

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ, МОЛОДІ ТА СПОРТУ УКРАЇНИ**  
**ХАРКІВСЬКА НАЦІОНАЛЬНА АКАДЕМІЯ**  
**МІСЬКОГО ГОСПОДАРСТВА**

**МЕТОДИЧНІ ВКАЗІВКИ**  
**ДЛЯ ОРГАНІЗАЦІЇ ПРАКТИЧНОЇ РОБОТИ З ДИСЦИПЛІНИ**  
**«ІНОЗЕМНА МОВА» (АНГЛІЙСЬКА МОВА)**

*(для студентів 2 курсу денної форми навчання  
напряму 6.170202 «Охорона праці»)*

Методичні вказівки для організації практичної роботи з дисципліни «Іноземна мова» (англійська мова) (для студентів 2 курсу денної форми навчання напрям – 6.170202 «Охорона праці») / Харк. нац. акад. міськ. госп-ва; уклад.: А. В. Омельченко.– Х.: ХНАМГ, 2012 –42 с.

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Методичні вказівки призначені для організації практичної роботи студентів другого курсу згідно з затвердженою робочою програмою навчальної дисципліни «Іноземна мова», укладеної відповідно освітньо-кваліфікаційним вимогам до знань і вмінь студентів напрям підготовки «Охорона праці», які в майбутньому будуть працювати у сфері електричного транспорту.

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## INTRODUCTION

These educational materials are designed for the ESP students (“Occupational safety”) to develop their language skills according to their profession.

The manual is based on the authentic texts. It also has the tasks for reading and translation, lexical and grammar tasks, texts for self-study. It has 4 units. Each unit contains:

- authentic texts for reading, translation and discussion in class;
- activities on grammar and vocabulary;
- activities on reading comprehension;
- additional texts with tasks.

The manual can be recommended both for using in class and for students’ self-study.

## UNIT 1

### Text 1.

#### **I. Read and translate the text**

### **THE HISTORY OF LAND TRANSPORT**

The word “transport” means to carry people or goods from place to place. It is also used for the vehicles that carry people or goods – for example, motor transport includes buses, lorries, motor coaches and motor cars. The American word for the same thing is transportation, and the remark “transportation is civilization” was made by an American, the motor-car manufacturer Henry Ford.

The history of transport is divided into two stages. The first stage is that in which all forms of transport depended directly on the power of men or animals or on natural forces such as winds and current. The second stage began with the development of the steam engine, which was followed by the electric motor and the internal combustion engine as the main sources of power for transport.

### **LAND TRANSPORT. PORTERS AND PACK ANIMALS**

The most ancient peoples were probably wanderers. They did not live in settled homes because they did not know how to till the soil. As they moved from place to place they had to carry their goods themselves. The porters were usually the women, probably because the men had to be ready to beat off attacks by wild beasts or enemies. Even now, to carry the household goods is the job of women in backward wandering tribes.

The next step was the use of pack animals for carrying goods. The kind of animal used varied in different places, but the general idea was the same - the bundles or baskets were carried by the animals on their backs. The dog, although too small to carry much, was probably one of the first transport animals used because it is so easily trained. Dogs are still to be trained for dragging sledges in the Arctic because of their light weight.

The next advance in land transport came with the invention of the wheel. The wheel at once led to the development of two-wheeled carts and four-wheeled wagons and carriages, but before these could be used for carrying goods over long distances, a system of roads was necessary. These roads had to be wide enough to take a cart and paved, for unless their surface was paved the wheels sank in and the cart stuck. In Britain, and also over much Europe, the first long-distance paved roads were made by the Romans, chiefly so that troops could be marched without delay from place to place. The roads made it possible to use wheeled traffic. However, when the Roman Empire collapsed, the roads gradually got into a very bad state.

There were two problems to be solved – first, how to make good roads, and, second, to decide who was to pay for them. In Great Britain these problems were solved in the 18<sup>th</sup> century. Stretches of roads were handed over to groups called trusts. The trusts borrowed money for repairing and improving the roads, paying it back from the sums they collected from road users. This method of paying for new roads and bridges is still used, especially in the United States.

Then it became possible to travel rather comfortably by coaches. In cities like London, rich people had their own carriages, while poor people went on horseback or walked. Then appeared carriages that could be hired for short distances. They correspond to the modern taxis. The word is short for “taxi-cab” which in turn comes from the words taximeter and cabriolet. A cabriolet is a light two-wheeled carriage introduced from France in the 19<sup>th</sup> century. The taximeter is a mechanical device connected with the wheels which, by measuring the distance travelled, shows the fare due at any moment. It is also controlled by a clock so that waiting time too is charged for.

## **II. Answer the questions.**

1. What does the word “transport” mean?
2. What are the stages of the history of transport?
3. What were the first porters?
4. What kind of animal was used first for carrying goods?
5. What did the invention of the wheel bring?
6. Whom were the first roads made by?
7. What were the two problems to be solved?
8. What was a cabriolet like?
9. What is a taximeter like?
10. Is waiting time charged for?

## **III. In each line find the words with opposite meaning.**

1. Complicated, expensive, simple, similar, numerous
2. Shortage, current, delay, distance, plenty
3. To remain, to lend, to leave, to measure, to stretch
4. To destroy, to drag, to pave, to restore, to step
5. Huge, small, strong, free, hard
6. Shallow, wide, possible, important, deep
7. To connect, to charge, to collapse, to introduce, to part
8. Gradually, also, at once, chiefly, rather
9. Repair, pay, remark, surface, damage
10. The same, due, total, different, essential
11. Wide, powerful, narrow, dry, necessary
12. Strength, combustion, device, weakness, force

#### **IV. Choose English equivalent to the Russian word.**

##### **1. Товары**

- a. vehicle
- b. stages
- c. substance
- d. goods

##### **2. Значить, иметь в виду**

- a. to drag
- b. to mean
- c. to pay
- d. to justify

##### **3. Грузовик**

- a. driver
- b. coal
- c. lorry
- d. railway

##### **4. Экипаж, автобус**

- a. safety
- b. coach
- c. tube
- d. traffic

##### **5. Тот же самый**

- a. in turn
- b. backward
- c. the same
- d. total

##### **6. Колесо**

- a. wind
- b. weight
- c. light
- d. wheel

##### **7. Внутренний**

- a. general
- b. current
- c. internal
- d. excellent

**8. Двигатель**

- a. engine
- b. lorry
- c. source
- d. force

**9. Из-за**

- a. without
- b. within
- c. because of
- d. directly

**10. Сгорание**

- a. direction
- b. combustion
- c. collapse
- d. admission

**11. Измерять**

- a. to measure
- b. to settle
- c. to vary
- d. to repair

**12. Почва, грунт**

- a. step
- b. strength
- c. piece
- d. soil

**13. Заряжать**

- a. to introduce
- b. to collapse
- c. to charge
- d. to hand

**14. Если не**

- a. also
- b. although
- c. no matter
- d. unless



**15. Поверхность**

- a. delay
- b. surface
- c. top
- d. wood

**16. Главным образом**

- a. rather
- b. carefully
- c. chiefly
- d. really

**17. Широкий**

- a. current
- b. wide
- c. due
- d. thick

**18. До некоторой степени, лучше**

- a. furthermore
- b. without
- c. rather
- d. in the meantime

**19. Рушиться**

- a. to connect
- b. to repair
- c. to exist
- d. to collapse

**20. Мостить**

- a. to pave
- b. to charge
- c. to measure
- d. to remark

**V. Complete the sentences with the appropriate words from the box.**

Engine, wind, delayed, distance, charged, soil, the same, to collapