friendly • cost-effective due to lower fuel consumption • minimal infrastructure costs	• slow speed • seasonal dependency (droughts, frost) • limited network

3. Explain in what way the following factors may influence the choice of transport.

- ✓ type of goods;
- ✓ cost;
- ✓ geographical position;
- ✓ time limitation

4. Skim the text and answer the questions.

1. Which mode of transport is most closely associated with heavy industries?
2. Which mode of transport is described as having low physical constraints and why?
3. What seems to be the most common use for pipelines?
4. How does containerization change the way goods are transported compared to traditional methods?
5. Which mode of transport is the most cost-effective for long-distance travel?

A diversity of modes

Each mode of transport is characterized by technical, operational, and commercial characteristics. Technical features include things like speed and capacity, while operational features include speed limits and safety conditions. The demand for transport and who owns the vehicles are important commercial aspects because transport supports business activities.

Road transport. Road infrastructures are large consumers of space with the lowest level of physical constraints among modes of transport. However, building roads can be costly due to natural obstacles like rivers. Road transport has average operational flexibility as vehicles can serve several purposes but can rarely operate outside roads. Road transport systems have high maintenance costs, both for the vehicles and infrastructures. They are mainly linked to light industries and freight distribution, where rapid freight movements in small loads are the norm. With

containerization, road transport has become a crucial link in freight distribution between ports and commercial hinterlands.

Rail transport. Railways are composed of a traced path for a right of way on which wheeled vehicles are bound. Rail transport also includes monorails and maglev, which are more recent developments of guided rail technology. They have an average level of physical constraints. Heavy industries are traditionally linked with rail transport systems, although containerization has improved the flexibility of rail transport through its connectivity with road and maritime modes. Rail is the land mode of transport offering the highest capacity, with a 23,000 tons fully loaded coal unit train being the heaviest load ever carried.

Pipeline. Pipeline routes are practically unlimited as they can be laid on land or underwater. They aim to move liquids such as petroleum products over long distances cost-effectively. Physical constraints are low, and they include the landscape. Pipeline construction costs vary according to the diameter and increase proportionally with the distance and viscosity of fluids (from low-viscosity gas to high-viscosity oil).

Maritime transport. Maritime transport is the most effective mode of moving large quantities of cargo over long distances. Main maritime routes are composed of oceans, coasts, seas, lakes, rivers, and channels. The construction of channels, locks, and dredging are attempting to facilitate maritime circulation by reducing its discontinuity, but such attempts are highly expensive. Maritime transport has high terminal costs since port infrastructures are among the most expensive to build, maintain, and operate. These high costs also relate to maritime shipping, where the construction, operation, and maintenance of ships are capital-intensive. More than any other mode, maritime transport is linked to heavy industries, such as steel and petrochemical facilities adjacent to port sites. Yet, with containerization, maritime shipping has become the key element of globalization, allowing the trading of a wide range of goods and commodities.

Air transport. The core advantage of air transport is speed and flexibility. Air routes are practically unlimited but denser over the North Atlantic, inside North America and Europe, and over the North Pacific. Air transport constraints are multidimensional and include the site (a commercial plane needs about 3,300 meters of runway for landing and take-off), the climate, fog, and wind currents. Air activities are linked to finance and tourism sectors that require mobility of people. More recently, air transport has accommodated growing quantities of high-value freight and is playing an increasing role in global logistics.

Each transport mode has key operational and commercial advantages and properties. However, contemporary demand is influenced by integrated transportation systems that require flexibility. Modes can compete or complement one another in cost, speed, accessibility, frequency, safety, comfort, etc.

5. Match the words to the correct definition.

*hinterlands, capacity, freight, containerization,
constraint, viscosity, terminal, infrastructure*

- a) the physical and organizational structures needed for the operation of a society (e.g. roads, railways);
- b) restrictions or limitations that affect a system or process;
- c) any type of goods or items that are transported via air, land or sea transport;
- d) a system for shipping goods in standardized containers;
- e) the areas surrounding a port or city that are served by transport routes;
- f) the maximum amount something can hold or carry;
- g) the state of being thick or sticky, often in relation to liquids;
- h) a facility where passengers or cargo are transferred from one vehicle or mode of transport to another.

6. Complete the sentences with the words from the previous exercise.

1. The ____ of the oil was so high that it moved slowly through the pipeline, requiring special pumps to transport it efficiently.
2. Air transport is often used for high-value ____ because of its speed.
3. Large ports are designed with advanced ____ to accommodate ships, lorries, and passengers.
4. ____ has significantly improved global trade by allowing goods to be easily transported in standardized containers across different modes of transport.
5. One of the biggest ____ of road transport is the high cost of maintenance.
6. The train has the highest ____ of any land transport mode, carrying thousands of tons of cargo.
7. Many industries are located in the ____ areas, outside of major cities, near transport hubs.
8. The building of new ____ for roads and railways can take several years and a large investment.

7. Replace the word in brackets with its English equivalent and answer the questions.

Air freight is the fastest mode of transport. It has always been used for (*хрупкий и ценный груз*) and urgently needed goods since it can guarantee such a (*быстрая доставка*). The shelf life of (*скоропортящиеся товары*) is short, so it is really only air freight that can guarantee moving the goods from producer to (*потребитель*) in a sufficiently short time for the product to be sold. The (*затраты*) involved are high, but this can be justified if the final consumers pay a premium. Similarly, for other goods, the advantages of quick, safe air freight and savings in terms of (*упаковка и страхование*), can offset the higher (*транспортные расходы*). For these reasons, there has been an increase in the number of airlines operating (*грузовое воздушное судно*) in recent years.

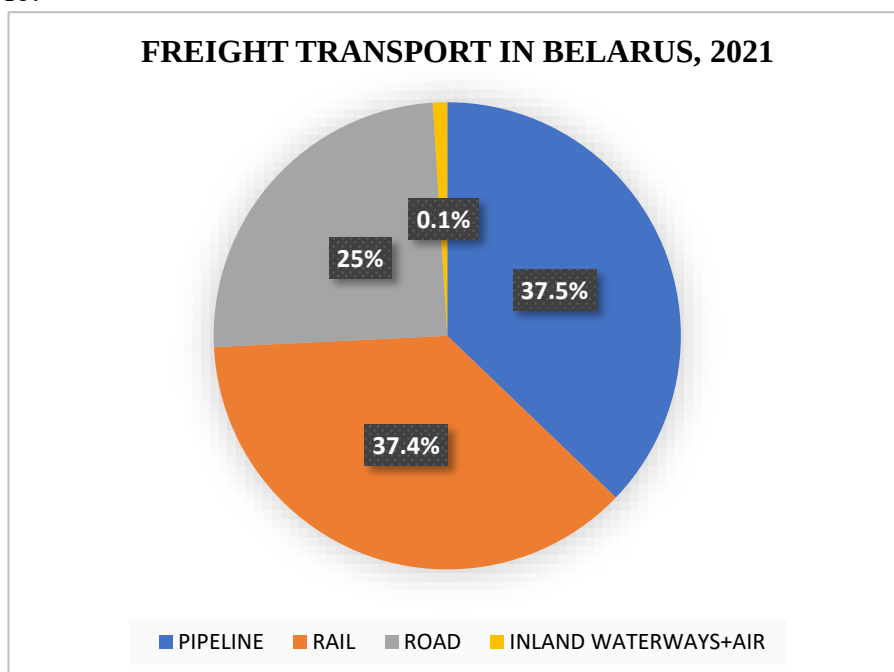
- ✓ What kind of goods are often transported by air?
- ✓ Why is air transport particularly suitable for perishable goods?
- ✓ Is the final price that consumers pay affected by this choice of transport?
- ✓ In what ways can using air transport save other costs?

8. Work with a partner and decide which mode is the best to transport the goods below. Give your reasons.

- 1) butter and cheese from Grodno to Minsk;
- 2) car parts from China to Belarus;
- 3) a Shishkin painting from Moscow to Minsk;
- 4) roses from the Netherlands to Belarus;
- 5) vaccine from China to Belarus;
- 6) salmon from Norway to Belarus;
- 7) a panda from China to Russia (Moscow Zoo);
- 8) cotton from Uzbekistan to Belarus;
- 9) bananas from Ecuador to Belarus;
- 10) toothpaste from Gebze, Turkey to Minsk.

9. The pie chart gives information on freight turnover by mode of transport in 2021 in Belarus. Complete the paragraph describing the pie chart.

The pie chart illustrates (provides information about) ¹____. In 2021, pipeline transport accounted for the largest share with ²____%, followed closely by ³____ transport with ⁴____%. Road transport made up a smaller portion representing ⁵____% of the total ⁶____. Inland waterways and ⁷____ transport had the smallest share, together contributing only ⁸____%. In conclusion, it is clear that (Overall, it can be said that) ⁹____ and ¹⁰____ dominated freight transport in Belarus, while ¹¹____ and ¹²____ played a minimal role.



Source: Belstat, 2022

10. Below is a table providing information on passenger turnover (in million passenger-kilometres) by mode of transport in 2021 in Belarus. Use the data to calculate the share for each mode of transport, draw a pie chart representing the data and write a short paragraph describing it.

Passenger transport mode	Passenger turnover, million pkm
Total	20,851
Rail	4,486
Bus	7,942
Inland waterway	2
Air	4,602
Metro and electric urban	3,181
Taxi	638



The share of each mode of transport is calculated by dividing the passenger-kilometres performed by each mode by the passenger-kilometres performed by all modes together.

11. In pairs. Internet research. Complete the table with the data regarding freight transport in the countries of the Customs Union and answer the questions.

- ✓ Which form of freight transport is the most common in the Customs Union?
- ✓ Which country uses inland waterway transport the most? And the least? What could be the reasons for this?
- ✓ Which country uses rail freight the most? And the least? What could be the reasons for this?

Freight Transport, 2021					
	Roads	Rail	Pipeline	Inland Waterway	Air
	(% , Based On Tonne-Kilometres)				
Belarus	25	37.4	37.5	0.02	0.08
Russia					
Kazakhstan					
Armenia					
Kirgizstan					



A tonne-kilometre is the equivalent of one tonne transported for one kilometre. Thus, a lorry transporting 20 tonnes 20 kilometres will have contributed 400 tonne-kilometres to national statistics.

12. Moving freight over long distances typically involves more than one mode of transport. Match the words to the correct definition.

intermodalism, ferry, containerization, handling, transshipment, stack, ramp, railroad car

- a) any of the separate parts of a train that are pulled by a locomotive;
- b) the process or system of conveying cargo in standard-sized containers;
- c) a process in which a cargo or container is moved from one mode of transport to another while in transit to its final destination;
- d) coordinated use of multiple modes of transport to move containerized freight from point of origin to destination;
- e) activities involved in getting the order ready for shipment;
- f) to arrange things in a pile one on top of another;
- g) a surface connecting a higher and a lower level; a slope;
- h) a boat or ship for taking passengers and often vehicles across an area of water, especially as a regular service.

13. Read the text about intermodal transport and label the images.



a



b



c



d

Intermodalism originated in maritime transportation, with the development of the container in the late 1960s, and has since spread to integrate other modes. Containerization permits the mechanized cargo handling of diverse types and dimensions placed into boxes of standard sizes. In this way, goods that might have taken days to be loaded or unloaded from a ship can now be handled in minutes.

To reduce time and costs during the transshipment process, standardized loading units are used in intermodal transport. Intermodal loading units (or intermodal transport units), such as semitrailers, containers and swap bodies, are transhipped between road, rail and waterway using specialized equipment, e.g. reach stacker, grapple lift and gantry crane. Due to their flexibility, semitrailers are predominantly used in road transport and only partially applicable in intermodal transport chains

because they are not stackable and require special equipment for handling. Containers are loading units which can be carried on all transport modes, and for that reason, they offer many advantages related to efficient terminal handling and cost-effective intermodal operations. The main advantage of a swap body is its ability to stand freely using four foldable legs that enable easy loading and unloading. The economic benefit for carriers is that just one vehicle can use multiple swap bodies.

Better techniques and transport units for transferring freight from one mode to another have facilitated intermodal transshipment. Early examples include piggyback, where truck trailers are placed on rail cars, and LASH (lighter aboard ship), where river barges are placed directly on board sea-going ships. It should be noted that LASH vessels are expensive. Besides, it is necessary to check on the availability of special handling facilities in the ports of origin and destination. Piggyback has become popular because it combines the speed and reliability of rail over long distances with the door-to-door flexibility of road transport for collection and delivery.

Two methods used for unloading and loading operations are:

- Lift-On Lift-Off (Lo-Lo). The loading and unloading of ships is carried out by cranes and reach stackers which can lift the cargo, often containers, on and off the vessel.

- Roll-on Roll-off (Ro-Ro). This system is used on ships that have ramps, so vans, lorries, or railroad cars with their cargo can be driven on and off the vessel. It is also used for automobiles on passenger ferries.

14. Match the beginning of each sentence in column A with the correct ending from Column B.

1. Intermodal transport became widespread	A. combining rail efficiency with road flexibility.
2. The introduction of containers made it possible	B. because they can stand on their own support legs.
3. Semitrailers are predominantly utilized in road transport	C. lifting cargo vertically between vessels and the dock, typically using cranes or reach stackers.
4. Swap bodies are particularly advantageous	D. after the development of containerization in the 1960s.
5. Containers are ideal loading units	E. although their use in intermodal chains is limited.
6. Piggyback transport offers a practical solution	F. since they enable fast handling at terminals and multimodal efficiency.
7. LASH vessels are designed for	G. to move various types of cargo quickly and efficiently.
8. Lo-Lo operations require equipment capable of	H. transporting river barges aboard sea-going ships.
9. Ro-Ro ships facilitate the movement of vehicles	I. through the direct use of ramps for loading and unloading.

15. Answer the following questions.

1. What is the key feature of containerization that has facilitated intermodal transportation?
2. What are the main advantages of using containers as intermodal loading units?
3. How do semitrailers differ from containers in terms of their applicability in intermodal transport chains?
4. What are the economic benefits for carriers in using swap bodies as intermodal loading units?
5. What are the advantages and disadvantages of the LASH system for intermodal freight transport?
6. How does the piggyback system combine the strengths of different transport modes?
7. What are the two main methods used for loading and unloading cargo in intermodal transport, and how do they differ?

16. Complete the sentences using information from the text.

1. Intermodalism began with _____.
2. Standardized loading units allow _____.
3. Specialized equipment like reach stackers, _____.
4. Semitrailers are flexible for _____ but less common _____.
5. Containers can be moved by _____.
6. Swap bodies have _____.
7. The piggyback system places _____.
8. Roll-on Roll-off ships have _____.

17. Translate the following sentences into English.

1. Транспорт является одним из ведущих видов экономической деятельности сферы услуг. Он обеспечивает перевозку пассажиров и грузов из одного региона в другой, тем самым поддерживает производственные связи и способствует экономическому развитию.

2. Транспорт делится на пассажирский и грузовой. Выбор вида транспорта зависит от типа перевозимого груза. Существуют следующие основные виды транспорта: наземный (железнодорожный, автомобильный, трубопроводный), водный (морской и речной) и воздушный.

3. Автомобильный транспорт перевозит грузы и пассажиров на короткие расстояния. Одно из его основных преимуществ – доставка груза «от двери до двери».

4. Железнодорожный транспорт имеет большое значение при перевозке грузов на большие расстояния и активно используется во внешней торговле Беларуси с Россией, Казахстаном и Китаем.

5. Воздушный транспорт выполняет перевозки пассажиров на дальние и средние расстояния, а также особо ценных грузов на дальние расстояния. Он обладает самой высокой скоростью доставки грузов и пассажиров. В Беларуси он почти полностью используется для выполнения международных перевозок.

6. Трубопроводный транспорт является одним из самых молодых видов транспорта в Беларуси. Он используется для перевозки нефти и нефтепродуктов, природного газа.

7. Речной транспорт обеспечивает перевозки массовых грузов на средние и дальние расстояния. Общая протяжённость внутренних судоходных путей республики составляет 2579 км.

8. По сравнению с контейнерами или полуприцепами съёмные кузова более лёгкие, но менее прочные, поэтому не допускают штабелирования и не способны защищать перевозимые грузы в достаточной степени.

9. Контрейлерные перевозки – это комбинированные железнодорожно-автомобильные перевозки, при которых перевозится трейлер, полуприцеп или съёмный кузов без водителя и тягача на железнодорожной платформе.

10. Горизонтальный метод погрузки и выгрузки – погрузка или выгрузка автомобильных транспортных средств с применением регулируемых рамп, позволяющих им заезжать на судно или съезжать с них.

11. Вертикальный метод погрузки и выгрузки – погрузка и выгрузка интермодальных транспортных единиц с использованием подъёмного оборудования. Применяется при перевозке грузов в контейнерах и съёмных кузовах.

Unit 3

Road Freight Transport

1. Look at the word cloud and find ten words that are related to the system of road freight transport. Explain in what way they are connected with this topic.



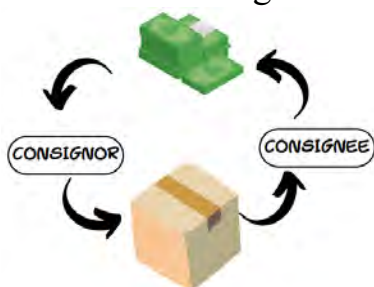
2. Match the terms on the left with their definitions on the right.

Term	Definition
1) haulage	a) the government department that deals with taxes on goods coming into and leaving a country
2) own account operator	b) the system of people and things that are involved in getting a product from the place where it is made to customers
3) freight forwarder	c) a person or company that moves goods for their business purposes and operates its own transport
4) hire and reward operator	d) a person or company that sends goods to someone
5) consignor (also referred to as <i>shipper</i>)	e) a person or company that transports goods for other businesses for a fee
6) consignee	f) the business of moving things by road or railway
7) carrier	g) a person or company to whom goods are delivered
8) supply chain	h) a company that transports goods or people from one place to another
9) fleet	i) a company that arranges for goods to be transported, especially to another country
10) customs	j) cars, buses, planes, etc. under the control of one person or company

3. Complete the text with the correct term from the previous exercise.

Road transport, also known as road ¹____, is essential in the logistics and transportation industry, serving as a vital link in the ²____ for moving cargo between various locations.

There are various players involved in ensuring that goods reach their destination safely and efficiently. One of the main categories of operators is the ³____. These are companies that use trucks and other vehicles to transport goods for their business purposes. For example, a large supermarket chain might use its own ⁴____ of vehicles to deliver products from warehouses to stores. On the other hand, a ⁵____ provides transportation services to other businesses for a fee. These operators have fleets of trucks to deliver goods for different companies, from manufacturers to retailers.



In many cases, freight forwarding plays a critical role. A ⁶____ is responsible for arranging the logistics of transporting goods, including selecting the appropriate ⁷____ (the person or company that physically transports the goods). The freight forwarder acts as an intermediary between the ⁸____ (the sender of the goods) and the ⁹____ (the recipient of the goods), ensuring that the shipment is organized and the right carrier is chosen. Freight forwarders cover all aspects of the transport process, in most cases including ¹⁰____ clearance, insurance, preparing documents, organizing import and export requirements like taxes and fees, and making confirmation of delivery and receipt. Additionally, many freight forwarders offer the warehousing and packing of goods. They can pick up the goods from the shipper, see that they are packed appropriately and store them until shipment.

4. Answer the following questions.

1. What is the main purpose of road transport in the logistics and transportation industry?
2. What are the two main categories of operators involved in road transport?
3. How do own account operators and hire and reward operators differ in their business models? Which type of company is more common in the road haulage industry in Belarus?
4. What is the role of a freight forwarder in the transportation process?
5. What are the key responsibilities of a freight forwarder?

5. Replace the words in brackets with their English equivalents and answer the questions:

- ✓ In what way can effective logistics management enhance a company's competitiveness in the market?
- ✓ What challenges do freight forwarders face when dealing with customs regulations across different countries?
- ✓ What skills are essential for someone working as a freight forwarder in today's global economy?

A (*экспедитор*) is an intermediary who acts on behalf of importers, exporters or other companies or persons, organizing the safe, efficient and cost-effective (*перевозка грузов*). Typical work activities of a (*экспедитор*) include:

1. A forwarder advises his client on the quickest and most economical (*вид транспорта*), taking into account (*вид товаров*) and the (*заказчики*)' delivery requirements.

2. He arranges appropriate (*упаковка*), taking into account climate, (*вес*), nature of goods and (*стоимость*), and the (*доставка и складирование*) of goods at their final (*место назначения*). He knows modern packing techniques, especially for the transport of (*скоропортящийся и хрупкий*) goods.

3. He handles (*таможенные*) formalities for his client. He knows the tariffs and (*налоги*) so that goods destined for export are cleared through (*таможня*) immediately after their delivery by the client.

4. A forwarder negotiates (*договоры о перевозках*) with (*перевозчики*). Because of his daily contacts with them, he can expedite (*доставка*) in case of an emergency.

5. He consolidates different shipments into one, which results in an optimal use of the available cargo space and (*конкурентоспособная цена*).

6. A forwarder arranges (*страхование*) and assists the client in the event of a claim.

7. He gives advice on (*складирование и распространение*). Many forwarders have their own (*склады*) and organize (*распространение*), which speeds up and increases liquidity.

8. He completes all the necessary (*транспортные документы*).

9. He uses e-commerce, internet technology and satellite systems to enable real-time (*отслеживание грузов*), etc.

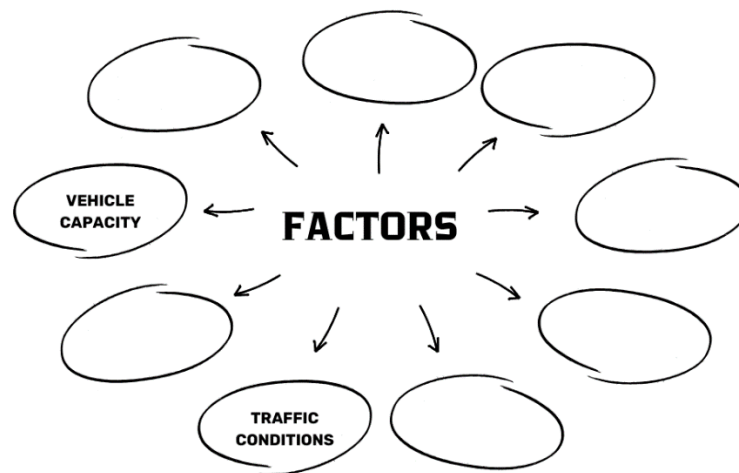
6. Work in pairs. Think of any transportation or freight forwarding company operating in Belarus. Do some research on the company and share the information with your group.

There are some points to research:



- ☐ name and location of the company;
- ☐ type of the company (private, state-owned, limited, joint venture);
- ☐ fields of activity and range of services provided by the company;
- ☐ number of staff;
- ☐ markets (operate in the domestic or foreign market).

7. Imagine that you are a transportation specialist responsible for the optimisation of the whole process. What factors should you consider while planning each delivery?



8. Match the words to the correct definition.

*sustainability, delivery window, traffic pattern, detour,
idling, shipment, telematics, consolidation*

- a different route that is used because a road is closed;
- any systematic movement of people or vehicles;
- (of an engine) running at low speed with the transmission disengaged;
- the process of putting items together to send or transport them;
- the act of sending goods somewhere;
- the area of technology that deals with sending digital information over long distances using wireless forms of communication;
- the quality of causing little or no damage to the environment and therefore able to continue for a long time;
- the estimated time frame within which the delivery or service is expected to take place.

9. Complete the following sentences using the words or phrases from the previous exercise.

- A plastic bag is made from petroleum products and, therefore, is an unfriendly choice for environmental ____.
- In vehicles, ____ can be used to monitor hours used and miles driven, each of which can be recorded in real time.
- ____ can significantly reduce the cost of moving smaller volumes of goods.
- We are required to pay for the goods before ____.
- You'd be wise to make a ____ to avoid the roadworks.
- ____ can often be adjusted based on the needs of the customer, offering flexibility for unforeseen circumstances or scheduling conflicts.
- Since March 2023, a new ____ has been in place to allow cars, buses, and other vehicles with three axles or less to use the bridge.
- Vehicle ____ contributes to increased emissions of greenhouse gasses and air pollutants.

10. Skim the text and highlight nine tips given in the text to improve the efficiency and cost-effectiveness of freight transport.

Freight transport and delivery is a complex process that requires careful planning and execution to ensure that goods are delivered on time and in good condition. One of the most important aspects of this process is route optimisation, which involves selecting the most efficient and cost-effective route for transporting goods from the point of origin to their final destination. Here are some tips on optimising routes during freight transport and delivery.

1. The first and most important tip for optimising routes during freight transport and delivery is to use the route optimisation software. This type of software can help you determine the most efficient and cost-effective route based on factors such as distance, traffic conditions, delivery windows, and the size and weight of the cargo. It can also help you calculate the fuel consumption and carbon emissions of each route, which can be useful for reducing your environmental impact.

2. The time of day can have a significant impact on the cost and efficiency of freight transport and delivery. For example, travelling during rush hour can significantly increase travel time and expenses. Therefore, it is important to consider the time of day when planning routes and to select routes that avoid peak traffic hours whenever possible. It is important to plan routes during off-peak hours with less traffic congestion. This can help drivers avoid delays and save time. Additionally, it is essential to consider traffic patterns when planning routes. For example, it is better to avoid routes that are frequently congested during rush hour.

3. Another important factor to consider when optimising routes during freight transport and delivery is the capacity and weight of the vehicle. It is important to ensure that the vehicle can safely and legally carry the cargo and that the weight is distributed evenly to avoid the vehicle overloading. Additionally, optimising routes to minimise the number of trips or group deliveries by weight can help to reduce freight forwarding costs.

4. Delivery window is the period of time when the recipient expects the goods to arrive. These windows can have a significant impact on the cost and efficiency of freight forwarding and delivery, as missing a delivery window can result in additional costs and delays. Therefore, it is important to plan routes that take into account delivery windows and ensure that goods are delivered within the specified time frame.

5. Distance is a key factor to consider when optimising routes during freight transport and delivery. Reducing the distance travelled can help to reduce transportation costs and improve efficiency. This can be achieved by selecting the most direct route, avoiding unnecessary detours, and grouping deliveries by proximity to each other.

6. GPS tracking and telematics technology can provide real-time data on the location, speed, and performance of the vehicle. This can be useful for optimising routes by identifying the most efficient and cost-effective routes, monitoring driver behaviour, and reducing fuel consumption. Additionally, this technology can help to

improve safety by alerting drivers to potential hazards and providing emergency assistance in the event of an accident or breakdown.



7. Fuel is a significant cost for freight transport and delivery, and optimising routes for fuel efficiency can help to reduce costs and improve environmental sustainability. This can be achieved by selecting the most direct and least congested routes, avoiding idling and unnecessary stops, maintaining proper tyre pressure, and using fuel-efficient vehicles.

8. Consolidating shipments is an effective way to optimise routes during freight transport and delivery. By combining multiple shipments into a single delivery, companies can reduce the number of vehicles needed and minimise the distance travelled. This can help companies save time, reduce fuel consumption, and lower costs. Additionally, consolidating shipments can help reduce carbon emissions, which is beneficial for the environment.

9. Intermodal transportation involves the use of multiple modes of transport, such as trucks, trains, and ships. By using intermodal transportation, companies can optimise routes and reduce costs. For example, long-distance shipments can be transported by train, while local deliveries can be made by truck. This can help companies save time, reduce fuel consumption, and lower costs. Additionally, intermodal transportation can reduce carbon emissions.

Route optimisation is crucial in the freight transport industry as it can significantly reduce transportation costs, improve efficiency, and enhance customer satisfaction. By implementing the tips discussed above, companies can streamline their operations, reduce fuel consumption, and lower their carbon footprint.

11. Choose the correct answer for the following questions.

1. What is the primary purpose of route optimisation in freight transport?
 - a) to increase vehicle speed;
 - b) to minimise transportation costs and improve efficiency;
 - c) to maximise driver working hours;
 - d) to extend delivery windows
2. How can GPS tracking and telematics technology contribute to route optimisation?
 - a) by replacing human drivers completely;
 - b) by providing real-time data on vehicle performance and location;
 - c) by purchasing new vehicles;
 - d) by eliminating delivery windows
3. How can companies reduce their carbon footprint during freight transport?
 - a) by increasing the number of vehicles;
 - b) by consolidating shipments and using intermodal transportation;
 - c) by increasing delivery distances;
 - d) by ignoring traffic conditions

4. Why is the time of day significant in route planning?

- a) to increase transportation costs;
- b) to maximise traffic congestion;
- c) to avoid peak traffic hours and reduce delays;
- d) to increase fuel consumption

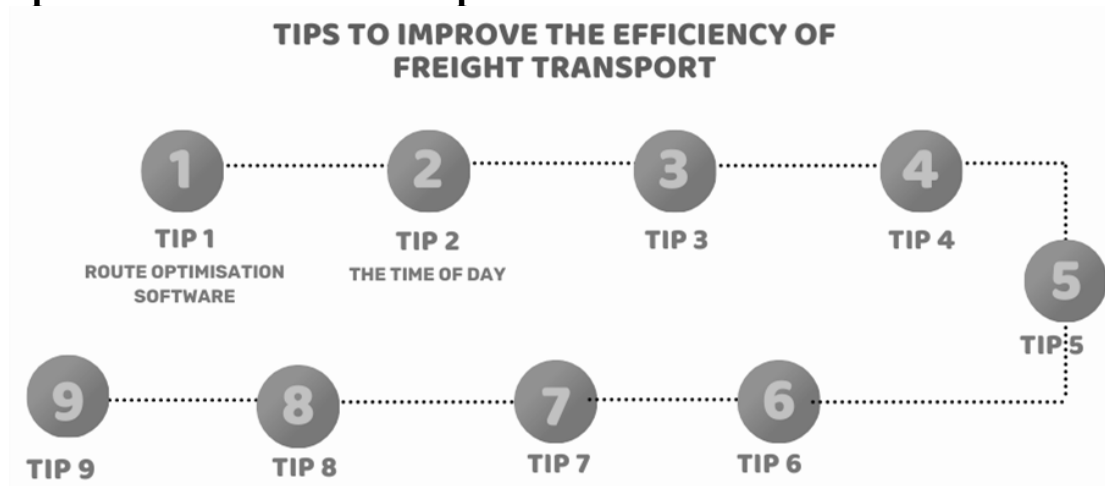
5. What benefit does intermodal transportation offer?

- a) using only trucks for transportation;
- b) reduced transportation costs and carbon emissions;
- c) increasing delivery distances

12. Make the collocations noun-noun and use them in sentences of your own.

1) traffic	a) pressure
2) transportation	b) footprint
3) tyre	c) consumption
4) carbon	d) congestion
5) fuel	e) assistance
6) driver	f) hour
7) emergency	g) behaviour
8) rush	h) costs

13. Work with a partner. Complete the flowchart below with the key tips for route optimisation. Take turns to present the information.



14. Group Discussion Questions.

1. How can route optimisation impact both the cost of freight transport and the environment?
2. Which tip do you think is the most important and why?
3. Can you think of any real-life examples (or news stories) where poor route planning led to problems in delivery or increased costs?
4. How have modern technologies changed the way we transport goods today?
5. Can you think of any potential downsides of using technologies such as video surveillance systems in transportation (e.g. privacy concerns, over-reliance on tech)?

15. Read the text and fill in the gaps with a suitable derivative of the word given in brackets. Translate the text into Russian.

Tachograph



The tachograph is the device that records driving time, breaks and rest periods as well as periods of other work and availability of drivers engaged in the ¹ _____ (*carry*) of goods or passengers by road. The purpose of the tachograph is to enable controls of ² _____ (*comply*) with the set of government rules aimed to prevent driver fatigue and to contribute to good working conditions for drivers, road safety and fair ³ _____ (*compete*).

Digital tachographs are able to record and store the ⁴ _____ (*act*) of the driver and the co-driver in an accurate and secure manner, thanks to the ⁵ _____ (*implement*) of forefront technology and strong anti-tampering measures. The driver must insert into the tachograph a personal card incorporating a microchip before starting to drive. This personal card stores the driving activity from the driver for at least 28 days and ensures that the information can be easily retrieved by ⁶ _____ (*inspect*) authorities.

Since 2019 a new generation of tachographs, so-called smart tachographs, are being installed in newly registered trucks and buses in European countries. The smart tachograph features the same functionalities as previous generations of the digital tachograph, complemented with additional ⁷ _____ (*communicate*) tools, such as GNSS positioning and ⁸ _____ (*transmit*) of real-time information to enforcement authorities by means of a short-range communication channel. It also incorporates enhanced anti-tampering measures such as ⁹ _____ (*encrypt*) keys generated with the most advanced algorithms.

16. Translate the following sentences into English.

1. У этой экспедиторской компании достаточные профессиональные знания, чтобы выступить посредником в перевозке ваших грузов. Они будут быстро и в сохранности доставлены из пункта отправления в пункт назначения. Воспользуйтесь их опытом.

2. Мы хорошо знакомы с современными условиями торговли и современными технологическими возможностями. Мы можем вас проконсультировать по всем вопросам, связанным с упаковкой ваших товаров, так как мы знаем все современные упаковочные технологии, особенно касающиеся перевозок скоропортящихся и хрупких грузов. Мы можем оформить все необходимые транспортные документы, выполнить таможенные формальности, организовать страхование, а также проследить движение вашего груза. Вам не нужно будет ни о чем беспокоиться, вы можете на нас положиться.

3. Ваша задача - найти лучший и наиболее дешевый вид транспорта, организовать страхование и хранение груза. Вы отвечаете за все аспекты транспортного менеджмента.

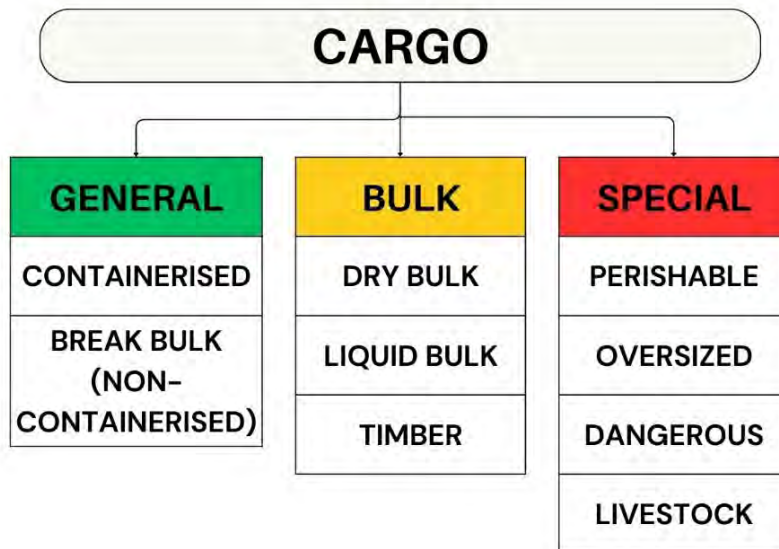
4. Для контроля за работой транспортного средства применяются системы глобального спутникового позиционирования, интернет-технологии и различные виды связи. Такие системы позволяют давать указания водителям транспортных средств, контролировать процесс перевозок через передачу информации с датчиков, установленных на транспортном средстве. В результате повышается эффективность, надежность и безопасность перевозок.

5. Цифровой тахограф – это устройство, которое записывает информацию о работе транспортного средства, такую как скорость, расстояние, время движения и перерывов, а также действия водителя, такие как остановки и переключение скоростей. В отличие от традиционных аналоговых тахографов, цифровые модели обеспечивают высокую точность и надежность данных, а также упрощают процесс их обработки и хранения. В первую очередь, цифровые тахографы предназначены для повышения безопасности на дорогах и контроля соблюдения правил труда. Они позволяют минимизировать риски аварий и обеспечивают прозрачность в логистике и перевозках.

Unit 4

Shipping Goods

1. Understanding the different types of cargo is crucial for businesses involved in transporting goods. Each type of cargo presents unique challenges and requires specialized knowledge and equipment to ensure its safe and efficient transport. Study the diagram given below, read the definitions and guess what type of cargo they define.



- a) products that have a limited shelf life and can spoil over time;
- b) goods transported unpackaged in large quantities;
- c) flammable or poisonous goods which pose a threat to life or environment;
- d) live animals transported from one place to another;
- e) items that are non-standard and extra-large;
- f) wood that has been specially produced for use in the building industry;
- g) goods shipped in bags, boxes, drums, etc. without the use of a container.

2. Match the pictures of trucks (lorries) (a-f) with their names and definitions (1-6).



a



b



c



d



e



f

1. An articulated lorry, also known as a semi-trailer truck, consists of a tractor unit and a trailer, normally used for moving large volumes of goods over longer distances.

2. A box van, also known as a box truck, is a rigid truck with an enclosed cargo area made of hard sides and used for local or regional deliveries of dry goods, consumer products, electronics, beverages.

3. A dump-body truck is used to transport loose material like sand, asphalt or gravel.

4. A flatbed truck with an open cargo area without sides or a roof can carry oversized or irregularly shaped loads.

5. A tanker, also known as a tank truck, is used to transport liquid or liquefied material, whether oil, milk, liquid chemicals or fertilisers.

6. A refrigerated truck is used for commercial deliveries of food products and perishable goods, such as fruit, meat, dairy and medicine.

3. Decide which truck you would recommend to transport the goods below.

e.g. You can use a refrigerated truck to transport....

A refrigerated truck can be used to transport....or...

Frozen food, canned food, fuel, apples, cement, plastic pipes, dairy products, books and magazines, flowers, seafood, bottled juice, coal, timber, alcohol, vaccine.

4. Read the text below, fill in the gaps with the phrases below and answer the questions.

*escort car, shipping containers, open-top container, lashing and crating,
final site, oversized cargo, traffic signs, production sites*

Combine harvesters, industrial batteries, helicopters, etc., are all large machinery that is integral to the operation of our farms, factories, and cities. However, these important items do not fit within TEU (twenty-foot equivalent unit) standard ¹ _____, creating complexity when loading cargo ships, trains, and trucks. Thus, getting ² _____ from a factory all the way to the end-user is a complicated dance of different modes, complicated paperwork, and numerous participants.

Challenges begin at ³ _____, where particular equipment like cranes are needed to lift the cargo onto a specialised truck and trailer. Then, trained professionals are deployed who have planned for this transportation and are able to execute the ⁴ _____ of the special cargo, securely fastening the products to the trailer.

To make matters a bit more complicated, it is common for trucks carrying oversized goods to require special permits and an ⁵ _____ when driving from the production site to the port. In some circumstances, oversized cargo transportation might necessitate the temporary removal of ⁶ _____, streetlights, or other proximal obstacles.

Once at a port, another specialised crane is needed to move the cargo from the truck to the ship, usually by way of a flat-rack or ⁷ _____. After the cargo's journey at sea, it returns to land with the same challenges it encountered from production to port, but with a bit more of time pressure on this end. Often the oversized cargo needs to get to its ⁸ _____ at the exact time when it can be lifted and put in place, creating a crucial timing challenge for all steps in this process.

- ✓ *What are the key challenges involved in transporting oversized cargo from the production site to the end-user?*
- ✓ *What additional measures may be necessary when transporting oversized cargo on public roads?*
- ✓ *What challenges arise when loading and unloading oversized cargo at the port?*

5. Read the text and label the pictures below with the words from the text.

Transport packaging is a critical component in ensuring the safe and efficient delivery of products to the end customer. Understanding the different categories of transport packaging – primary, secondary (=group), and tertiary (=transport) – is essential.

PRIMARY packaging directly interacts with the product, offering the first layer of protection and important product information (e.g. a bottle, a sack, a drum, a can, a tube, a carton, etc.).

SECONDARY packaging provides additional protection and consists of the grouping together of primary packaging. For example, in the case of milk, an individual carton would be primary packaging, while the cardboard box containing the pack of cartons would account for secondary packaging.

TERTIARY packaging focuses on the efficient grouping and protection of goods during transportation (e.g. a shipping container, a pallet). Most of this packaging cannot be handled manually and requires mechanized equipment such as forklifts.

In the logistics context, the significance of the unit load should be noted. It's the basic unit that a company uses in the transport and storage of its products. These loads can be in the form of pallets, boxes, containers, drums, coils, intermediate bulk containers (IBCs), sacks, etc. Various unit loads can exist in a single warehousing facility; they can be differentiated by area and stored in different types of racking adapted to each one.



a



b



c



d



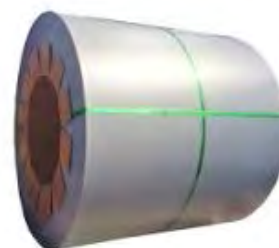
e



f



g



h

6. Match the types of internal packaging to their definitions.

*bubble wrap, wood wool, packing peanuts, cardboard,
polystyrene foam, plastic film, foam rubber*

- a) a sheet of plastic filled with bubbles of air, used especially for wrapping and protecting things;
- b) a thin continuous piece of plastic;
- c) very thick, stiff paper, usually pale brown in colour;
- d) a mass of fine, soft wood shavings;
- e) small pieces of polystyrene;
- f) a light, usually white plastic used especially for putting around delicate objects inside containers to protect them from damage, or for putting around something;
- g) soft rubber with air bubbles in it.

7. The correct marking of packages helps to prevent incorrect handling and safety hazards, losses of weight and volume, shipment delays and customs fines.

In the text given below find the English equivalents for:

- a) *манипуляционные знаки;*
- b) *масса брутто;*
- c) *страна-изготовитель;*
- d) *наименование пункта назначения;*
- e) *наименование грузоотправителя;*
- f) *порядковый номер грузового места внутри партии;*
- g) *количество мест в партии;*
- h) *габаритные размеры грузового места.*



The complete marking must comprise the following information:

1. Shipping mark

- Identification mark, e.g. the name of the receiver, or shipper, or receiver's company name
- Identification number, e.g. receiver's order number
- Total number of items in the complete consignment
- Number of the package in the consignment, e.g. 5/12 or 5-12
- Place and port of destination

2. Information mark

- Country of origin. It must be stated in accordance with the provisions of the particular countries.
- Indication of weight of package: from a gross weight of 1000kg packages must be marked with details of weight
- Dimensions of packages: standards specify that dimensions be stated in centimetres.

3. Handling instructions

Handling marks help to ensure that greater care is taken with cargo handling. It must be possible to tell:

- whether the package is sensitive to heat or moisture,
- whether it is at risk of breakage,
- where the top and bottom are and where the centre of gravity is located.

8. Match the handling marks to the appropriate pictogram.

*Fragile • Keep away from heat • Keep dry • Centre of gravity •
This way up • Use no hooks • Do not stack • Clamp as indicated •
No forklift trucks • Do not clamp as indicated*

				
a	b	c	d	e
				
f	g	h	i	j

➤ Read the explanation and guess what symbol it describes.

1. Cargoes marked with this symbol should be handled carefully and should never be tipped over or slung.

2. The package must always be transported, handled and stored in such a way that the arrows always point upwards. The cargo doesn't need to be stored on top.

3. This label should be used for goods, such as butter and chocolate, which everybody knows shouldn't be exposed to heat in order to prevent losses.

4. Cargoes must be protected from excessive humidity and must accordingly be stored under cover. If particularly large or bulky packages cannot be stored in warehouses, they must be carefully covered with tarpaulin.

9. In pairs, decide the best form of packing and labelling for these goods and give your reasons.

1. electronic devices, such as a laptop, a smartphone;
2. dry goods, such as tea, flour;
3. perishable items, such as fruit, meat;
4. fresh flowers;
5. fragile items, such as light bulbs, glassware, ceramics.

10. Read the text and put the steps involved in the international shipment of bananas in the right order.

The advent of containerization and reefers has transformed the manner in which fruits are transported and stored. For instance, bananas, the world's most traded fruit, are harvested in subtropical markets (e.g., Costa Rica, Ecuador, Brazil, Colombia), boxed, palletised, and loaded into reefers. Reefers are then loaded into container ships that can supply power for the refrigeration units.

Before being boxed, banana bunches are placed in plastic bags to prevent humidity loss during transportation. A banana box weighs around 16 kg (35 pounds) each. Corrugated cardboard boxes are commonly used. They should have sufficient strength to withstand stacking and handling during transportation. Boxes are usually designed with ventilation holes to allow for proper air circulation, which is crucial for preventing the build-up of ethylene gas and moisture.

The boxes should be labelled with details such as the variety of bananas, the country of origin, the exporter's name and address, and the date of packaging. Labels may also include instructions for handling and storage, such as the recommended temperature and humidity conditions. Symbols indicating that the contents are fragile and should be handled with care are prominently displayed on the boxes. This alerts the handlers and transporters to take extra precautions to avoid dropping or mishandling the boxes.

Then, the goods are palletised with 48 boxes per pallet and loaded into reefers. Pallet size is designed to fit exactly in a reefer with two pallets per row over five rows. The size and positioning of the pallets within the reefer allow for the efficient circulation of refrigerated air.

The ideal temperature to transport bananas is around 13 degrees Celsius, which allows using the reefers to cool down shipments. Pallets are therefore loaded at ambient temperature, and the reefer unit will cool down the shipment to the "banana" temperature in a matter of about five days.

At the port of destination, reefers are de-stuffed in refrigerated warehouses with the pallets ready to be distributed by refrigerated trucks.

A	Boxes are labelled with details such as variety, origin, packaging date, and handling instructions.
B	After harvesting, banana bunches are placed in plastic bags to minimize moisture loss.
C	Reefers are placed on container vessels that can supply continuous power for cooling.
D	The pallets, once loaded at ambient temperature, are cooled down gradually by the reefer over about five days.
E	At the port of arrival, reefers are unloaded and de-stuffed in refrigerated storage facilities.
F	Bananas are packed in corrugated cardboard boxes designed to support weight and allow ventilation.
G	Boxes are palletised – 48 boxes per pallet – and arranged in reefers to ensure proper airflow.
H	Pallets are distributed to retailers or storage centres using refrigerated trucks.

11. Read the statements below and decide if they are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Bananas are usually cooled to the optimal temperature before being loaded into reefers.
2. Corrugated cardboard is chosen mainly for its ability to keep bananas warm during transport.
3. Ethylene gas must be completely removed from reefers to prevent spoilage during shipment.
4. The placement of pallets inside reefers is essential for maintaining proper airflow.
5. Plastic bags using during banana harvesting help reduce weight loss by minimizing moisture evaporation.
6. Each pallet of bananas includes information about the exporter printed on a large outer label.
7. Handlers rely on box symbols to determine how to manage the goods safely.
8. At the destination, bananas are taken directly from reefers and delivered without any further cooling.

12. Read the recommendations how to package a sculpture and complete the text with the following verbs.

hold, mark, condense, weigh, need, put, double, surround

For these sculptures I suggest a wooden crate and not a cardboard box. Sculptures of that size have more surface area that can get damaged and ¹___ more protection than smaller items. They also ²___ more, so their containers need to be stronger.

Inside the crate, ³___ the item with packing material, like wood wool or packing peanuts. You could use a sheet of polysterene foam that fits inside the crate and has a cut-out to fit the base of the sculpture. That would ⁴___ it in place. And I would use another piece of polysterene to hold the top of the sculpture in place, as well. Make sure you ⁵___ the crate with the symbols for “fragile” and “this way up”.

For more protection, you can ⁶___ box the item. So, you package it in a crate, just like we talked about, and ⁷___ that crate inside a slightly larger wooden crate surrounded by more packing material.

There's one last thing you should think about. There may be changes in temperature during transport which could cause water to ⁸___ on the items. So I would advise you drying agents.

13. Imagine your company receives an enquiry from a Chinese or Russian company. They want to ship some goods from Belarus to China or Russia.

1. Choose any type of cargo (e.g. electronics, glassware, food products, machinery, etc.).
2. Make some recommendations on the correct packaging and marking of the items.
3. Use the sample text above and the phrases below to help you.
4. Present your ideas to the group (2-3 minutes).



To ensure the safe delivery of / to avoid damage in transit, I recommend / suggest using

You should use a because

Each item should be wrapped in to prevent impact damage.

For more protection / extra security

The boxes must be clearly marked with

14. Work in pairs. Answer the questions below.

1. Are there any differences between transporting dangerous goods and general goods?
2. Could you give some examples of dangerous goods or hazardous materials?
3. What kinds of accidents can happen when transporting dangerous goods?
4. What should transport companies do to prevent such accidents?
5. Should transporting hazardous materials require special training?
6. Why must all packages containing hazardous materials be properly marked and labelled?

15. Match the words to the correct definition.

*toxic spill, stowage, personal protective equipment,
wheel chock, drain seal, first aid kit, chemical spill kit*

- a) a safety device used to prevent dangerous liquids from entering the drainage system;
- b) the way cargo is placed, arranged, and secured inside a vehicle or container during transportation;
- c) a collection of basic medical items that help treat minor injuries;
- d) an accidental release of harmful chemicals or substances that can cause serious health problems or environmental damage;
- e) a block placed under a wheel to keep a truck or trailer from moving accidentally;
- f) special clothing or equipment that protect the body, eyes, hands, head from injuries, chemicals;
- g) a set of special tools and materials used to clean up dangerous chemical spills.

16. Read the text. Look at the images below and label each one using the correct word related to the equipment needed while transporting hazardous materials.

Every year, the mishandling of hazardous materials in transportation leads to accidents with devastating consequences. From explosions to toxic spills, fires, and exposure to dangerous chemicals, these accidents often result in serious injuries and deaths and cause long-lasting environmental damage.

A dangerous good (also known as hazardous material or hazmat) is any substance or material capable of posing an unreasonable risk to health, safety, and property when transported in commerce. Identifying dangerous goods is the first step to reduce the risks posed by the product with proper packaging, communication, handling, and stowage. This is an important aspect of cargo safety.

Most goods are not considered sufficiently dangerous to require special precautions during carriage. Some goods, however, have properties which mean they are potentially dangerous if carried.

Dangerous goods are liquid or solid substances and articles containing them, that have been tested and assessed against internationally-agreed criteria – a process called classification – and found to be potentially dangerous (hazardous) when carried. There are nine classes of dangerous goods, and each have their own degree of danger and class specific hazards.

There are regulations to deal with the carriage of dangerous goods, the purpose of which is to protect everyone either directly involved (such as consignors or carriers), or who might become involved (such as members of the emergency services and public). Regulations place duties upon everyone involved in the carriage of dangerous goods, to ensure that they know what they have to do to minimise the risk of incidents and guarantee an effective response.

Before the transportation of dangerous goods, you should ensure that the vehicle and workers are equipped with the right personal protective equipment (PPE), fire extinguishers, and documentation. PPE and safety equipment for the transportation of dangerous goods might include a warning vest, wheel chocks, warning signs, portable lighting, protective gloves, eye rinsing liquids, and goggles. In some cases, a driver should have an emergency escape mask, a shovel, drain seal and plastic collecting container in vehicles. In addition to the above items the driver should carry a first aid kit and any other safety items identified in the risk assessment (e.g. chemical spill kit, protective overalls, safety boots, hard hat).



a



b



c



d



e



f



g



h

17. Match the beginning of each sentence in column A with the correct ending from Column B.

A	B
1. Dangerous goods are materials that	a. such as warning vests, goggles, and chemical spill kits.
2. Hazards from dangerous goods include	b. to reduce the risks during the transportation of dangerous goods.
3. Proper packaging, communication, and handling are important	c. fires, explosions, toxic spills, and chemical exposure.
4. Goods are classified	d. ensure that the driver and vehicle are properly equipped.
5. Regulations for transporting hazardous materials are designed to ensure	e. special precautions during transportation.
6. Personal protective equipment (PPE) may include items	f. the safety of transport workers, emergency services, and the public.
7. Before transporting dangerous goods, you should	g. cause serious harm to people, property, or the environment during transportation.
8. Dangerous goods regulations place duties on	h. to identify the specific level of danger they pose.
9. Most goods do not require	i. everyone involved in the transportation process.

18. Choose the correct class and description for the dangerous materials below.

gunpowder • hydrogen • sulphuric acid • fireworks • uranium • arsenic • alcohol • propane • kerosene • sulphur • battery • peroxide • mercury

Class 1: Explosives	Class 2.1: Flammable Gas	Class 3: Flammable Liquids

		
Class 4.1: Flammable Solids	Class 5.1: Oxidizing Agent	Class 6.1: Poison
		
Class 7: Radioactive	Class 8: Corrosive	Class 9: Miscellaneous

19. In pairs.

- ✓ **Student A is the driver getting ready for a dangerous goods shipment.**
- ✓ **Student B is the safety inspector responsible for checking the vehicle, equipment and the driver's PPE before departure.**

Task

1. Driver:

- present each item from the safety equipment checklist;
- describe or explain the use of each item (e.g. "The fire extinguisher is used to put out fires in case of an emergency").

2. Safety inspector:

- check if the driver has all necessary items and if they are in good condition;
- discuss what actions the driver should take in the event of an accident (e.g., "What is the first thing you should do if there is a spill?"). Use the information below.

DRIVER FIRST ACTIONS



- Stop the engine*
- No smoking allowed*
- Put warning signs on road*
- Warn road users to keep away from the danger area*
- Keep upwind*
- Inform the police and fire brigade immediately*
- Do not try to deal with any fire yourself*

20. Translate the following sentences into English.

1. По способам перевозки и выполнению погрузочно-разгрузочных работ, грузы делятся на генеральные, массовые и специальные. В категорию «специальные грузы» входят грузы, требующие особых условий при их транспортировке и хранении. К ним относятся: опасные, скоропортящиеся, негабаритные, живой скот и птица. К массовым грузам относятся наливные и сухие навалочные. К сухим навалочным грузам относятся такие грузы, как железная руда, цемент, уголь, зерно, фосфаты и др.

2. Опасные грузы – это вещества и предметы, обладающие опасными свойствами и требующие соблюдения особых мер предосторожности. Скоропортящиеся грузы – это грузы, требующие специальных условий транспортировки: охлаждения, отопления, вентиляции.

3. Выбор ТС для перевозки овощей и фруктов производится грузоотправителем по согласованию с перевозчиком в зависимости от погодных условий или дальности перевозки. В холодную погоду их перевозят в изотермических кузовах, а на дальние расстояния – в кузовах с подогревом или охлаждением в зависимости от сезона года.

4. Скоропортящиеся пищевые продукты транспортируют в изотермических фургонах, или в рефрижераторах. В зависимости от рода груза температура должна быть от $+12^{\circ}$ до -20°C .

5. Живая рыба должна транспортироваться в термоизолирующих автоцистернах, оснащенных устройством для охлаждения воды, а также оборудованием для насыщения воды воздухом. Температура воды в термоизолирующей автоцистерне не должна превышать 10°C .

6. Транспортная маркировка информирует о получателе, отправителе и способах обращения с продукцией при транспортировании и хранении и должна содержать следующую информацию:

- наименование грузополучателя и пункта назначения;
- наименование грузоотправителя и пункта отправления;
- количество грузовых мест в партии и порядковый номер места в партии;
- масса брутто и нетто грузового места в килограммах;
- габаритные размеры грузового места в сантиметрах (длина, ширина и высота или диаметр и высота).

7. Каждая транспортная единица, перевозящая опасные грузы, должна быть снабжена предметами снаряжения для индивидуальной защиты в соответствии с номером знака опасности перевозимого груза. На транспортной единице должно перевозиться следующее снаряжение:

- противооткатный башмак;
- два предупреждающих знака (знаки аварийной остановки);
- жидкость для промывания глаз (кроме грузов, обозначенных знаками 1, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3);
- для каждого члена экипажа транспортного средства: аварийный жилет; переносной осветительный прибор; пара защитных перчаток; защитные очки.

8. Дополнительное снаряжение, требуемое для определенных твердых веществ и жидкостей: маска для аварийного покидания транспортного средства; лопата; дренажная ловушка, которая предназначена для предотвращения попадания опасных веществ в систему канализации; сборный контейнер.

Unit 5

Containerisation

1. Discuss in pairs.

- ✓ How would you transport pineapples or bananas from South America to the Middle East, or cars from the USA to Germany? How would the goods be kept?
- ✓ Think of your favourite food or favourite meal and its ingredients. Which of the ingredients are likely to have been transported in a shipping container (e.g. a banana from South America)?

2. Complete the text with the appropriate word and answer the question “What contribution did Malcom McLean make in the field of transportation?”

cranes, intermodalism, container, fleet, lorries, haulage, entrepreneur, tanker

One day, in 1937, Malcom McLean, owner of a ¹ _____ company in North Carolina, was waiting for ² _____ to unload cargo from his truck onto a ship in Hoboken, New Jersey. It took nearly the whole day, and he decided a lot of time was being wasted. McLean had earned money to buy his first truck by working at a petrol station. The ³ _____ was looking for ways to improve his business. McLean decided that, if goods could be transported in standardized containers, the entire ⁴ _____, and not just individual goods, could be transferred from ⁵ _____ to trains, and to ships.

The idea of transporting goods in one box was not new, as the US government had used small containers to ship supplies during the Second World War. However, McLean’s idea of a seamless transport system, later known as ⁶ _____, was new. At the time, he owned only one truck, which was not enough to invest in his idea.

For the next decade and a half, McLean concentrated on his trucking business, and by the early 1950s, with 1,776 trucks and 37 transport terminals along the eastern seaboard, he had built his operation into the largest trucking ⁷ _____ in the South and the fifth-largest in the country. In 1956, McLean’s first converted ⁸ _____, carrying 58 containers, left from Newark, New Jersey, to Houston, Texas. The idea spread quickly and, by 1968, the container ship industry had been born. By the early 1980s, container ships were sailing to every corner of the world.

3. Read the text and label the containers (a-h) based on the information from the text.

Containers can be adapted for almost any type of load, but in most cases, a **dry (hard top) container** in the standard 20ft, 40ft and 40ft High Cube sizes is used to carry general cargo either in breakbulk (most common) or bulk (less common).

Bulk containers used for unpackaged commodities, such as grain, spices, etc., have three loading hatches on the roof.

An **open-top container** is designed to carry cargo too large to be loaded through standard container doors, such as machinery. The container is loaded from the top with a tarpaulin used to cover its contents.

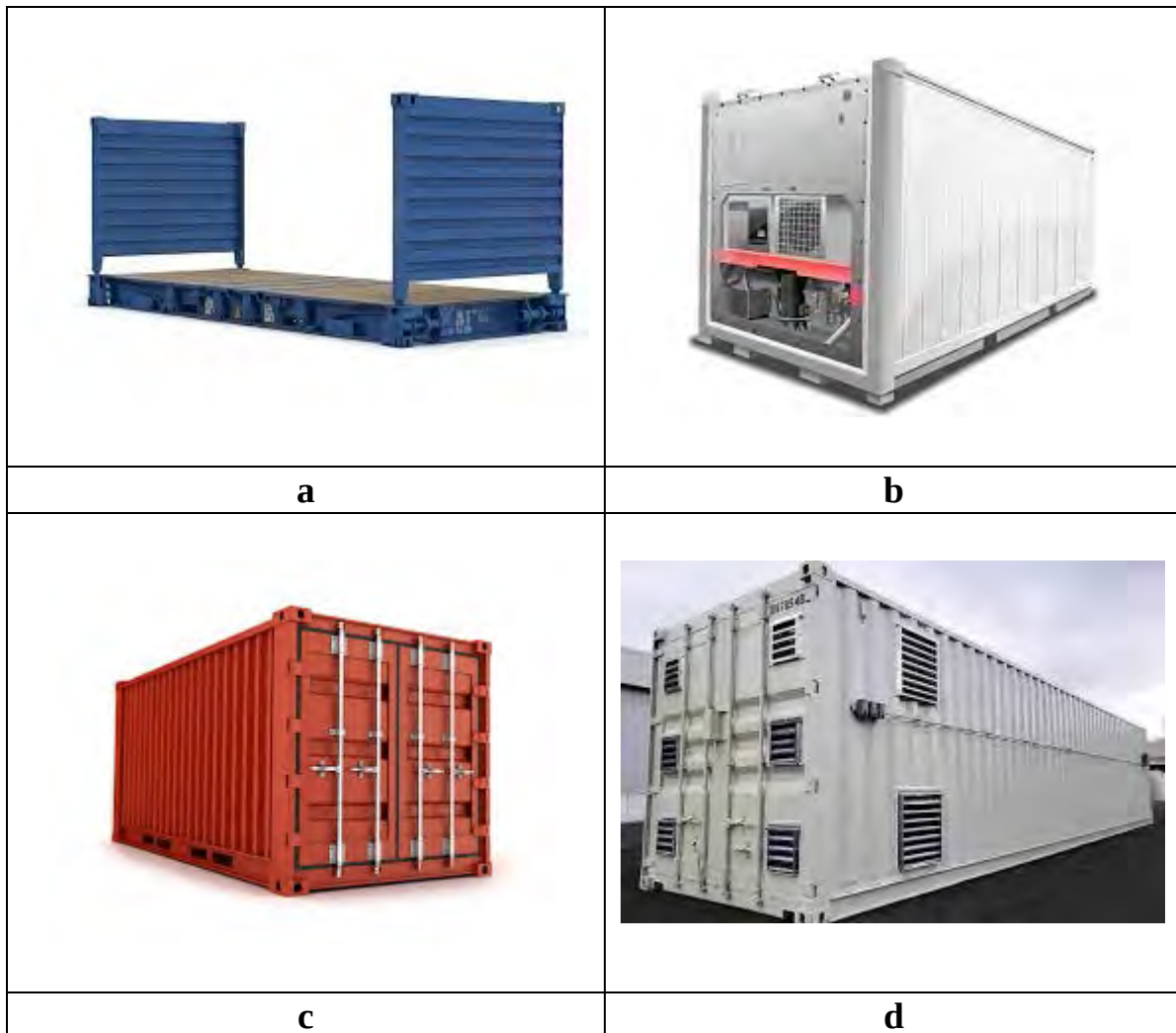
Flat rack containers without a top or sides are used for oversized and heavy, weather-resistant loads.

A **refrigerated container**, also known as a reefer, is a container designed to carry temperature-controlled cargo, often around or below the freezing point during long-distance shipping.

Insulated containers are used by the pharmaceutical, food processing and perishable food industries for short distance journeys. In contrast with a refrigerated container, an insulated container has no refrigerated unit and just maintains the initial temperature.

A **tank container** is designed to carry liquids (chemicals or foodstuff). It is composed of a tank surrounded by a structure, making it the same size as a standard 20-foot container, including its four latching points.

Organic products that give off condensation are transported in **ventilated containers** with slats (thin pieces of metal) to let in the air.



	
e	f
	
g	h

4. Choose a suitable container for the loads below.

Coffee beans, steel coils, wheat, frozen meat, fresh flowers, sugar, clothing, steel pipes, computers, onions and potatoes, seafood, paper, a boat, vegetable oil, salt, peanuts, livestock feed.

5. Match the terms on the left with their definitions on the right.

Term	Definition
1) mainstay = cornerstone	a) crime of illegally taking something that belongs to someone else;
2) advent	b) twenty-foot equivalent unit, a standard measure for a container for transporting goods, used to calculate how many containers a ship can carry;
3) theft	c) the official authority to make decisions and judgments;
4) sheer scale	d) the invention of something;
5) jurisdiction	e) something of great importance on which everything else depends;
6) TEU	f) an impressive and very large size or quantity of something

6. Scan the text and decide which title fits best.

- A. Criminal opportunities in international container transport.**
- B. The architectural evolution of maritime cargo vessels.**
- C. Shipping containers: revolutionising global trade and logistics.**

The shipping container is one of the mainstays of international trade. The globalised modern economy depends on the rapid and efficient movement of goods that containerisation allows. In many ways, it was the advent of the container that allowed this globalised economy to develop.

Before shipping containers were invented, goods being transferred from lorries to trains to ships had to be individually unloaded and loaded again. This made up almost half the cost of shipping. Goods also had to wait in warehouses for the next stage of transport, often delaying shipment. And the costs of transporting different goods varied.

At first, containers reduced theft as it was more difficult for casual thieves to get into the containers. However, criminal gangs soon saw the potential for taking whole containers. This became a profitable crime. Criminals also benefited from the convenience of containers when using them to transport drugs, illegal immigrants or other illegal goods. Measures to combat this, including stronger locks and preference schemes for shippers who have anti-theft programmes, have had some success, but crime is a constant danger to the container trade.

Increasingly, the huge number of containers has been raising worries about their possible use by terrorists. In fact, possible terrorists have already been found hiding in containers. This is particularly worrying considering that only 2% to 10% of containers are inspected.

Containers are also extremely difficult to track and monitor. This is because they pass through so many countries and jurisdictions and because they can travel on both land and sea. Each transaction involving a container can involve as many as 25 different parties and generate between 30 and 40 documents. For a ship carrying 600 TEU, this would result in approximately 4000 documents. The sheer scale of the information involved makes tracking containers a difficult task. Screening them to determine the contents is another solution that would take a great deal of effort because of the large number of containers. Additionally, it might cause delays in delivery that would disrupt international trade.

For the foreseeable future, there would seem to be no alternative to containers, and their use is bound to grow. They are one of the cornerstones of global trade.

7. Choose the correct answer for the following questions.

1. What was the major impact of containerisation on global trade?
 - A. It reduced the number of goods transported internationally.
 - B. It delayed the shipment of most goods.
 - C. It enabled faster, more efficient global transportation.
 - D. It made it more difficult to transport goods by land.

2. Why was shipping more expensive before containers were introduced?
 - A. Ships required special fuel to carry goods.
 - B. Cargo had to be loaded and unloaded multiple times.
 - C. Containers were not strong enough to protect goods.
 - D. Lorries and trains refused to carry certain goods.
3. What security issue emerged shortly after containers began to be used?
 - A. Customs refused to check containers.
 - B. Ships carrying containers sank more frequently.
 - C. Criminals started stealing entire containers.
 - D. Containers became too expensive to secure.
4. According to the text, what is the disadvantage of the container system today?
 - A. It slows down the process of customs clearance.
 - B. It increases fuel consumption for ships.
 - C. It is difficult to monitor and control all containers.
 - D. It limits the types of goods that can be transported.
5. Why do containers pose a potential threat in terms of terrorism?
 - A. They are often not properly sealed.
 - B. Many ports refuse to accept containers.
 - C. They are too large to transport safely.
 - D. They can be used to smuggle people or dangerous materials.
6. What makes it difficult to track containers across borders?
 - A. Most containers are transported by air.
 - B. The size and weight of containers vary greatly.
 - C. Containers involve many stakeholders and legal systems.
 - D. Each container requires very little paperwork.
7. What does the phrase “cornerstone of global trade” suggest about containers?
 - A. They are rarely used in international transport.
 - B. They have played a vital role in supporting international trade.
 - C. They are becoming obsolete due to modern technology.
 - D. They are only important in land-based transportation.
8. What might be a drawback of thoroughly screening every container?
 - A. It could make transportation cheaper.
 - B. It would speed up international deliveries.
 - C. It might increase theft risks.
 - D. It could cause major delays in delivery schedules.

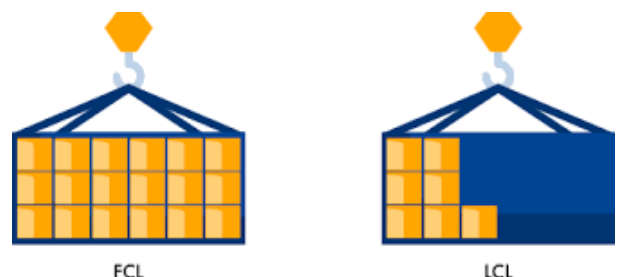
8. Work in pairs. Using the information in the table, describe the key benefits and risks associated with containerisation. Share your opinions with your group.

ADVANTAGES	CHALLENGES
• STANDARDISATION (ISO standard) • FLEXIBILITY (a variety of goods) • COSTS (low transport costs) • SPEED (fast transshipment operations) • SECURITY AND SAFETY (reduced spoilage and losses)	• SITE CONSTRAINTS (large consumption of terminal space) • INVESTMENT (infrastructure, equipment) • STACKING (complexity of arrangement of containers) • THEFT AND LOSSES (high value goods vulnerable to thefts) • ILLICIT TRADE (goods, drugs, weapons, illegal immigration)

9. When we want to transport our goods abroad, we need to decide between FCL (full container load) and LCL (less than container load). Discuss the advantages and disadvantages of FCL and LCL shipments. Complete the table below.

	FCL	LCL
Cost		
Time		
Risks		

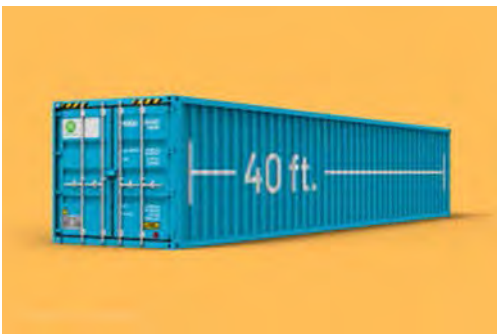
- 1) cheaper for small amounts;
- 2) expensive for small amounts;
- 3) faster, one-stop collection and delivery; one set of documents, faster customs clearance;
- 4) less risk of damage because goods are only handled on collection and delivery;
- 5) less risk of theft because the container is locked and unlocked once;
- 6) more risk of damage because of frequent handling for multiple collections and deliveries;
- 7) more risk of theft because the container is locked and unlocked multiple times;
- 8) the shipper bears the entire cost of the container;
- 9) the shipper shares the cost of the container;
- 10) slower, multi-stop collection and delivery.



10. Containers are normally classified by their length, and the most commonly used are 20 or 40 feet long. The weight of the container when empty is its tare weight, and the maximum weight it can carry is its payload, or net weight. The tare weight and payload together are the container's maximum gross weight. Describe the container features to a partner and decide if these containers are suitable for a load weighing 29,000 kg.



Partner A	20ft Open Top	
	<i>Imperial</i>	<i>Metric</i>
Maximum payload	47,520 lb	21,560 kg
Internal length	19 ft 4 in	5.9 m
Internal width	7 ft 4 in	2.24 m
Internal height	7 ft 8 in	2.35m
Capacity	1,133 cu ft	32 m ³
Gross weight	52,910 lb	24,000 kg
Tare weight	5,380 lb	2,440 kg



Partner B	40ft Open Top	
	<i>Imperial</i>	<i>Metric</i>
Maximum payload	69,600 lb	31,570 kg
Internal length	39 ft 5 in	12.02 m
Internal width	7ft 8 in	2.35 m
Internal height	7 ft 7 in	2.33 m
Capacity	2,355 cu ft	66.7 m ³
Gross weight	79,370 lb	36,000 kg
Tare weight	9,760 lb	4,430 kg



*The container is ten metres / feet long / high / wide / deep.
or The length / height / width / depth of the container is ten metres / feet.
The dimensions of the box are 10 by 50 by 15 centimetres.*

11. Match the words to the correct definition.

*circuitry, seal, tamper, correlation, integrity,
deter, geofencing, humidity*

- a) the connected arrangement of the wires and other parts of a closed system through which electricity can flow;
- b) a measurement of how much water there is in the air;
- c) technology that allows the movement of a person, vehicle, etc. to be recorded using satellite signals;
- d) to prevent someone from doing something;
- e) a connection between two or more things;
- f) a thin piece of material that covers the opening of a container and has to be broken in order to open the container and use the contents;
- g) the quality of being whole and complete;
- h) to make changes to something when you should not, especially when this is illegal.

12. Read the text. Match each type of device with its correct function or description.

Device type	Function/ Description
1. Smart seals	___ GPS and environmental monitoring inside the cargo
2. Smart sensors	___ redirect to a webpage with product or logistics info
3. Electronic labels	___ use radio frequency, stops working if opened
4. Electronic seals	___ alert if tampered with, tracks location

There is a range of smart devices, or Internet of Things devices (IoT devices) that have been developed over the last few years to protect freight in transit. They can be broadly classified into two categories:

1. **Smart seals** have features that allow the location of goods and the integrity of the load to be tracked. They can typically record opening and detect when equipment enters specific locations (“geofencing”). Smart seals are usually attached to the doors of the transportation unit using cables. These cables are not a physical barrier since they can be cut or broken, but the circuitry in the devices will automatically trigger an alert if they are cut without having first unlocked the device. This may deter certain types of criminal activity.



2. **Smart sensors** are generally GPS-enabled, permitting the same type of location features as smart seals, and are also equipped with environmental sensors (light levels, humidity, temperature, etc.). The devices are generally inserted with the load and are used commercially to track the integrity of the goods. Correlation of sensor data (for example, a spike in light and CO₂ corresponding with a signal that the vehicle is stationary) may indicate the unit has been tampered with. This type of technology can also be permanently built into transportation equipment, and is called “smart containers” or “smart trailers”.

Besides, two types of “passive” devices (i.e. devices that do not require a power source) are used:

✓ **Electronic labels** generally contain a QR code, URL or radio frequency device that, when scanned, will redirect the user to a website. The website might provide information about the goods or provide services that allow approved users to submit or review other data related to the item, e.g. data about the production, distribution, status and location of the goods.

✓ **Electronic seals** contain a radio frequency device that transmits information when scanned by a portable reader device. The devices can only be read when closed and undamaged - once opened, they will no longer transmit identification information, thus alerting the scanner that the seal was broken. Although these devices are not GPS-enabled, it is still possible to get a basic idea of the route by checking the locations where the seals were scanned.

13. Match the beginning of each sentence in column A with the correct ending from Column B.

A	B
1. Smart seals are used to	a. within the cargo to monitor environmental conditions.
2. If a smart seal cable is cut,	b. a QR code or a URL that links to product information.
3. Smart sensors are typically inserted	c. detect if a container was tampered with.
4. “Smart trailers” are transportation units that	d. track the location and integrity of transported goods.
5. Electronic labels usually contain	e. when they are opened or damaged.
6. Passive devices do not	f. give a general idea of the locations where the cargo has been scanned.
7. Electronic seals stop transmitting	g. the device sends an automatic alert.
8. Scan records can	h. require a power source to function.
9. Geofencing is a function that	i. have built-in smart monitoring systems.
10. Correlation of sensor data may	g. triggers alerts when the unit enters or exits a location.

14. Read and translate the extract describing what happens at a shipping container terminal. Arrange the steps that occur when a container lorry arrives at an automated port. Number the steps from 1 to 5.



When a container lorry arrives at an automated port, it first goes through a truck gate where its arrival is recorded and the container is identified electronically. The driver then reverses the lorry under a gantry crane, which picks up the container and stacks it. Later, the gantry crane loads the container onto an automated guided vehicle (AGV). The AGV takes the container to a larger gantry crane, which loads it onto the ship.

1. The AGV takes the container to a larger gantry crane.
2. The driver reverses the lorry under a gantry crane.
3. The container is identified electronically at the truck gate.
4. The gantry crane picks up the container and stacks it.
5. The gantry crane loads the container onto the ship.

15. Work in pairs. Do some research on the Internet and share the information with your group.

- ✓ What are the world's largest container ships? What are their length and capacity?
- ✓ What are the top five container ports in the world?
- ✓ What are the top five canals used for shipping goods? What is their role in transportation?
- ✓ What is the world's longest railroad? What is its length?
- ✓ What is the world's longest train? What is its overall length and trip length?
- ✓ What is the world's longest non-stop airline flight? What is its trip length and overall time?



16. A large container ship called the Ever Given became stuck in the Suez Canal on the 23rd of March, 2021, and was freed six days later. Search the Internet and give your opinion on the following issues.

- 1) Where is the Suez Canal located? What seas does it connect?
- 2) When was the Suez Canal constructed? What is its length and width?
- 3) How many ships pass through the canal each day? Why does the Suez Canal play such a pivotal role in the world trade? What alternate routes will ships have to take if they cannot go through the 150-year-old canal?

routes will ships have to take if they cannot go through the 150-year-old canal?

- 4) Why did a container ship named the Ever Given become stuck in the Suez Canal?
- 5) Where did the ship originate from, and where was it going?
- 6) How has the blockage of the Suez Canal affected globe trade?

17. Translate the following sentences into English.

1. Одним из способов повышения эффективности перевозок грузов является применение более экономичных автомобильных транспортных средств, а также применение специализированного оборудования (контейнеров, поддонов), что позволяет сокращать простои транспортных средств и повышать сохранность перевозимых грузов.

2. Грузовой контейнер – это единица транспортного оборудования многократного применения, внутренним объёмом не менее 1 м³, удобная для механизированной загрузки и разгрузки, предназначенная для перевозки и временного хранения грузов.

3. Основными параметрами контейнеров являются собственная масса, максимальная масса брутто и грузоподъемность контейнера, внутренние размеры, полезный внутренний объём.

4. Погрузка грузов в контейнеры производится грузоотправителями, а выгрузка грузов из контейнеров – грузополучателями. Контейнеры должны быть пригодными для данного вида груза и очищенными от остатков предыдущего груза.

5. В морских и речных портах контейнерные терминалы оборудованы порталными кранами.

6. 45-футовый контейнер шириной 2,44 м позволяет перевозить 33 поддона размером 800×1200 мм, в то время как 45-футовый контейнер стандартной ширины – только 27 поддона, а 40-футовый контейнер – всего 25 таких поддонов.

7. Рефрижераторные контейнеры используются для перевозки скоропортящихся или требующих особых условий хранения грузов. Контейнер-цистерна – мультимодальная транспортная единица, используемая для перевозки жидких химических и пищевых продуктов, сыпучих грузов, а также сжиженных газов тремя способами транспорта: морским (речным), железнодорожным и автомобильным.

8. Вентилируемый контейнер предназначен для перевозки различных грузов, которые нуждаются в свежем воздухе (чай, зерно, кофе). Насыпные контейнеры, соответствующие стандартным размерам 20- и 40-футового контейнера и изготовленные из листовой стали толщиной 4 мм, предназначены для перевозок насыпных грузов (песок, цемент, зерно, гравий, уголь) всеми видами транспорта.

9. Системы «электронного пломбирования» контейнеров позволяют фиксировать местонахождение контейнера, открытие и закрытие двери контейнера, температуру и влажность внутри контейнера, уровень заряда аккумулятора устройства.

Unit 6

Passenger Transport



1. Share your experience and ideas on the following with the class.

- ✓ How do you usually get from home to university or work?
- ✓ What kinds of public transport have you used in your life?
- ✓ Which type of transport do you prefer and why?

2. Transport (or transportation) is the means supporting the mobility of passengers and freight. Categorise the following operational differences. Decide if they describe either passenger or freight transportation and complete the table.

Operational differences:

- a. Process information and act on it without assistance.
- b. Information must be processed through logistics managers.
- c. Must be loaded, unloaded and transferred.
- d. Board, get off and transfer without assistance.
- e. Make choices between transport modes without assistance which are often irrational.
- f. Logistics managers meet choices between transport modes rationally.
- g. Require accommodation related to storage.
- h. Require travel accommodation related to comfort and safety.

Passengers	Freight
1.	1.
2.	2.
3.	3.
4.	4.

3. Read the statements below.

a. Are they features of passenger transport (P), freight transport (F), or both (B). Explain the choice.

1. Safety is a top priority, especially during loading and unloading.
2. Comfort and speed are key factors for users.
3. Transport routes are designed for efficiency and cost-effectiveness.
4. Terminals must handle check-in or documentation procedures.
5. Tracking and tracing are essential parts of the process.
6. Delays can affect connections or schedules significantly.
7. Requires planning for volume and weight.
8. Can include multiple modes like rail, road, or air.
9. Timetables must align with demand.
10. The end user directly interacts with the transport process.

b. Answer the questions about the statements.

- ✓ What are the main priorities in passenger vs freight transport?
- ✓ Why do freight services require logistics managers while passengers don't?
- ✓ Which of the passenger transport features above are applied to public transport in particular?

4. Read the text on public transport for the gist. Then match each paragraph (A–D) with the correct summary (1–5). Two summaries are extra and do not match any paragraph.

Summaries:

1. Paragraph ____ describes why public transport use is dropping in some wealthy cities and how authorities are trying to respond.
2. Paragraph ____ describes the basic concept of public transport.
3. Paragraph ____ focuses on different ways public transport is managed in various countries.
4. Paragraph ____ outlines the history of public transport systems around the world.
5. Paragraph ____ focuses on environmental advantages of public transport.
6. Paragraph ____ explains how public transport usually operates.

Public transport

A. Public transport (also known as public transportation, public transit, mass transit, or simply transit) is a system of transport for passengers available for use by the general public. There is no rigid definition of which kinds of transport are included, and air travel is often not thought of when discussing public transport – dictionaries use wording like ‘buses, trains, etc’. Typical forms of public transport include city buses, trolleybuses, trams (or light rail), passenger trains, subways (also

known as metro or underground), and ferries. When it comes to traveling between cities, airlines, long-distance buses (coaches), and intercity trains are the main options. High-speed rail networks are also being developed in many parts of the world.

B. Unlike private transport, most public transport charges a set fee for each trip, runs along fixed routes with specific stopping points and follows a prearranged timetable with the busiest services operating at regular intervals (like ‘every 15 minutes’ rather than at an exact time). However, most public transport trips include other modes of travel. Share taxis offer on-demand services in many parts of the world, which may compete with fixed public transport lines, or complement them, by bringing passengers to interchanges. Paratransit is sometimes used in areas of low demand and for people who need a door-to-door service.

C. Public transport systems around the world are managed through various models, ranging from fully government-operated to fully private, with many countries adopting hybrid approach. For example, in *Belarus* and *China* public transport is predominantly operated by state-owned enterprises under local government control. *Singapore* employs a contracting model where the government owns the infrastructure and contracts private operators to run transit services, with significant public oversight being maintained. In *Luxembourg* public transport is entirely government-funded and has been free-of-charge for all users since 2020. In Japan, most public transport is run by private companies which are part of bigger business groups (real estate and retail ventures) which use transport hubs to earn extra income by owning shops, restaurants, and offices in or near train stations, or by developing real estate (like apartments or malls) around transit areas.

D. In recent years, some high-wealth cities have seen a decline in public transport usage. This drop is often linked to the growing popularity of working from home, ride-sharing services, and cheap car loans. Major cities have attempted to change the situation by cutting fares and encouraging new modes of transportation, such as e-scooters and e-bikes. Because public transportation produces fewer emissions and has a smaller environmental footprint than private transport, many experts believe that increasing investment in public transit is a key strategy for combating climate change.

5. Scan the text for one more time and find the answers to the questions below.

1. What forms of public transport are not typically included when discussing the term?
2. What example is given of a country where public transport is completely free?
3. What kind of service is used for people who need door-to-door transport?
4. Which country is mentioned as having private companies run most of the public transport?
5. Name one new mode of transportation cities are promoting to improve public mobility.

6. Look through Paragraph C quickly and match each country with how its public transport is managed.

Country	Transport Model
Belarus	a. Private operators under contract with public ownership
Singapore	b. Fully government-funded and free for all
Luxembourg	c. Primarily private companies, part of bigger business groups
Japan	d. Publicly owned and operated by the local government

7. Match the words from the text to their correct definitions. What are their Russian equivalents?

Word/Phrase	Definition
1. paratransit	a. land and buildings, often owned for income or development
2. real estate	b. relating to providing services when a customer wants or asks for them
3. rigid	c. transport services for people with special mobility needs
4. prearranged	d. a mode of transport which falls between a taxicab and a bus
5. on-demand service	e. an area with different modes of transport where customers can change from one mode to another
6. share taxi	f. a business (like a convenience store, a cafe, or a shopping centre) <i>that sells goods directly to the consumer</i>
7. interchange	g. strict or not able to be changed easily
8. predominantly	h. mainly
9. a retail venture	i. a benefit usually measured in money that derives from capital or labour
10. income	j. a sum of money that is borrowed from a bank and must be paid back, usually with interest
11. a loan	k. an impact caused by a person, activity, or system — such as transport — that affects the environment
12. footprint	l. planned before the time when it actually happens

8. Complete the sentences with the words from the previous exercise.

1. Some transport companies invest in _____ near stations by building malls or apartments.
2. A _____ often leaves only when all seats are occupied.
3. There is no _____ rule about which vehicles are public transport; it can vary depending on the country.

4. The station is a major _____ where passengers can switch between buses, trains, and subways.

5. In small towns, _____ is used to help elderly people get to hospitals or shops when no regular bus is available.

6. Using the metro instead of a personal car helps reduce your carbon _____.

7. In Belarus, public transport is _____ run by the government.

8. Most buses follow a _____ schedule and stop at specific locations.

9. Many private transport operators acquire extra _____ from shops and restaurants inside transit hubs.

10. An _____ lets passengers book a ride when they need it, instead of following a fixed timetable.

11. The train company opened _____ inside the station, selling food and travel goods.

12. Some people prefer to buy cars using _____, but this can reduce their use of public transport.

9. Translate these sentences using the vocabulary from the previous exercises. Focus on the underlined words.

1. Социальные услуги по перевозке людей с ограниченными возможностями используются, когда обычные автобусы недоступны.

2. Многие предприятия (компании) общественного транспорта инвестируют в недвижимость, чтобы увеличить свою долгосрочную прибыль.

3. В городе нет жестких правил относительно того, что считается общественным транспортом, поэтому в это понятие включают даже лодки и канатные дороги.

4. Все отправления заранее запланированы, поэтому пассажирам необходимо заранее проверять расписание.

5. Приложение предлагает услуги по запросу, позволяя пользователям бронировать поездку в любое время дня.

6. В некоторых странах маршрутное такси является самым дешевым и быстрым способом передвижения по городу.

7. Эта автобусная остановка соединяется с метро и служит пересадочной станцией между несколькими маршрутами.

8. В Китае общественный транспорт в основном управляется государством.

9. Автобусная компания открыла на центральном вокзале розничное предприятие по продаже кофе, снеков, газет и журналов.

10. Правительство хочет, чтобы транспортные компании нашли другие способы получения дохода, кроме продажи билетов.

11. Он взял кредит, чтобы купить машину, но теперь жалеет об этом из-за высоких цен на топливо.

12. Поездка на трамвае вместо автомобиля помогает уменьшить наше воздействие (след) на окружающую среду.

10. Skim the text

Types of buses

Buses are a popular and practical mode of transportation for millions of people around the world. They are a convenient and cost-effective way to move a large number of people over short and medium distances. Buses are widely used in cities and towns for public transportation, as well as for intercity travel. They are often used for school transportation and as a shuttle service for events and activities. Buses have also been used in emergency situations, such as evacuations during natural disasters. They can be categorized by form/design and application.

11. Match the features below (1-13) with the bus types from the table. Complete the following table with numbers.

Bus type (design)	Features
a single-deck bus 	
a double deck bus 	
an articulated bus 	
a trolley bus 	

Features

1. Drivers must avoid bridges, overhead utilities, and other obstacles below the bus's height clearance.
2. Receives power via overhead wires.
3. Most often associated with tourism
4. With a flexible, accordion-looking centre that can stretch on one side while crimping on the other.
5. Can be closed-top or open-top.
6. Doesn't require batteries.
7. Can be either closed-top or open-top.
8. One platform for passengers.
9. Constantly receives power from overhead wires.
10. Due to low walls on the upper floor, these tour buses provide a superior view.
11. The most popular as a transit bus.
12. Can bend at its mid-section and make more narrow turns
13. Can have one or two backup batteries to power short distances or in case the feeding power goes out

12. The following buses are categorized by how they get used. The use can often influence design, so these buses are easy to recognize. They are often used just in a single application. Think over characteristic features the following bus types have. If necessary look them up. Complete the table.

Bus type (design)	Features
a school bus	
a special needs bus	
a coach	
a shuttle bus	
a party bus	

13. Work in pairs. Look at the list of public transport options: city bus, trolleybus, tram, metro, taxi, share taxi, e-scooter. Discuss and answer the following questions together.

1. What types of public transport do you usually use? Why?
2. What type of transport is the most comfortable / fastest / cheapest in your city?
3. Would you like to see more on-demand services or share taxis in your area? Why or why not?
4. Do you think public transport in your country should be free? Why or why not?
5. What is one thing that could improve public transport in your city?

Unit 7

Road Networks

Road transport or road transportation is a type of transport using roads. Transport on roads can be roughly grouped into the transportation of goods and transportation of people.

1. Look at the roads of different types. What are the roads like? Discuss the differences between these road types. Which roads are the most important for transport?

a.



b.



c.



2. Read the text for the gist and answer the questions:

1. What is the text about?
2. What were roads used for in the past?
3. How have roads changed over time?

The Setting of Road Transport Systems

1. Roads and rail are the two major modes that compose the land transport system. Roads were established first, as steam rail technology only became available by the 18th century, due to the industrial revolution. Today, road networks play a central role in supporting our daily lives and economic activity. They facilitate daily commutes – two-thirds of all work-related journeys are made by car – and enable long-distance travel for an increasing number of people. Even individuals who do not drive depend on roads, which support critical supply chains and are essential for the distribution of goods and services. Roads connect key economic hubs and link other transport modes such as railways, airports, and seaports. They contribute to employment, regional development, and business growth. Factories and other businesses regularly consider access to good roads and other transport connections in making decisions about where to locate.

2. While today's road networks are often complex engineering systems, they originate from trails that were used to move from one hunting territory to another

through seasonal migrations. When the first empires began to appear, trails started to be used for commercial purposes as trade expanded, collecting taxes, and moving military forces. Some became roads mainly by domesticating horses, mules, and camels. The use of wheeled vehicles encouraged the construction of better roads to support the additional weight since heavier vehicles quickly damaged an unpaved surface. A road transport system requires a level of labor organization, financing, and administrative control that could only be provided by a form of governmental oversight, also offering some military protection over trade routes.

3. Although the first paved roads appeared in Mesopotamia by 3,000 BC, the Roman Empire is known for setting up the first major road system from 300 BC onward, for economic, military, and administrative reasons. It relied on livelong road engineering methods, including laying of foundations and construction of bridges. This was also related to establishing trading routes across the continent, such as the Silk Road, linking Europe and Asia by 100 BC.

4. The rise of modern nation-states in the 17th and 18th centuries led to the formal establishment of national road systems and a public transport service of stagecoaches carrying passengers and mail.

5. Of high significance were technological innovations in road engineering that made it possible to construct reliable and low-cost hard surface roads. One such achievement came from the Scottish engineer McAdam in the early 19th century, who developed a process (later known as *macadam*) where hard and waterproof road surfaces were made by cemented crushed stone, bound together either with water or bitumen. It provided a cheaper, durable, smooth, and non-slippery pavement, and improved considerably the reliability and travel speed on roads.

6. Road development accelerated in the first half of the 20th century. Germany was the first to build a modern highway (autobahn) in 1932, with features such as restricted access, overpasses, and road separation that are standard in contemporary highway systems.

7. After World War II, road networks expanded rapidly worldwide. Here are just some of the examples of the world's largest road networks which demonstrate what crucial role infrastructure plays in shaping economies and societies. At present, the biggest one is the Interstate Highway System (USA), stretching over 4.2 million miles. This vast system includes everything from interstates to rural country roads. This network not only supports commerce and daily commutes but also serves as a critical link for emergency response.

8. India's road network spans approximately 3.9 million miles, making it the second-largest in the world. This complex system includes national and state highways, as well as rural roads which connect remote villages to busy metropolitan hubs like Delhi and Mumbai.

9. China's road network covers approximately 3.7 million miles. It reflects the nation's rapid urbanization and economic growth. The system includes an extensive network of expressways, many of which were constructed in the past few decades as part of ambitious infrastructure projects.

10. Brazil's road network, spanning 1.6 million miles, is the largest in South America. It comprises federal highways like the BR-101, which traverses the entire coastline, as well as countless rural and urban roads. The network connects the Amazon rainforest, agricultural inland, and major cities like São Paulo and Rio de Janeiro.

11. Russia's road network stretches 1.4 million miles, reflecting the country's vast size and diverse geography. The system includes iconic routes like the Trans-Siberian Highway, which connects Moscow to Vladivostok, overpassing nearly 6,800 miles across forests, mountains, and tundra. This road is a lifeline for remote regions and enables the movement of goods and people in one of the world's most challenging climates.

12. Japan's road network, covering 360,000 miles, is known for its efficiency and advanced technology. The country's expressways, like the Tōmei and Tōhoku routes, connect major urban centres such as Tokyo, Osaka, and Kyoto. The country's mountainous landscape has led to the construction of extensive tunnels and bridges. Japan's roads are vital for its export-driven economy, ensuring the smooth transportation of goods. Smart road systems and automated toll collection reflect Japan's innovation in road infrastructure.

3. Look through the text again. What is not mentioned?

a.



b.



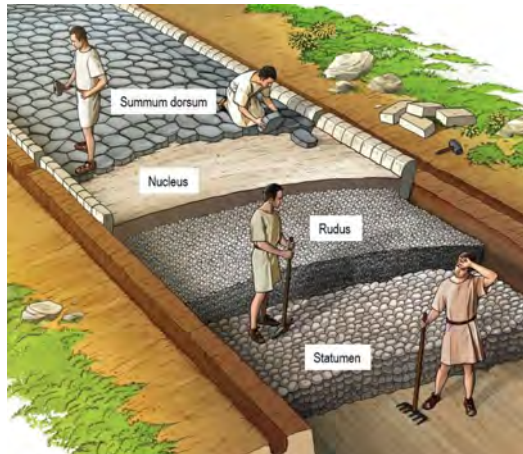
c.



d.



e.



f.



g.



h.



i.



j.



k.



l.



4. Find in the text equivalents to the following Russian words. To help you find the right word, the number of the paragraph is given in brackets. Be careful, the word in the text might have a different form.

verb	noun	adjective	adverb
1. способствовать облегчать (1)	1. поездка на работу и обратно (1)	1. доступный (1)	1. значительно (5)
2. происходить, зарожаться (2)	2. эпицентр деятельности, место сосредоточения (1)	2. дополнительный (2)	2. быстро (7)
3. расширяться, расти (2)	3. цель (2)	3. общественный (4)	
4. собирать (2)	4. надзор, контроль (2)	4. долговечный (3)	
5. одомашнивать (2)	5. достижение (5)	5. надежный (5)	
6. мостить (3)	6. надёжность (5)	6. прочный (5)	
7. полагаться на (3)	7. эстакада (6)	7. ровный (5)	
8. разрабатывать (5)	8. разделение (6)	8, скользкий (5)	
9. ускорять (6)	9. (зд.) ликвидация аварийных ситуаций (7)	9. современный (6)	
10. проходить через, пересекать (10)	10. взимание платы	10. неоднородный, многообразный (11)	

5. Find in the text

- ✓ at least three adjectives denoting «very important»;
- ✓ words and expressions denoting different types of roads

6. Complete the sentences from the text with the following words. Try not to peep into the text.

commercial	waterproof	trails	paved	innovations
wheeled	highway	military	Interstate	economy
compose	labour	migrations	nation-states	

1. Roads and rail are the two major modes that _____ the land transport system.
2. The first land roads originate from _____ used to move from one hunting territory to another through seasonal _____.
3. With the emergence of the first empires, trails started to be used for _____ purposes as trade expanded.
4. The use of _____ vehicles encouraged the construction of better roads.
5. A road transport system requires a level of _____ organization, financing, and administrative control.
6. The first _____ roads appeared in Mesopotamia by 3,000 BCE.
7. The rise of modern _____ in the 17th and 18th centuries led to the formal establishment of national road systems.
8. Of high significance were technological _____ in road engineering.
9. A Scottish engineer McAdam developed a process where hard and _____ road surfaces were made by cemented crushed stone.
10. Germany was the first to build a modern _____ (autobahn) in 1932.
11. The biggest achievement was the America _____ Highway System, connecting major cities across the U.S.
12. It was built to support the _____ and, if needed, help with _____ transport, though this was never used.

7. Choose the correct answer.

1. According to the text, why businesses consider road networks when deciding where to locate?
 - A. To find areas with less traffic congestion
 - B. Because roads are cheaper to build than railways
 - C. Because good road access supports supply chains and economic growth
2. Which empire is famous for building a pan-continental trading route called the Silk Road?
 - A. Roman Empire
 - B. British Empire
 - C. Ottoman Empire
3. What was *macadam* made from?
 - A. Asphalt and rubber
 - B. Cement and wood
 - C. Crushed stone and bitumen
4. What technological feature is mentioned as part of Japan's road infrastructure?
 - A. High-speed train crossings
 - B. Automated toll collection

C. Self-repairing road surfaces

5. Which country built the first modern highway?

A. Japan

B. Germany

C. Italy

6. India's road network is:

A. Mostly made up of expressways

B. Limited to national highways

C. The second-largest in the world

7. China's road network development is closely linked to:

A. Its industrialisation

B. Traditional rural transport systems

C. Economic growth and urbanization

8. Put the following events in chronological order to create the time line.

1. Roman Empire builds major road system.

2. First paved roads appear in Mesopotamia.

3. Germany builds the first modern highway (autobahn).

4. Scottish engineer McAdam develops macadam technique.

5. National road networks started to expand rapidly worldwide.

9. Read the statements and say if they are True or False. Correct the False ones.

1. Roads and railways are the main components of the land transport system.

2. Only people who drive benefit from the road network.

3. Access to roads influences business decisions on where to locate.

4. The use of animals like horses and camels played a role in the development of roads.

5. Governmental organization was necessary for maintaining road systems in early empires.

6. The Roman Empire used roads only for military purposes.

7. Roman roads involved sophisticated engineering.

8. National road systems and stagecoach transport emerged in the 17th and 18th centuries.

9. Stagecoaches only carried goods, not passengers.

10. The macadam technique used cement and bricks for road construction.

11. The new surface made roads more durable and safer to travel on.

12. The autobahn was first built after World War II.

13. The primary function of the Interstate Highway System is limited to commercial transport.

14. India's road network is the second-largest in the world.

15. Many of China's expressways were built during recent infrastructure initiatives.

16. Brazilian road network is the second-largest in South America.

17. Brazil's roads link the Amazon region with major cities.

18. The Trans-Siberian Highway is approximately 3,000 miles long.

19. Russia's geography significantly impacts its road construction and transport logistics.
20. Japan's road infrastructure has remained largely unchanged for decades.

10. Answer the questions.

1. What are the two major modes that compose the land transport system?
2. What were the first land roads used for?
3. Why did trails start turning into roads?
4. How did the use of wheeled vehicles encourage the construction of better roads?
5. Who is known for establishing the first major road system?
6. What innovations did the Roman Empire introduce in road construction?
7. What road engineering technology was developed by the Scottish engineer McAdam?
8. What innovations were introduced in the highway (autobahn) built in Germany in 1932?
9. Why are the national road systems built? Enumerate the reasons for this.

11. Discuss the following in small groups.

1. Why do you think roads were so important for empires and states?
2. How did technological innovations change road transportation over time?
3. In your opinion, what was the most important development mentioned in the text?

12. Get ready with a short oral presentation or a written passage on why roads are important for a country's economy. Use the language support prompts below. They will help you structure your answers more easily and sound more natural.

To start your answer:

- I believe roads are important for a country's economy because...
- In my opinion, roads play a key role in economic development because...
- Roads contribute to a country's economy by...

To explain or add ideas:

- They make it easier to transport ...
- They connect cities, towns, and rural areas, allowing businesses to ...
- Good road infrastructure helps to create jobs in construction, transportation and logistics...
- Roads can attract investment and boost tourism...

To give an example:

- For example, when a new highway is built, businesses often open ...
- A good example is when improved roads in rural areas help farmers sell ...

To conclude:

- Therefore, roads are essential for economic ...
- In conclusion, strong road networks help improve

Unit 8

Road Traffic



1. Look through the facts provided by World Health Organization. This information is dated back to 13 December 2023. What option might be right?

1. Approximately (1) _____ million people die each year as a result of road traffic crashes.
 - a) 1.9
 - b) 2
2. Road traffic injuries are the leading cause of death for children and young adults aged (2) _____ years.
 - a) 5–29
 - b) 10–35
3. 92% of the world's fatalities on the roads occur in (3) _____ countries.
 - a) high-income
 - b) low- and middle-income
4. More than (4) _____ of all road traffic deaths are among vulnerable road users, including pedestrians, cyclists and motorcyclists.
 - a) two thirds
 - b) half
5. Road traffic crashes cost most countries (5) _____ of their gross domestic product.
 - a) 2%
 - b) 3%
6. The United Nations General Assembly has set an ambitious target of halving the global number of deaths and injuries from road traffic crashes by (6) _____.
 - a) 2030
 - b) 2035

2. Traffic signs or road signs are signs placed at the side of roads to provide information or give instructions to road users. Do you know what these traffic signs represent? Try to label the traffic signs with the correct words and explain what they mean.



1 _____



2 _____



3 _____



4 _____



5 _____



6 _____



7 _____



8 _____

DANGERS ON THE ROAD

3. Study some of the possible dangers one can be exposed to on the road. The pictures will help you understand the words.

fatigue



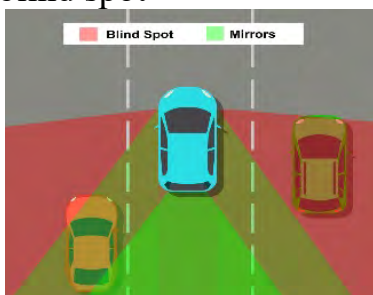
crossing animals



hit-and-run



blind spot



braking distance



accident



distracted driver



road rage



night-blindness



alcohol



4. Complete the passages with the appropriate word.

fatigue crossing animals hit-and-run blind spot braking distance
accident distracted driver road rage night-blindness alcohol

1. An _____ is often happening quickly. What should you do if you are involved in an _____ ?

2. _____ and driving a vehicle are a very dangerous combination. It reduces attention, assessment and reaction capacity. A drunk driver is not only a danger to himself, but also to other road users. That is why the police often organize _____ checks.

3. A _____ in a vehicle is an area around the vehicle that cannot be directly observed by the driver, under existing circumstances. It exists in a wide range of vehicles: aircraft, cars, motorboats, sailboats, and trucks. Proper adjustment of mirrors and use of other technical solutions can eliminate the problem.

4. _____ refers to the distance a vehicle will travel from the point when its brakes are fully applied to when it comes to a complete stop. It is primarily affected by the original speed of the vehicle and the coefficient of friction between the tires and the road surface.

5. _____ can cause dangerous traffic situations. It often happens in green areas.

6. A driver must concentrate on driving his vehicle. It can happen that something pulls away your attention from the road, so you can focus less on driving your vehicle. A _____ is at greater risk of being involved in an accident. With the known consequences (property damage, injuries, deaths).

7. _____ is a feeling of tiredness. It may be sudden or gradual. It is a normal phenomenon if it follows prolonged physical or mental activity, and resolves completely with rest. A tired driver may risk in falling asleep while driving.

8. A driver commits a _____ if he leaves the scene of the accident with the intention of escaping the consequences. Never commit a _____, there are very strict penalties!

9. _____ is a condition making it difficult or impossible to see in relatively low light. It is a symptom of several eye diseases. _____ may exist from birth, or be caused by injury or vitamin A deficiency. It can be described as insufficient adaptation to darkness.

10. _____ is aggressive or angry behavior exhibited by motorists. These behaviors include rude and offensive gestures, verbal insults, physical threats or dangerous driving methods targeted toward another driver or non-drivers such as pedestrians or cyclists. Road rage can lead to altercations, assaults and collisions that result in serious physical injuries or even death.

5. Match the halves.

1. The police are searching for a suspect...
2. People with night-blindness should avoid...
3. In rural areas, drivers must slow down because of...
4. Driving under the influence of alcohol...
5. The accident on the highway...
6. Incidents of road rage have increased as...
7. A distracted driver was caught...
8. Fatigue is one of the main reasons...
9. Many accidents happen because...
10. On wet roads, you should double...

a. drivers fail to check their blind spot before changing lanes.
b. texting moments before causing a rear-end collision.
c. caused a major traffic jam during rush hour.
d. dramatically increases the chance of a crash.
e. your braking distance to avoid skidding.
f. drivers lose concentration on long highway trips.
g. the risk of crossing animals.
h. traffic congestion gets worse in the city.
i. involved in a hit and run accident downtown last night.
j. driving after sunset to prevent dangerous situations.

6. Study with definitions what these words from Exercise 4 mean. The number in brackets indicates the passage this word is taken from. Find their Russian equivalents. If necessary, use a dictionary.

Word/Phrase		Definition
1. reaction capacity (2)	—	a. the ability to respond quickly to something.
2. to eliminate (3)	—	b. to remove or get rid of something completely.

3. property damage (6)	–	c. harm done to someone's belongings or things.
4. to distract (6)	–	d. to take someone's attention away from what they are doing.
5. phenomenon (7)	–	e. something that happens and can be seen or noticed.
6. to resolve (7)	–	f. to find a solution to a problem or difficulty.
7. penalty (8)	–	g. a punishment for breaking a rule or law.
8. to escape the consequences (8)	–	h. to avoid facing the results of your actions.
9. insufficient (9)	–	i. not enough to meet a need or requirement.
10. verbal insults (10)	–	j. words used to hurt or offend someone.
11. altercation (10)	–	k. a noisy argument or disagreement between people.
12. collision (10)	–	l. when two or more things hit each other with force.
13. assault (10)	–	m. an attack on someone with the intention to hurt them.
14. physical threat (10)	–	n. a sign that someone may cause harm to another person.
15. offensive gestures (10)	–	o. hand movements that can upset or insult someone.
16. exhibit (10)	–	p. to show something so others can see it.

7. Rephrase the following sentences using the words and expressions from the previous exercise. When doing this, focus on the underlined part. Make sure you change the word form if necessary.

1. The driver's ability to respond quickly saved them from an accident.
2. They want to remove all risks from the project.
3. The accident caused a lot of damage to their belongings.
4. Texting while driving can easily take your attention away from the road.
5. It's becoming more common for drivers to behave aggressively in traffic.
6. When drivers argue, it's important to settle the problem peacefully.
7. Some drivers think they can avoid punishment by leaving the scene of the accident.
8. The driver received a ticket for parking in the wrong place.
9. His driving skills were not enough to navigate through the heavy traffic safely.
10. The museum will display the new artefacts next month.
11. He made rude hand signals to the other driver.
12. They exchanged bad words during the argument.
13. The man raised his fist in a threatening manner.
14. There was a heated argument between the two men.
15. The victim reported the physical attack to the police.
16. The two cars crashed at the intersection.

8. Translate into English using the target vocabulary of the unit.

1. Усталость — одна из самых распространенных причин дорожно-транспортных происшествий среди водителей-дальнобойщиков.
2. Будьте осторожны при движении по сельской местности — на дороге могут внезапно появиться животные, перебегающие дорогу.
3. Мокрые дороги могут значительно увеличить тормозной путь, поэтому снижайте скорость в дождливую погоду.
4. Людям, страдающим куриной (ночной) слепотой, следует избегать вождения после захода солнца.
5. Столкновение привело к серьезному ущербу имуществу, но, к счастью, никто не пострадал.
6. Часто бывает сложно разрешить споры между водителями после аварии.
7. Недостаточное внимание к дороге может привести к трагическим последствиям.
8. Словесные оскорбления между водителями могут быстро перерасти в драку.
9. Новые технологии направлены на устранение отвлекающих факторов в автомобиле.
10. Оскорбительные жесты во время вождения только усиливают напряженность на дороге.
11. Физическую угрозу со стороны другого водителя необходимо воспринимать всерьез и сообщать о ней.
12. Громкая музыка и телефонные звонки могут легко отвлечь водителя.
13. Некоторые водители демонстрируют агрессивное поведение во время пробок.
14. Стычка между двумя водителями привела к серьезной задержке на мосту.

9. Answer the questions about the possible dangers on the road.

1. What are the most common causes of accidents mentioned in the text?
2. How does fatigue affect the driver's performance?
3. Why is alcohol consumption dangerous for drivers?
4. What can happen if the driver gets distracted?
5. How can road rage lead to further accidents?
6. What is the risk associated with animals crossing the road?
7. Why is it important to be aware of blind spots?
8. How does weather affect braking distance?
9. What are some examples of aggressive behavior on the road?

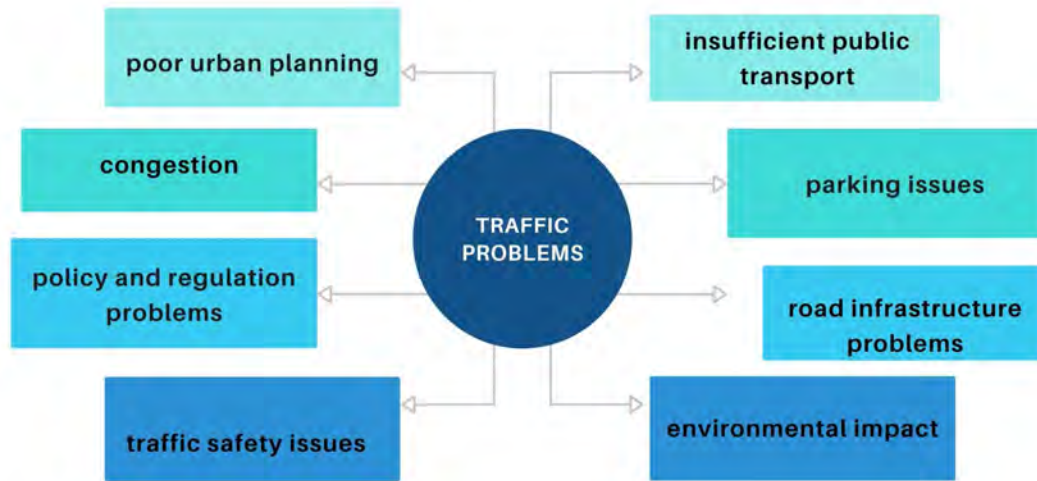
10. Choose three road signs each and make a presentation explaining:

- ✓ what group they belong to;
- ✓ what they mean;
- ✓ why they are important;
- ✓ how ignoring these signs could cause an accident.

Unit 9

Road Traffic Problems

1. Study the mind map on some road traffic problems.



2. Consider the list of possible causes of road traffic problems. Decide what problems they are related to. Match each idea to the correct type and complete the chart. There may be more than one answer.

1. Poor traffic flow management.
2. Buses/trains are slow, unreliable, or don't cover enough areas.
3. Lack of alternative routes.
4. Low road network density (few roads, limited connections between areas).
5. People prefer private cars because alternatives are inconvenient.
6. No zones limiting heavy traffic in city centres.
7. Bottlenecks at intersections.
8. Lack of pedestrian crossings or bike lanes.
9. Long distances between home, work, and shops – forcing everyone to drive.
10. Poor coordination between city departments.
11. Poorly maintained roads (potholes, bad markings, broken signs).
12. Cities designed only for cars (not for walking, cycling, or public transport).
13. Dangerous driving behaviours not well controlled.
14. Poorly designed intersections (causing confusion and accidents).
15. Not enough parking places.
16. Poor signs and bad road markings.
17. Weak enforcement of traffic laws.
18. Illegal parking blocking traffic lanes.
19. No smart traffic lights (lights not adapting to real-time traffic).
20. Lack of lanes for buses, cyclists, or emergency vehicles.
21. High demand for street parking slows down movement.
22. No strategies to reduce pollution from vehicles.
23. No clear policies encouraging public transport or alternative travel.

Road traffic problems	Causes
congestion	1, ...
poor urban planning	4, ...
insufficient public transport	
road infrastructure issues	
policy and regulation problems	
environmental impact	
traffic safety issues	
parking issues	

3. Read the article about causes of traffic jams and decide which section the following headings refer to.

- A. A Better Way to Understand Traffic
- B. How to Reduce Traffic
- C. How We Think About Traffic
- D. Another Important Factor: Routes

Why are Traffic Jams Getting Worse?

Many people believe that new apartment buildings or businesses cause more traffic. In my neighbourhood, some residents even wanted to stop a new apartment complex from being built because they worried about ‘traffic’.

It’s true that traffic can be a problem. But stopping new development is not the best solution. To understand why, we need to think about the real causes of traffic – and sometimes update the way we think about it.

1 _____

Most people have a very simplistic idea about traffic: more drivers → more traffic. In other words, if more people move into an area, the roads will automatically become more crowded. This way of thinking feels natural. But it’s often wrong. When we only think like this, we start to believe that any new neighbours are a problem. We might feel like our city is ‘too full’ and that nothing can be done to fix the situation. Some people even think the only answer is to block new housing projects or make roads bigger.

2 _____

Let’s make the model a little more accurate. Traffic is not just about the number of drivers. It’s also about how much they drive. Think of it this way. If people have to drive everywhere – even for short errands like buying groceries – traffic will still be

heavy. For example, if every trip to the store takes 10–15 minutes by car, traffic will build up, even if the area doesn't seem very crowded.

3 _____

The goal is not to stop people from driving altogether. Instead, it's to make it possible for people to drive shorter distances or make fewer trips. Here are a few ways this can happen: build shops, parks, and services closer to where people live; improve public transport and bike lanes; design neighbourhoods where it's easy to walk to everyday places. When daily needs are closer, people don't have to drive as far. This can reduce traffic – even if the number of people in the neighbourhood grows.

4 _____

There's another reason traffic gets worse: the number of available routes. If a neighbourhood has many small streets and paths, drivers can spread out. But if everyone has to use the same two or three main roads, those roads will quickly get crowded. Imagine two neighbourhoods. One has lots of small streets that connect in different ways. The other has only one or two exits to the main road.

In the second case, even a small number of drivers can cause big traffic jams because there are so few ways to get in or out.

Sometimes, when people try to protect «their own» streets by blocking access from new developments, they actually make traffic worse by forcing everyone onto just a few roads. To understand and solve traffic problems, we should think about three key factors: the number of drivers, how much they drive, the number of available routes. If we want to make traffic better, we can help people drive shorter distances; add more local services and businesses; design better road networks with more ways to move around.

Traffic is not simply about «too many people». It's about how our cities and neighbourhoods are planned – and we have real choices to make things better.

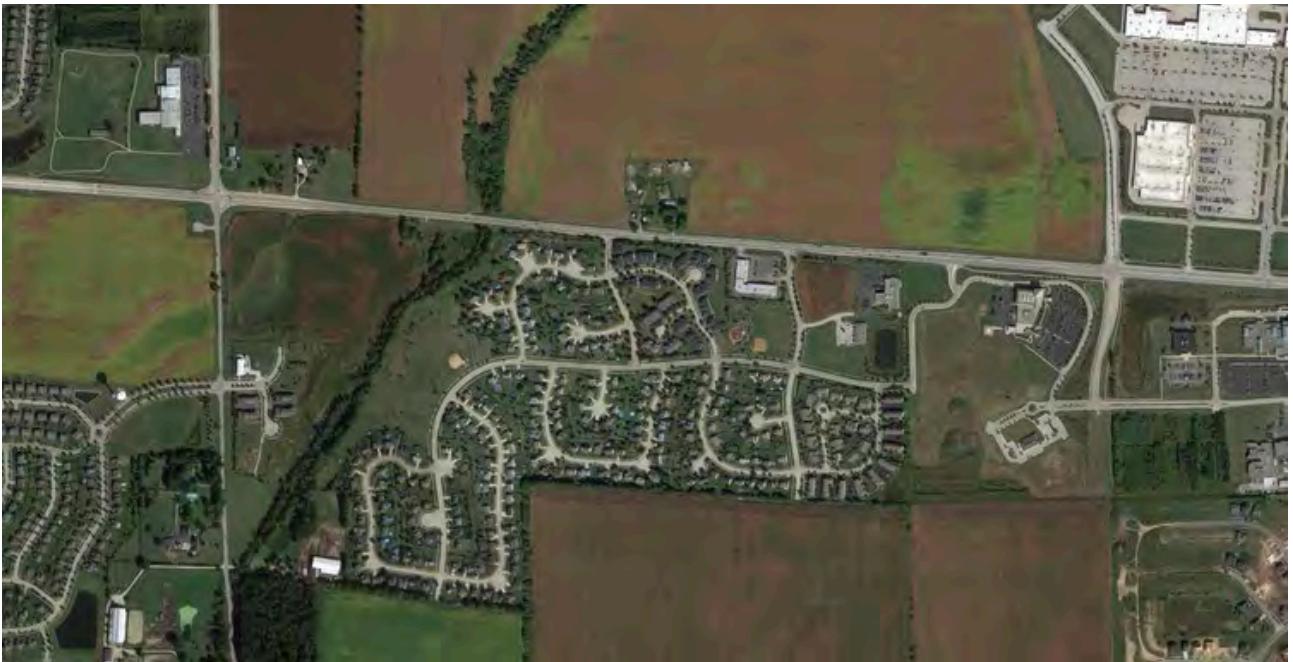
(based on *What Causes Traffic Problems? Updating Your Mental Model* by Daniel Herriges, August 24, 2022)

4. Are these statements True or False?

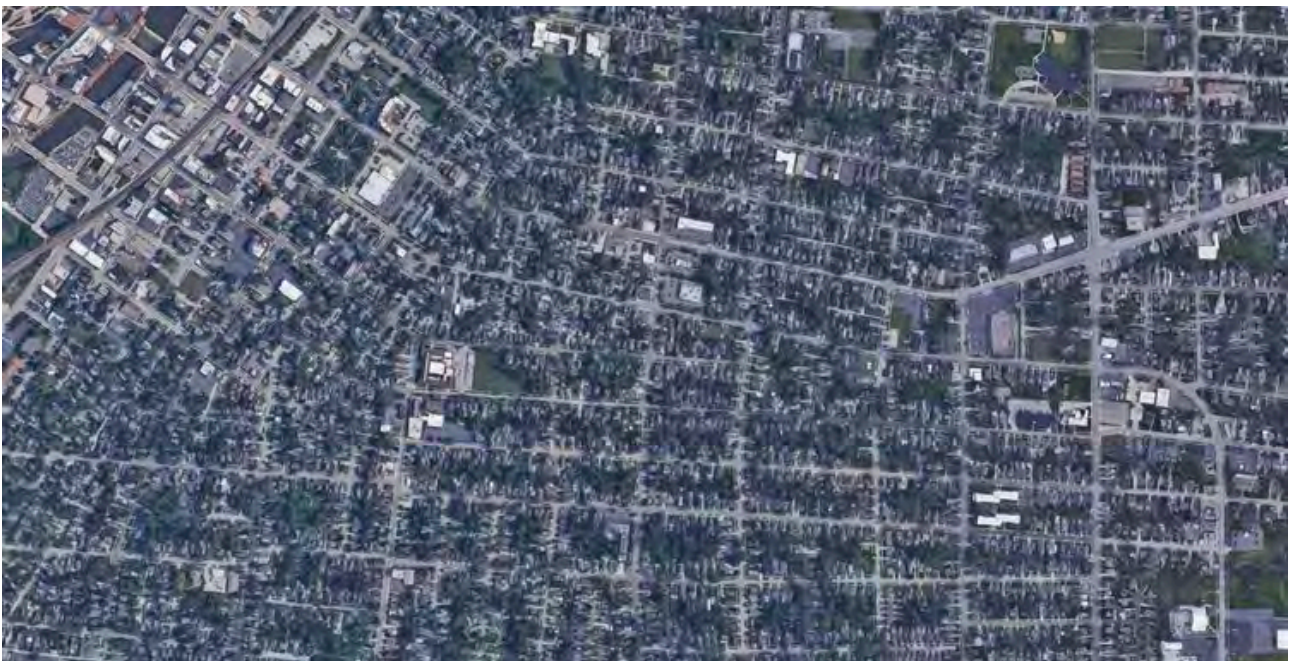
1. The article suggests stopping new housing is the best way to reduce traffic.
2. Some people think traffic gets worse simply because more people move into the area.
3. The more roads a city has, the more traffic problems it creates.
4. Traffic also depends on how often and how far people need to drive.
5. People are encouraged to stop using cars completely.
6. If parks and shops are closer to people's homes, they may drive less.
7. A neighbourhood with only one or two exits usually has more traffic issues than one with many routes.
8. According to the article, traffic is always caused by too many people.

5. Look at the layout of two different neighbourhoods. What can you see? What are the neighbourhoods like? Which one, *a* or *b*, (according to the article) is likely to experience a problem of a congested road? Explain your choice.

a.



b.



6. Read the list of ideas below. Decide which ones are suggested in the article as ways to reduce traffic and which ones are not. Tick ✓ the ones that are mentioned in the article.

Suggested Solution	In the Article? (✓ / ✗)
Build more highways	
Place shops and parks closer to homes	
Improve public transport	
Add more bike lanes	
Limit the number of people moving in	
Make neighbourhoods easier to walk through	
Design road networks with many connected streets	
Block new housing to reduce traffic	

7. Find words or phrases in the article which mean the *same* as the words and phrases below. They are provided in the order their equivalents come in the text.

1. a flat	
2. a local	
3. to result in	
4. a way out	
5. to revise (to modernise)	
6. to seem	
7. to prevent	
8. correct	
9. tasks	
10. to make better	
11. a pathway for bicycles	
12. ready for use	
13. the right to enter	
14. by pressing	

8. Complete the sentences with the vocabulary from the previous exercise.

1. People often drive for short _____, like picking up groceries or dropping off a parcel.

2. Parking is only _____ on one side of the street, which reduces space for moving traffic.

3. Some people think new housing projects _____ traffic jams, but the real reasons are more complex.

4. There's no _____ to the main road from the new neighbourhood, so all cars use just one exit.

5. The lack of side streets increases congestion _____ all drivers to use the same route.

6. For traffic models to work, the data must be _____ and based on real driving patterns.

7. The city is building a new _____ complex near the main road, which some residents believe will increase traffic.

8. Residents tried to _____ the new supermarket, saying it would bring too much traffic.

9. Expanding bike lanes and improving public transport could be a better _____ than just widening roads.

10. One _____ complained that it already takes her 30 minutes to drive to work due to congestion.

11. The city plans to _____ intersections by installing smart traffic lights that adapt to real-time flow.

12. The city council wants to _____ its transportation plan to make driving less necessary.

13. Many people now choose to cycle to work because a new _____ makes it safer.

14. At first, it didn't _____ like the new traffic rules helped — but over time, the roads became less busy.

9. Translate the sentences. Use the target vocabulary from the unit for the underlined words.

1. Многие жители жалуются на шум транспорта возле своих домов.

2. Строительство нового многоквартирного квартала рядом с шоссе может привести к еще большим заторам.

3. Одним из возможных решений является строительство большего количества велосипедных дорожек в центре города.

4. Город планирует обновить систему управления дорожным движением в следующем году.

5. Похоже, что новая система светофоров работает некорректно.

6. Некоторые местные дороги были перекрыты во время строительства, что ухудшило ситуацию.

7. Для получения более точных данных о дорожном движении на крупных перекрестках будут установлены датчики.

8. Люди часто используют свои автомобили даже для небольших дел, например, чтобы забрать посылку.

9. Правительство хочет улучшить общественный транспорт, чтобы сократить использование автомобилей.

10. Мало доступных парковочных мест возле железнодорожной станции.

11. Жители протестовали т.к. был перекрыт доступ к их улице.

12. Водителей перенаправляют через жилые районы, вынуждая их выбирать более длинные маршруты.

10. Look at the three traffic models below. They show how our understanding of traffic problems changes and becomes more accurate. Use the formulas to explain what each model means in your own words. Try to summarise what the article says about each one. Use the prompts below.

Which model do you think is the most realistic? Why?

1.

$$\text{TRAFFIC} = \text{Number of people driving}$$

2.

$$\text{TRAFFIC} = \text{Number of people driving} \times \text{How much they drive}$$

3.

$$\text{TRAFFIC} = \frac{\text{Number of people driving} \times \text{How much they drive}}{\text{Number of available routes}}$$

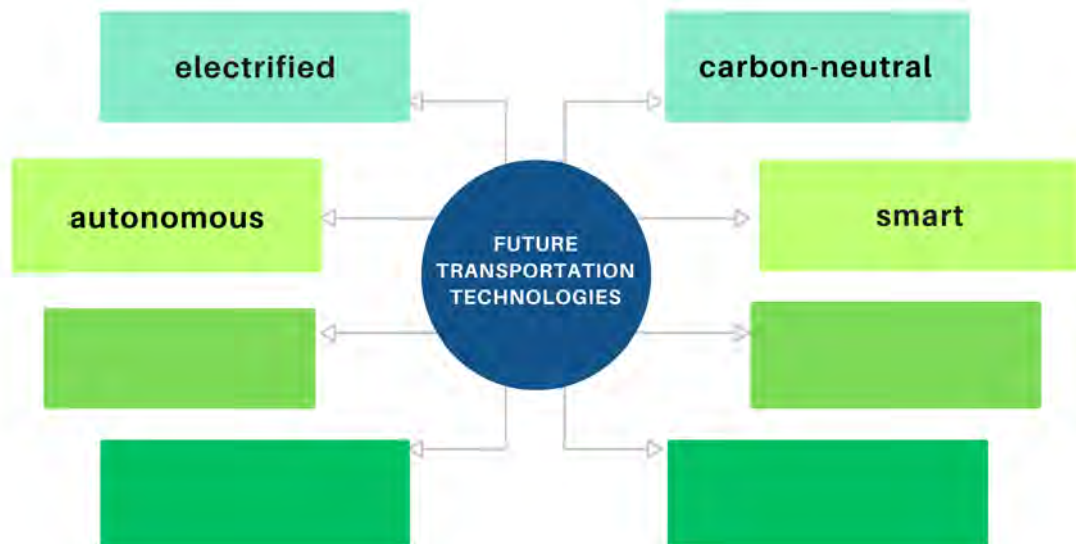
Sentence starters:

- Model 1 suggests that...
- Model 2 adds that...
- Model 3 shows that...

Unit 10

Technology in Transportation

1. What words come to mind when you think of future technology in transportation? Complete the mind map below.



2. Complete the survey with you partners.

QUESTIONS:	Student 1	Student 2	Student 3
Have you heard of Hyperloop or electric vertical takeoff and landing (eVTOL) vehicles?	☐	☐	☐
Do you think flying cars will be common in our lifetime?	☐	☐	☐
Would you trust an AI to drive a bus or plane?	☐	☐	☐
Do you think public transport will significantly improve with advanced technology?	☐	☐	☐

3. Match the words and their definitions. What are their Russian equivalents?

Word/Phrase
1. connectification
2. to enable
3. traffic update
4. to enhance
5. to streamline
6. smart booth
7. mileage
8. charging session
9. auto care shop
10. maintenance
11. alert
12. remotely
13. added convenience
14. emergency assistance
15. to request
16. to dispatch

Definition
a. from a distance, using a smartphone or internet connection
b. to improve something or make it more effective
c. the period when an electric vehicle is connected to a charger to refill its battery
d. help provided in urgent situations, like accidents or breakdowns.
e. the distance a vehicle has traveled or can travel
f. a place where cars are repaired or serviced
g. regular checks and repairs to keep a car in good working condition
h. the process of making cars connected to the internet and other devices to improve communication, services, and control
i. a warning or notification, often shown on a screen or sent via app
j. to send someone or something, like a vehicle or a team, to a specific location
k. new information about current road conditions, like congestion, accidents
l. an advanced station or kiosk equipped with technology for services like charging, navigation, or information
m. to ask for something, such as help or information
n. to make something possible or allow it to happen, especially using technology
o. an extra feature or function that makes something easier or more comfortable
p. to make a process simpler and more efficient

4. Fill in the gaps using the words from the previous exercise. Mind the form.

verb	noun / noun phrase	adverb
to dispatch to request to streamline to enable to enhance	added convenience alert mileage emergency assistance smart booth maintenance auto care shop charging session traffic update connectification	remotely

1. Smart dashboards _____ the driving experience by combining multiple functions in one display.
2. The new software update _____ drivers to control their cars remotely using a smartphone app.
3. Voice control offers _____ by allowing hands-free navigation and communication.
4. In an emergency, the system _____ a rescue team to the vehicle's GPS location.
5. The car's navigation system provides real-time _____ to avoid congested areas.
6. The _____ of vehicles is transforming the way we drive and communicate on the road.
7. Drivers can stop at a _____ to check vehicle diagnostics or charge their electric cars.
8. Each _____ takes about 30 minutes to reach 80% battery capacity.
9. Regular _____ alerts help prevent serious problems in connected vehicles.
10. The app shows the car's _____ and predicts when the next charging session is needed.
11. Drivers can lock or unlock their cars _____ through a mobile app.
12. The system sends an _____ if it detects low tire pressure or an engine issue.
13. In case of a crash, the system automatically contacts _____ services.
14. Connected technologies are used to _____ driver safety and comfort.
15. The driver can _____ a roadside technician with just one tap on the screen.
16. The car automatically schedules a visit to an _____ when maintenance is needed.

5. Read the text.

Automotive IoT: A Brief Overview of the Connected Car

Connected cars are influencing the way we drive. These days, computer chips and sensors are installed inside everything from washing machines to light bulbs. But few industries are being transformed by the mass connectification of objects, also known as the Internet of Things (IoT), like car manufacturing.



What Is a Connected Car?

A connected car is a vehicle that uses internet connectivity to communicate with other cars and internet-connected devices. These devices can include roadside sensors, smart home systems, parking meters, toll booths, EV charging stations, and mobile or web applications. By communicating with these devices, connected car technology enables drivers to share and access real-time data to power all kinds of actions.

You can use connected car technology to:



Improve road navigation systems: get live traffic updates from roadside sensors to avoid congestion. Most newer vehicles come with advanced navigation systems that use traffic data to give drivers real-time route recommendations and enhance traffic safety. These capabilities are included in an automaker's connected services subscription.



Streamline road tax payments: many smart booths today simplify toll payments with devices using radio frequency identification (RFID) technology. Today, transportation departments can use connected car technology to enable automatic mileage verification for fair road usage charge programs.



Optimize electric vehicle (EV) charging: drivers can connect their vehicle to EV charging applications that use live battery data to find nearby charging stations, schedule charging sessions, plan routes, and more.



Monitor vehicle health: auto care shops and auto dealerships use vehicle connectivity to simplify vehicle maintenance for customers through digital apps and portals. Drivers connect their car to an application to receive maintenance alerts, access vehicle reports.



Enable smart home features: drivers can control home devices like temperature control or garage doors remotely from their car for added convenience. With smart home energy management systems, vehicle connectivity allows drivers to schedule charging sessions and automatically optimize sessions for lower energy rates.



Access emergency assistance: drivers can request emergency services or roadside assistance through a mobile application if an accident or vehicle breakdown happens. With vehicle connectivity, emergency services can be dispatched directly to a car's location or be given digital car keys.

6. Choose an answer to the questions.

- What is the primary function of a connected car?
 - To provide entertainment systems in the car.
 - To communicate with other vehicles and devices using internet connectivity.
 - To monitor the vehicle's engine performance.
 - To allow drivers to stream music.
- Which of the following is NOT mentioned as a device connected to a car?
 - Smart home system
 - Washing machine
 - Parking meter
 - EV charging station
- Which of the following is NOT mentioned as a use of connected car technology?
 - Improving road navigation systems
 - Optimizing electric vehicle (EV) charging
 - Enabling vehicle-to-vehicle communication for racing games
 - Monitoring vehicle health
- How do connected cars assist in road tax payments?
 - By automatically paying road taxes at toll booths
 - By using radio frequency identification (RFID) technology for toll payments
 - By generating invoices for road taxes

- D. By offering discounts on toll fees based on usage
5. What can drivers do with the help of smart home integration in connected cars?
- Stream movies while driving
 - Control home devices such as temperature and garage doors remotely
 - Automatically unlock their home doors
 - Send text messages to family members
6. How can vehicle connectivity help drivers in emergencies?
- It can automatically fix vehicle breakdowns
 - It can send location details to emergency services or roadside assistance
 - It can provide live weather updates
 - It can offer real-time route changes during accidents

7. Speak on the following.

- Explain how connected car technology improves road navigation systems.
- Describe two ways connected cars help with electric vehicle (EV) charging.
- What are some of the benefits of vehicle connectivity for car maintenance?
- How does connected car technology help with toll payments?
- What is the role of connected cars in enabling smart home features?
- How connected car technology enhances safety on the road.
- What are the advantages of using connected car technology to access emergency services in case of an accident or breakdown?

8. Choose one of the questions below and make a short oral presentation using the sentence starters and idea prompts in brackets. Try to explain your ideas clearly and give reasons or examples. Make use of Internet resources.

1. Which feature of connected car technology do you think will have the greatest impact on drivers in the next 10 years?

Idea prompts:

- | | |
|-----------------------------|--|
| • real-time navigation | • in-car voice assistant |
| • vehicle health monitoring | • over-the-air (OTA) software updates |
| • EV charging apps | • remote vehicle control via smartphone apps |
| • smart home integration | |

Sentence starters:

- One important feature of connected cars is...
- In my opinion, this feature will have the greatest impact because...
- For example, drivers will be able to...
- Compared to other features, this one is more useful because...
- This can change the way people...

2. What challenges or risks do you associate with vehicle connectivity?

Idea prompts:

- data privacy
- system hacking
- over-reliance on technology
- software errors

Sentence starters:

- A major risk of connected cars is...
- This could lead to problems such as...
- Another challenge is...
- I think this is serious because...
- To reduce these risks, we should...

3. Would you personally feel comfortable using a fully connected or autonomous vehicle? Why or why not?

Idea prompts:

- trust in technology
- fear of accidents
- convenience
- emergency help
- hands-free driving

Sentence starters:

- I would / wouldn't feel comfortable because...
- I'm worried about...
- However, it could be useful for...
- If the technology is safe, then...
- Personally, I prefer...

Unit 11

History of First Roads

1. Before you read the text, try to answer the following questions.

1. What do you think are the two primary modes of land transportation?
2. How do you think the development of roads has influenced trade and commerce throughout history?
3. What role do you think government plays in the construction and maintenance of roads?
4. How do you imagine early roads were constructed compared to modern roads?
5. In what ways do you think the domestication of animals impacted transportation methods?
6. What are some potential challenges faced by early road transport systems?
7. How do you think technological innovations have changed road construction over time?

Read the text

Land transportation systems consist of two primary modes: roads and railways. Roads were the initial mode of transportation that appeared before the rail technology became available in the 18th century during the industrial revolution. Understanding the historical developments is crucial when analyzing the current structure of land transport networks. Present-day roads often follow the structure of earlier roads, as seen in the modern European road network, particularly in countries like Italy, France, and Britain, which closely resemble the Roman road network established centuries ago.

The earliest land roads transformed from trails initially used for traveling between hunting territories. As nation-states began to form, these trails started to be used as routes for commercial purposes as trade expanded and some became roads. Some of these trails eventually developed into roads, especially by the domestication of animals like horses, mules, and camels. The introduction of wheeled vehicles further encouraged the construction of roadways of better quality. However, creating a well-organized road transport system required a level of labor coordination and government oversight, which was typically provided by a central authority that offered protection along trade routes.

By 3000 BC, the earliest road systems began to develop in Mesopotamia. By 625 BC, asphalt was utilized to pave roads in Babylon. The Persian Empire built a 2,300 km road in the 5th century BC. However, the Roman Empire established the first major road system starting from 300 BC onwards. This system was primarily developed for economic, military, and administrative purposes. It heavily relied on existing road engineering techniques, which included laying foundations and constructing bridges. Moreover, it played a crucial role in creating transcontinental trade routes like the Silk Road, connecting Europe and Asia by 100 BC.

After the fall of the Roman Empire in the 5th century, the concept of integrated road transportation lost its popularity. Most roads were then constructed and maintained locally, leading to a lack of proper maintenance. Because of the lack of maintenance of many road segments, land transport became a very dangerous activity. It was not until the 17th century, with the establishment of modern nation-states, that national road transportation systems were formally developed.

The French government, for instance, constructed the Royal Roads system, covering 24,000 km. This system facilitated the operation of stagecoaches for public transport services carrying passengers and mail. 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 approach was undertaken in the United States in the 19th century, leading to the operation of a network of 3 million km of roads by the early 20th century, with most of them being unpaved.

The year 1794 marked a significant milestone in modern road transportation with the introduction of the first mail coach service between London and Bristol, operating according to a set timetable.

Technological innovations in road engineering also played a crucial role in enabling the construction of durable and cost-effective roads. In the past, advancements in road construction have been significant. A notable contribution was made by the Scottish engineer McAdam, who introduced a method for creating durable and waterproof road surfaces using crushed stone bound together with either water or 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 Lincoln Highway, the first transcontinental highway suitable for all weather conditions, stretched over 5,300 km from New York to 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 the American Interstate highway system initiated in 1956, which played a crucial role in enhancing transportation infrastructure. Its strategic purpose was to provide a national road system servicing the economy of the country 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, connecting major cities across the country from coast to coast. By the 1970s, every modern nation had constructed a national highway system. This trend is now being observed in numerous developing countries as well.

2. Find the answers to the following questions in the text.

1. What were the two primary modes of land transportation mentioned in the text?
2. How did early trails transform into commercial roads according to the reading?

3. What was the significance of the Roman Empire's road system?
4. How did the French and British governments contribute to road transportation systems in their respective countries?
5. Who was McAdam, and what was his contribution to road construction?
6. How did technological innovations improve road reliability and travel speed?
7. In what ways did early road systems differ from modern road networks based on the text?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Land transportation systems consist of two primary modes: roads and railways.
2. Rail technology was available before roads during the industrial revolution.
3. Present-day roads often follow the structure of earlier roads.
4. The text specifies how many countries have road networks resembling the Roman road network.
5. The earliest land roads transformed from trails initially used for traveling between hunting territories.
6. The domestication of animals had no impact on the development of roads.
7. Creating a well-organized road transport system required labor coordination and government oversight.
8. By 3000 BC, the earliest road systems began to develop in Mesopotamia.
9. Asphalt was first utilized to pave roads in Mesopotamia.
10. The Roman Empire established the first major road system starting from 300 BC onwards.
11. The text mentions specific reasons for the decline of integrated road transportation after the fall of the Roman Empire.
12. The French government constructed the Royal Roads system, covering 24,000 km.
13. The British system of turnpikes did not require tolls for road usage.
14. The year 1794 marked the introduction of the first mail coach service between London and Bristol.
15. McAdam introduced a method for creating durable and waterproof road surfaces using crushed stone.

4. Match the word or word combination with the appropriate definition.

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

5. Fill in the gaps with the appropriate word.

*construction, tolls, maintenance, modes, movements, turnpikes,
non-slippery, purposes, reliability, road*

1. Land transportation systems consist of two primary ____: roads and railways.
2. The introduction of wheeled vehicles further encouraged the ____ of roadways of better quality.
3. This system was primarily developed for economic, military, and administrative ____.
4. Most roads were then constructed and maintained locally, leading to a lack of proper ____.
5. The British, mainly through private efforts, built a 32,000 km system of ____ where ____ have to be paid for road usage.
6. It provided a cheaper, durable, smooth and ____ pavement, which considerably improved the ____ and the travel speed on roads.
7. Its strategic purpose was to provide a national ____ system servicing the economy of the country and also able to support troop ____ and act as air strips in case of an emergency.

6. Fill in the blanks with the suitable prepositions.

1. The earliest land roads transformed ____ trails initially used for traveling ____ hunting territories.
2. Some of these trails eventually developed ____ roads, especially by the domestication of animals.
3. ____ 3000 BC, the earliest road systems began to develop in Mesopotamia.
4. It heavily relied ____ existing road engineering techniques, which included laying foundations and constructing bridges.
5. The year 1794 marked a significant milestone ____ modern road transportation.
6. Technological innovations in road engineering also played a crucial role ____ enabling the construction of durable and cost-effective roads.

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 modes 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 following sentences into your native language.

1. Создание организованной системы движения дорожного транспорта требует координации рабочих сил и государственного надзора, который обычно осуществляется центральной властью.
2. Технологические инновации в дорожном строительстве сыграли ключевую роль в создании прочных и экономически эффективных дорог.
3. Шотландский инженер МакАдам разработал метод создания прочных и водонепроницаемых дорожных покрытий, используя дробленый камень, связанный водой или битумом
4. Наиболее выдающимся достижением стала американская система автомагистралей между штатами, которая сыграла ключевую роль в улучшении транспортной инфраструктуры
5. Введение колесных транспортных средств способствовало строительству более качественных дорог.

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

1. The text deals with ...
2. First the author points out that...
3. Then the author writes that
4. Further the author says that
5. In conclusion the author states that
6. I find the text very interesting because.....

Unit 12

Rules Governing Road Transportation

1. Before you read the text answer the following questions.

1. What modes of transportation do you think are most commonly used for delivering goods?
2. What advantages do you think road transport has over other forms of transportation, such as rail or air?
3. Why might transportation companies prefer using road networks for distribution?
4. How might road transport contribute to environmental issues, such as greenhouse gas emissions?
5. What are some potential safety concerns associated with increased road traffic?
6. What role do you believe public authorities play in regulating road transport?

Read the text

Every day and night, hundreds of thousands of lorries travel along the primary transportation routes of various countries. This mode of transport has two obvious advantages: it offers flexibility and can deliver goods and passengers right to their doorsteps. That's why many transportation companies prefer using the road network to distribute their products not only across their country but also along the Europe and Asia.

Road transport is crucial for developing the Euro-Asian market. As this market becomes more open and integrated, the road transport sector benefits from growing opportunities of land transportation.

All operators in this sector have the right to establish their businesses and operate freely throughout the European and Asian market. However, the rules governing road transportation – especially concerning taxation, tolls, and fees for infrastructure use – are shaped by different national laws. This mosaic of regulations leads to various costs that distort competition, making it harder to allocate resources efficiently and hindering competitiveness overall. The overall aim of EU regulations in this sector is to provide clarity and balance to benefit a more accessible market for numerous transport operators.

Ironically, the road haulage sector is facing challenges due to its own success. As it continues to grow, along with increasing car traffic, Europe's roadways are becoming more congested. This situation raises significant concerns about road safety, especially the need to share infrastructure with other users. Additionally, there is a crucial environmental impact linked to greenhouse gas emissions and climate change. Although road freight transport, which primarily uses diesel fuel (not the most polluting), isn't the only contributing factor to the problem, the growing number of vehicles – now exceeding 20 million in Europe – is a significant factor.

The passenger transport sector shares similar rights and responsibilities with road haulage, including freedom to establish businesses, market access, competition standards, vehicle safety, and safe driving practices. As a result, many EU regulations that apply to trucks also extend to buses and coaches. However, road transport only

represents about 9% of overall passenger transport, which includes cars, trains, and planes. A considerable percentage of these vehicles is made up of urban or intercity services managed 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. This includes national authorization for regular services, contracts for specific types of regular services (like school transport, personnel transport, etc.), and the necessary permits for occasional services and a certificate for own-account services.

The Interbus agreement plays a vital role in liberalizing the passenger road transport market between the EU and Central and Eastern European countries. This agreement includes social, fiscal, and technical measures that promote non-discrimination among the participating countries. It regulates not just the movement between the EU and non-member states, but also traffic among the non-member countries themselves.

Road transport plays a direct role in developing the road transportation either on the internal market or following the rules of Euro-Asian transportation 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 transport policy all over the world.

2. Based on the text provide the answer to the following questions.

1. What are the two main advantages of road transport mentioned in the text?
2. What challenges do transportation companies face due to varying national regulations?
3. How does the increase in vehicle numbers affect road safety and congestion in Europe?
4. What percentage of overall passenger transport is represented by road transport?
5. How do EU regulations aim to improve competition and clarity in the road transport sector?
6. What is the significance of greenhouse gas emissions in relation to road freight transport?
7. What types of services require national authorization and permits in the passenger transport sector?
8. In what ways have authorities simplified administration procedures for passenger transport services?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Hundreds of thousands of trucks travel along primary transportation routes every day and night.

2. Road transport offers flexibility and can deliver goods and passengers right to their doorsteps.
3. All operators in the road transport sector can operate freely without any regulations.
4. The rules governing road transportation vary by national laws, affecting taxation, tolls, and fees for infrastructure use.
5. The EU aims to provide clarity and balance in road transport regulations to benefit transport operators.
6. The number of vehicles operating in European road transport has exceeded 20 million.
7. Road freight transport is the most polluting mode of transportation in Europe.
8. The passenger transport sector shares similar rights and responsibilities with road haulage.
9. Road transport represents over 20% of overall passenger transport in Europe.
10. Authorities have systematized and simplified common administration procedures for various passenger transport scenarios.

4. Match the word or word combination with the appropriate definition.

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

5. Fill in the gaps with the word or word combination from the task 4 in an appropriate form.

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.

6. Fill in the gaps with the appropriate word.

*non-discrimination, laws, infrastructure, interurban,
importance, transportation, Interbus*

1. Every day and night, hundreds of thousands of lorries travel along the primary _____ routes of various countries.
2. However, the rules governing road transportation reshaped by different national_____.
3. The need to share _____ with other road users also raises the important question of road safety.
4. A considerable share of these is made up of vehicles used for urban or _____ transport.
5. In a sector where safety is of crucial_____, the authorities systematized and simplified the common administration procedures.
6. The _____ agreement plays a vital role in liberalizing the passenger road transport market.
7. This agreement includes social, fiscal, and technical measures that promote _____ among the participating countries.

7. Fill in the blanks with the prepositions where necessary.

1. That's why many transportation companies prefer using the road network to distribute their products not only _____ their country but also _____ the Europe and Asia.
2. All operators in this sector have the right to establish their businesses and operate freely _____ the European and Asian market.
3. Another consequence of fundamental importance for the community is the impact _____ the environment.
4. Ironically, the road haulage sector is facing challenges _____ its own success.
5. Moreover road transport also has to meet _____ challenges connected with its success

8. 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.

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.

9. 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. Transport and transporters are influenced by the changes in political and public opinion, by the rapid development of telecommunications and so on.
4. The capacity of existing European waterways is not fully utilized.
5. The need for sustainable mobility and alternative land use policies has recently been recognized.
6. 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.

10. Translate the following sentences into your native language.

1. Поскольку каждая страна устанавливает собственные правила налогообложения, оплаты дорог и сборов за инфраструктуру, формируется целый комплекс требований, усложняющий работу перевозчиков.
2. Из-за неоднородных тарифных норм операторы несут разные расходы, что приводит к неравным условиям и мешает конкуренции на рынке.
3. Несмотря на первоначальное внимание на крупнотоннажных грузовиках, многие постановления Европейского союза распространяются на междугородные и городские автобусы, обеспечивая единообразие требований.
4. Заключённое между ЕС и государствами Центральной и Восточной Европы соглашение «Интербас» внедряет социальные, фискальные и технические стандарты, исключая дискриминацию участников и расширяющие свободу перевозок.

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

1. The main idea of the text is
2. First the author states that
3. Then the author notes that ...
4. Further the author says that ...
5. The author comes to the conclusion that ...
6. In my opinion the text is quite useful because...

Unit 13

Traffic Control

1. Before you read the text try to guess the answers to the following questions.

1. What do you think are the main challenges associated with road traffic in modern cities?
2. How might traffic congestion affect daily life for residents of a city?
3. What types of devices do you believe are used to control traffic on roadways?
4. Have you ever experienced a traffic jam? What were the possible causes?
5. How do you think roundabouts differ from traditional traffic signals in managing traffic?

Read the text

Road traffic control is an essential aspect of modern life. As our cities and towns grow, so does the number of vehicles on the roads. Traffic congestion can cause numerous problems, including delays, frustration, and increased pollution. Effective traffic control measures can help reduce these issues and create safer and more efficient roads for everyone.

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 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.

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.

Traffic signals and signs are one of the most commonly used methods of controlling road traffic. They help to regulate traffic flow by indicating when vehicles

should stop, go, or yield. These signals and signs should be placed in visible locations and should be maintained regularly to ensure they are functioning correctly. Proper use of traffic signals and signs can greatly improve traffic safety and help reduce accidents.

Roundabouts are an effective way of controlling traffic at busy intersections. They help to reduce congestion by eliminating the need for traditional traffic lights and stop signs. Roundabouts work by directing traffic in a circular motion around a central island. This helps to reduce the number of accidents that occur at intersections and improves traffic flow.

Setting speed limits is another way to control traffic. By limiting the speed at which vehicles can travel, it helps to reduce the number of accidents on the roads. Speed limits should be set based on the type of road, weather conditions, and the amount of traffic. Proper enforcement of speed limits can help to improve safety and reduce congestion.

2. After you read the text provide the answer to the following questions.

1. What are the three main categories of traffic control devices mentioned in the text?
2. How have traffic signals evolved from the 19th century to the present day?
3. Why was standardization of traffic control devices necessary?
4. How do roundabouts improve traffic flow compared to traditional intersections?
5. What factors should be considered when determining appropriate speed limits on different types of roads?
6. What benefits can effective traffic control measures provide to a community?
7. Why is regular maintenance of traffic signals and signs crucial for road safety?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Road traffic control is an essential aspect of modern life.
2. Traffic congestion can cause delays and increased pollution.
3. All roadways are built without devices meant to control traffic.
4. Traffic control devices fall into three main categories: signs, signals, and pavement markings.
5. The text specifies the exact number of signs and signals used in modern traffic control.
6. In the late 19th century, signals began to appear in big cities at highly congested intersections.
7. Traffic control devices were standardized only at the federal level in the United States.
8. Roundabouts help reduce congestion by eliminating the need for traditional traffic lights and stop signs.
9. The text mentions specific types of accidents that roundabouts help to reduce.
10. Speed limits should be set based on the type of road, weather conditions, and the amount of traffic.

4. Match the word or word combination with the appropriate definition.

traffic jam, lane, roundabout, 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 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
7. a road junction at which traffic moves in one direction around a central island to reach one of the roads converging on it

5. Fill in the gaps with the word or word combination from task 4 in an appropriate form.

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.
7. The traffic flowed much better when they replaced the traffic lights with a ____.

6. Fill in the gaps with the appropriate word.

traffic, markings, safety, congestion, roundabouts, enforcement

1. Traffic ____ can cause numerous problems, including delays, frustration, and increased pollution.
2. Besides signals, signs and ____, other forms of traffic control are designed and built into the roadway.
3. Proper use of traffic signals and signs can greatly improve ____ safety and help reduce accidents.
4. ____ work by directing traffic in a circular motion around a central island.
5. Proper ____ of speed limits can help to improve ____ and reduce congestion.

7. 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. By easing traditional impediments to the international movement of goods, the TIR system encourages the development of international trade.

3. A market observation system for monitoring the transport market in case of disturbances enabling adequate interventions is needed.
4. There is little scope for reducing the annual tax on vehicle ownership further.
5. The extent of feeling unsafe when using public transport is relatively high.
6. 300 extra buses were added to the Central London bus network to give people an alternative to driving and prevent the anticipated chaos.
7. Whatever the mode of transport, getting round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and stressful activity.

8. 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.

9. Translate the following sentences into your native language.

1. В конце 19 века сигналы дорожного движения управлялись вручную и состояли из семафоров, флагов или щитов, а иногда — из цветных электрических огней.
2. На сегодняшний день предпринимаются попытки объединить со всех стран Руководства по Унифицированным Устройствам Управления Дорожным Движением в единый международный стандарт.
3. Правильное использование сигналов и знаков дорожного движения может значительно повысить безопасность и сократить количество аварий на дорогах.
4. Кольцевые развязки — это эффективный способ управления движением на загруженных перекрестках.

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

1. The text is devoted to ...
2. First the author describes...
3. Then the author notes that
4. Further the author thinks that
5. In conclusion the author underlines that
6. I find the text very informative because.....

Unit 14

Traffic Management System

1. Before you read the text answer the following questions.

1. What do you think traffic management means, and why might it be important in urban settings?
2. Can you list some potential problems that might occur without proper traffic management?
3. What differences can you anticipate between traffic management and traffic control?
4. Why might educating the public about traffic rules be significant for effective traffic management?
5. How do you think traffic congestion can impact daily life and the economy?
6. What features do you think would be important for a well-designed transportation system?
7. In what ways do you think traffic management might affect pedestrian safety?

Read the text

Traffic management is the process of monitoring and controlling traffic flow on roads, highways, and other transportation systems to ensure the safe and efficient movement of vehicles and pedestrians. It includes traffic monitoring, signal timing, road construction and maintenance, parking management, and incident response.

Traffic management is crucial in reducing congestion, improving safety, and enhancing the overall transportation experience for all road users. It involves a combination of technology, planning, and enforcement to optimize traffic flow and minimize delays.

Traffic management and traffic control are two distinct concepts within transportation and urban planning.

Traffic management involves planning and implementing strategies to optimize traffic flow, minimize congestion, and improve overall transportation efficiency. It may include technology, infrastructure improvements, urban planning, and public transportation options. On the other hand, traffic control involves regulating and manipulating traffic flow through signage, signals, and law enforcement to ensure road safety and order.

While traffic management focuses on long-term solutions and systemic improvements, traffic control is more concerned with immediate and tactical interventions to address specific traffic situations. Both are essential components of a comprehensive transportation strategy.

The five traffic management pillars will give you a solid base to create your desired smooth urban operation. These are the following:

Traffic Engineering – This involves improving traffic flow by designing and implementing physical infrastructure such as roads, highways, intersections, and

pedestrian facilities. This pillar encompasses traffic signal design, road signs, center islands, and markings.

Traffic Education – It aims to educate the general public on traffic rules and regulations, safe driving practices, and alternative modes of transportation. This pillar includes driver education programs, public awareness campaigns, and school safety programs.

Traffic Enforcement – Involving enforcing laws and regulations related to traffic control and safety, this can cover monitoring speed limits, issuing citations for traffic violations, and conducting sobriety checkpoints.

Traffic Ecology – This pillar focuses on understanding the environmental impact of transportation systems and implementing sustainable solutions to minimize negative effects. It also includes initiatives such as promoting alternative modes of transportation, reducing vehicle emissions, and preserving green spaces.

Traffic Economics – This focuses on how a traffic system impacts an area's economic prosperity and product pricing and supply. Heavy traffic congestion can significantly affect productivity and businesses' ability to receive essential supplies. An uncongested traffic system boosts economic value by ensuring smooth access for workers and supplies.

One of the primary reasons why traffic management is important is to ensure the safety of all road users. Properly designed and implemented traffic management systems can help to reduce the number of accidents on the road, which in turn can save lives and prevent injuries. This can include measures such as traffic lights, roundabouts, speed limits, and road signage, which help to regulate the flow of traffic and reduce the risk of collisions.

Another key aspect of traffic management is to reduce congestion on the roads. Congestion not only causes delays for drivers and commuters, but it also has a significant impact on the economy by reducing productivity and increasing fuel consumption. Traffic management systems such as variable speed limits, intelligent transport systems, and road pricing can help to reduce congestion and keep traffic moving smoothly.

Traffic management is also important for maintaining the infrastructure of our roads. Without proper traffic management like traffic barriers, roads can become damaged more quickly due to overuse and heavy vehicles. This not only increases the cost of repairs but also can make the roads more dangerous for drivers.

In addition to the above, traffic management plays a vital role in reducing the environmental impact of transportation. Proper traffic management systems can help to reduce fuel consumption and emissions, which in turn can improve air quality and reduce the negative impact of transportation on the environment.

2. After you read the text provide the answer to the following questions.

1. What are the main components of traffic management?
2. How are traffic management and traffic control different?
3. What are the five pillars of traffic management mentioned in the text, and what does each encompass?

4. Why is traffic safety considered a primary concern in traffic management?
5. In what ways can traffic management contribute to environmental sustainability?
6. What role does traffic education play in the overall strategy for traffic management?
7. How can proper traffic management systems improve air quality and reduce emissions?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Proper traffic management can prevent road damage caused by overuse and heavy vehicles.
2. The cost of road repairs can increase without effective traffic management.
3. Poor traffic management can make roads more dangerous for drivers.
4. Traffic management systems can help reduce fuel consumption.
5. Proper traffic management can improve air quality.
6. The text states that traffic management has no impact on the environment.
7. Reducing emissions is a benefit of effective traffic management.
8. The text provides specific statistics on how much fuel consumption can be reduced through traffic management.
9. Traffic management plays a vital role in minimizing the negative impact of transportation on the environment.

4. Fill in the gap with the appropriate word.

reasons, urban, congestion, infrastructure, emissions, consumption

1. Traffic management is crucial in reducing____, improving safety, and enhancing the overall transportation experience for all road users.
2. The five traffic management pillars will give you a solid base to create your desired smooth ____ operation.
3. One of the primary ____ why traffic management is important is to ensure the safety of all road users.
4. Traffic management is also important for maintaining the ____ of our roads.
5. Proper traffic management systems can help to reduce fuel ____ and ____ .

5. 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. Manufacturers 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.

6. 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.

7. 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.

8. Translate the following sentences into your native language.

1. Управление дорожным движением включает в себя сочетание технологий, планирование и обеспечения соблюдения правил для оптимизации потока движения и минимизации задержек.
2. Для того чтобы уменьшить заторы и обеспечить бесперебойное движение транспорта могут использоваться системы управления дорожным движением, такие как переменные ограничения скорости, интеллектуальные транспортные системы и дорожное ценообразование.
3. Экология дорожного движения изучает воздействие транспортных систем на окружающую среду и поиск решений для минимизации негативных последствий.
4. Сильные пробки на дорогах могут существенно повлиять на работу предприятий, а также их способность получать необходимое сырье.
5. Крайне важно постоянно информировать людей о правилах дорожного движения, безопасных методах вождения и альтернативных видах транспорта.

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

1. The text touches upon the issue of ...
2. The author starts by telling that...
3. Much attention is given to
4. Further the author points out that
5. In conclusion the author draws reader's attention to.....
6. In my opinion the text is rather interesting because.....

Unit 15

Driving In Belarus

1. Before you read the text answer the following questions.

1. What do you think are the most important rules for driving in a foreign country?
- 2 Why do you think having the proper documentation is important when driving abroad?
3. What do you believe are the safety measures that should be followed when driving?
4. What might be the consequences of driving without a valid license or permits in a foreign country?

Read the text

In terms of driving every country has its own rule and regulations. Any foreigner as well as the citizen of the country 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, it's crucial for drivers to keep several important documents on hand. Failing to have these documents can result in an on-the-spot fine. You need to have a valid driver's license and an International Driving Permit (IDP), proof of identity (like your passport), vehicle ownership documents, and third-party insurance. If you're a foreign driver, it's also necessary to have your vehicle serviced before hitting the road at designated service centers. After the service, you'll receive a certificate confirming that your vehicle has passed inspection and is safe for driving. Remember, all documentation must be original; copies won't be accepted. Not having the right papers could prevent you from driving legally in Belarus, and there's a high chance of getting fined for not following these requirements.

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, front seat passenger must wear seatbelts, 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 you travel by car in Belarus during the winter months, that your vehicle must be equipped 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 be sure 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!

In terms of parking there 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 issues 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 pay accordingly. In most shopping centers parking is free. The parking regulations in Belarus is 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%.

2. After you read the text provide the answer to the following questions.

1. What are the key documents required for driving in Belarus?
2. How does the speed limit differ between built-up areas and motorways in Belarus?

3. What are the specific laws regarding seatbelts and child safety in vehicles in Belarus?
4. Why is it important for drivers to stay within their lane while driving in Belarus?
5. Why might using the car horn be considered rude in Belarus?
6. What steps should a foreigner take to ensure they are safely and legally driving in Belarus?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Drivers in Belarus must follow specific rules and regulations for their safety and the safety of others.
2. Foreign drivers visiting Belarus from the European Union should be familiar with road signs due to compliance with the Vienna International Convention.
3. It is acceptable to carry copies of important driving documents in Belarus.
4. A valid driver's license, International Driving Permit, proof of identity, vehicle ownership documents, and third-party insurance are required when driving in Belarus.
5. The text provides information on the exact fines associated with not having the necessary documents when driving.
6. In Belarus, driving takes place on the right side of the road and overtaking is done on the left.
7. Children of all ages are permitted to sit in the front seat without needing a child seat in Belarus.
8. Speed limits in built-up areas in Belarus are 60 km/h, while in residential areas, the limit is 20 km/h.
9. The text indicates whether parking meters are available in all parking facilities in Belarus.
10. Belarus has a zero alcohol limit for drivers, and drinking and driving is prohibited.

4. Match the word or word combination with the appropriate definition.

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

5. Fill in the gaps with the word or word combination from the task 4.

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.

6. Fill in the sentences with the suitable preposition.

1. Generally in Europe the major road signs comply ____ the Vienna International Convention.
2. Nevertheless, there is more to driving in a foreign country than just being familiar ____ their road signs.
3. Failing to have these documents can result ____ an on-the-spot fine.
4. Like many European countries in Belarus driving takes place ____ the right side of the road and overtaking takes place ____ the left.
5. By law children ____ the age of 12 are not permitted to seat in the front and young children are required to have a child seat ____ the car.
6. When you travel by car in Belarus during the winter months your vehicle must be equipped ____ snow tyres.
7. As a driver in Belarus, always be sure that you stay ____ your lane.

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

1. 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.
2. Changes in the manufacturing flow process lead to shorter cycle times, meaning improved responsiveness and efficiency of demand to customers.
3. Increasing volumes of traffic mean an increased safety risk.
4. The longer the journey time, the greater the disadvantage which passengers experience when changing buses.
5. 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. Importance is placed on making use of each other's' expertise and special equipment.

3. Transport is not viewed in isolation, but is closely linked with policies including those covering the environment, energy and safety.
4. Most seaport, inland waterways and pipelines networks are designed and realized specifically for movement of freight.
5. 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. It is neither possible nor rational to develop a public transport system where all passengers can travel from door-to-door without exchanging buses.
4. Traffic signs and management systems are deteriorating due to intensive use, in part through damage and by poor maintenance.
5. A corporate station operates by means of staff and cars that are both part of the car rental company.

10. Translate the following sentence into your native language.

1. Если вы являетесь водителем в Беларуси, вы должны иметь при себе несколько важных документов.
2. Для иностранных водителей важно пройти ТО в специализированном месте перед длительной поездкой.
3. Как вы знаете: водитель и пассажир на переднем сиденье должны быть пристегнуты ремнями безопасности, а детям до 12 лет запрещено сидеть спереди.
4. Штрафы регистрируются в базу данных, и в случае повторного нарушения того же правила, штрафы могут быть увеличены в несколько раз.
5. Частое использование звукового сигнала является неуважительным на дорогах Беларуси, поэтому иностранцы приятно удивлены белорусскими водителями.

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

1. The aim of the text is to provide the reader with some information on.....
2. The author starts by telling that...
3. Then the author describes
4. Further the author points out that
5. The author comes to the conclusion that
6. I found the text very informative because.....

Unit 16

Transportation in Big Cities

1. Before you read the text answer the following questions.

1. What role do you think transportation plays in the daily lives of residents in big cities?
2. Can you list some forms of public transportation you think are common in urban areas?
3. What challenges do you think big cities face regarding transportation?
4. In what ways can transportation influence urban development and property values?
5. How do you think traffic congestion affects the quality of life for residents?
6. What solutions can you think of to improve transportation in big cities?

Read the text

Transportation plays a crucial role in the operation of big cities, impacting various aspects like economic development and environmental sustainability. While efficient transportation systems can enhance mobility and access to resources, they also bring a lot of challenges and drawbacks. Understanding both the advantages and disadvantages of transportation in large urban environments is crucial for policymakers and people who live there.

Advantages of Transportation in Big Cities

Accessibility and Connectivity: One of the primary advantages of well-established transportation systems in big cities is improved accessibility. Public transportation networks, such as buses, subways, and light rail, allow residents to move around the city with relative ease, connecting them to employment opportunities, educational institutions, healthcare facilities, and recreational venues. This accessibility is vital for citizens with low income who may not own a vehicle.

Economic Growth: Effective transportation infrastructures stimulate economic activity. They enable the fast movement of goods and services, reducing delivery times and costs for businesses. Moreover, a well-connected city attracts investments and encourages tourism, as visitors can navigate easily between different places of interest. Major transportation hubs – like airports and train stations – also become attractive centres for commerce, that help to create job places and stimulate further economic development.

Environmental Impact: Public transportation systems can be more environmentally sustainable compared to individual car use. By encouraging the use of buses, trains, and other popular public transport options, cities can significantly reduce greenhouse gas emissions per capita. Furthermore, these systems can minimize traffic congestion, resulting in less overall pollution. As cities adopt cleaner technologies, such as electric buses and energy-efficient rail systems, they can significantly decrease detrimental environmental impact.

Reduced Traffic Congestion: Major cities frequently face challenges with traffic congestion, but efficient public transportation systems can help mitigate this problem. By offering reliable alternatives to personal vehicles, public transport can

reduce the number of cars on the road. This results in smoother traffic flow and shorter commute times, benefiting not only commuters but also improving the overall quality of life in urban areas.

Urban Development and Revitalization: Transportation infrastructure plays a vital role in stimulating urban development. Major transportation projects, such as the establishment of new underground lines or the expansion of bus routes, stimulate investment in surrounding areas. As neighborhoods become more accessible, property values tend to rise, leading to urban revitalization and increased public services.

Disadvantages of Transportation in Big Cities

Traffic Congestion: In big cities, transportation poses several drawbacks that impact residents and the urban environment. Despite the existence of public transport, many big cities continue to face significant traffic congestion. The increasing number of vehicles on the road, combined with poorly designed infrastructure, might lead to delays for drivers and passengers of public transport. Traffic jams not only waste time but can also increase level of stress and contribute to road rage incidents.

Infrastructure Costs: Building and maintaining transportation infrastructure in large urban areas can be rather expensive. Cities must allocate substantial portions of their budgets for continuous investments in transit transportation systems, road maintenance, and constant upgrades. This financial issue can divert funding from other essential services, such as education and public safety, leading to challenges in overall municipal governance.

Environmental Concerns: While public transportation has environmental benefits, poorly maintained systems can significantly contribute to pollution of the environment. Public transportation can unintentionally worsen pollution levels. Older buses and trains using fossil fuels can release harmful substances, reducing some of the environmental advantages intended to be observed by increased ridership. Moreover, the development of new transit routes or roads can lead to habitat destruction and expansion of urban areas that can have negative impact on local ecosystems.

Safety Concerns: Transportation systems in big cities can also present safety challenges. High pedestrian traffic, especially in metropolitan areas, increases the risk of accidents involving vehicles and pedestrians. Moreover, the presence of cyclists and other modes of transportation adds complexity to urban traffic dynamics, increasing the potential for collisions. The crowded nature of city streets, combined with aggressive driving behaviors, can further contribute to unsafe conditions.

To address these safety concerns, cities must implement comprehensive strategies that include improved infrastructure, such as dedicated bike lanes, pedestrian-friendly crossings, and enhanced lighting in high-traffic areas. Additionally, public awareness campaigns can educate both drivers and pedestrians about safe practices. By prioritizing safety within transportation systems, urban planners can create a more secure environment for all road users, ultimately reducing the incidence of accidents and enhancing the overall safety of the urban landscape.

As urban populations continue to grow, the importance of creating balanced, resilient transportation solutions will only increase, shaping the future of metropolitan living.

2. After you read the text provide the answer to the following questions.

1. What are the key advantages of transportation systems in big cities?
2. What are some of the disadvantages of transportation systems in urban areas?
3. How does traffic congestion negatively impact both drivers and public transport users?
4. What safety concerns are associated with transportation systems in metropolitan areas, and what solutions are proposed?
5. How can the maintenance of public transportation systems affect environmental pollution?
6. Why is it important to create balanced and resilient transportation solutions as urban populations grow?

3. Skim the text and decide if these statements are True (T) or False (F). If there is not enough information, choose Doesn't Say (DS).

1. Transportation plays a crucial role in the operation of big cities.
2. Effective transportation infrastructures stimulate economic activity by enabling the fast movement of goods and services.
3. Public transportation systems increase greenhouse gas emissions per capita.
4. Public transportation can provide improved accessibility for citizens with low income who may not own a vehicle.
5. Major cities never experience traffic congestion if public transportation is available.
6. The text specifies the exact budget percentage cities should allocate for transportation infrastructure.
7. Poorly maintained public transportation systems can contribute to environmental pollution.
8. The presence of cyclists and other modes of transportation adds complexity to urban traffic dynamics.
9. All transportation improvements in cities lead to increased safety without any additional measures.
10. The text provides specific examples of cities that have successfully implemented balanced, resilient transportation solutions.

4. Match the word or word combination with the appropriate definition.

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

5. Fill in the gaps with the word or word combination from task 4 in an appropriate form.

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.

6. Fill in the gaps with the appropriate word.

congestion, residents, navigate, mobility, revitalization

1. Efficient transportation systems can enhance ____ and access to resources.
2. Public transportation networks, such as buses, subways, and light rail, allow ____ to move around the city with relative ease.
3. Moreover, a well-connected city attracts investments and encourages tourism, as visitors can easily ____ between different places of interest.
4. Furthermore, these systems can minimize traffic ____, resulting in less overall pollution.
5. As neighborhoods become more accessible, property values tend to rise, leading to urban ____ and increased public services.

7. Fill in the gaps with prepositions where necessary.

1. In big cities, transportation poses several drawbacks that impact ____ residents and the urban environment.
2. This financial issue can divert funding ____ other essential services, such as education and public safety.
3. Moreover, the development of new transit routes or roads can lead ____ habitat destruction and expansion of urban areas.
4. The crowded nature of city streets, combined ____ aggressive driving behaviors, can further contribute ____ unsafe conditions.
5. Additionally, public awareness campaigns can educate both drivers and pedestrians ____ safe practices.

8. 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.

9. 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.

10. Translate the following sentences into your native language.

1. По мере внедрения в городах экологически чистых технологий, таких как электробусы и энергоэффективные железнодорожные системы, можно значительно снизить негативное воздействие на окружающую среду.
2. Общественный транспорт (метро, автобусы, трамваи) позволяет жителям относительно легко передвигаться по городу, не используя личный транспорт, что значительно улучшает экологическую обстановку города.

3. Эффективная транспортная инфраструктура стимулирует экономическую активность: она обеспечивает быстрое перемещение товаров и услуг, сокращая сроки доставки и издержки для бизнеса.
4. Общественный транспорт может сократить количество транспорта на дорогах общего пользования, что приводит к более плавному движению транспорта и сокращению времени пути.
5. Поощряя использование автобусов, поездов и других популярных видов общественного транспорта, города могут значительно сократить выбросы парниковых газов на душу населения.

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

1. The text is devoted to ...
2. First the author notes that...
3. It is further reported that
4. Then the author describes
5. In conclusion the author states that
6. In my opinion the text is rather interesting because.....

Supplementary material

1. Unit 1. History of transportation

<https://quizlet.com/1041907446/unit-1-history-of-transportation-flash-cards/?i=5oi8vg&x=1jqt>

2. Unit 2. Modes of Transport

<https://quizlet.com/1023430708/unit-2-modes-of-transport-flash-cards/?i=39gffx&x=1jqt>

3. Unit 2. Modes of Transport. Intermodalism

<https://quizlet.com/1042442419/unit-2-modes-of-transport-intermodalism-flash-cards/?i=39gffx&x=1jqt>

4. Unit 3. Road Freight Transport

<https://quizlet.com/1042447761/unit-3-road-freight-transport-flash-cards/?i=39gffx&x=1jqt>

5. Unit 4. Shipping Goods. Types of Cargo

<https://quizlet.com/1042457753/unit-4-shipping-goods-types-of-cargo-flash-cards/?i=39gffx&x=1jqt>

6. Unit 4, 5. Road Haulage Vehicles and Containers

<https://quizlet.com/1026715148/road-haulage-vehicles-and-containers-flash-cards/?i=39gffx&x=1jqt>

7. Unit 4. Shipping Goods. Packaging

<https://quizlet.com/648331273/unit-4-shipping-goods-packaging-flash-cards/?i=39gffx&x=1jqt>

8. Unit 4. Shipping Goods. Transporting Hazardous Materials

<https://quizlet.com/586726759/unit-4-shipping-goods-transporting-hazardous-materials-flash-cards/?i=39gffx&x=1jqt>

9. Unit 5. Containerisation

<https://quizlet.com/1042469971/unit-5-containerisation-flash-cards/?i=39gffx&x=1jqt>

10. Unit 6. Passenger Transport (exercise 7)

<https://quizlet.com/1041916417/unit-6-passenger-transport-to-exercise-7-flash-cards/?i=5oi8vg&x=1jqt>

11. Unit 7. Road Networks (to Exercise 4 (Verbs))

<https://quizlet.com/1041932159/unit-7-road-networks-to-exercise-4-verbs-flash-cards/?i=5oi8vg&x=1jqt>

12. Unit 7. Road Networks (to Exercise 4 (Nouns))

<https://quizlet.com/1041948480/unit-7-road-networks-to-exercise-4-nouns-flash-cards/?i=5oi8vg&x=1jqt>

13. Unit 7. Road Networks. To Exercise 4 (Adjectives and adverbs)

<https://quizlet.com/1041955900/unit-7-road-networks-to-exercise-4-adjectives-and-adverbs-flash-cards/?i=5oi8vg&x=1jqt>

14. Unit 8. Road Traffic (to Exercise 3, 4)

<https://quizlet.com/1041975241/unit-8-road-traffic-to-exercise-3-4-flash-cards/?i=5oi8vg&x=1jqt>

15. Unit 8. Road Traffic (to Exercises 6, 7, 8)

<https://quizlet.com/1041993346/unit-8-road-traffic-to-exercises-6-7-8-flash-cards/?i=5oi8vg&x=1jqt>

16. Unit 10. Technology in Transportation (exercises 3, 4)

<https://quizlet.com/1042001249/unit-10-technology-in-transportation-to-exercises-3-4-flash-cards/?i=5oi8vg&x=1jqt>

17. Unit 11. History of First Roads

<https://quizlet.com/1042306446/unit-11-history-of-first-roads-to-exercises-4-and-5-flash-cards/?i=5oi8vg&x=1jqt>

18. Unit 12. Rules Governing Road Transportation

<https://quizlet.com/1042310079/unit-12-rules-governing-road-transportation-to-exercises-4-5-6-flash-cards/?i=5oi8vg&x=1jqt>

19. Unit 13. Traffic Control

<https://quizlet.com/1042318448/unit-13-traffic-control-to-exercises-4-5-6-flash-cards/?i=5oi8vg&x=1jqt>

20. Unit 14. Traffic Management System

<https://quizlet.com/1042323824/unit-14-traffic-management-system-to-exercise-4-flash-cards/?i=5oi8vg&x=1jqt>

21. Unit 16. Transportation in Big Cities

<https://quizlet.com/1042325536/unit-16-transportation-in-big-cities-to-exercises-1-4-5-6-flash-cards/?i=5oi8vg&x=1jqt>

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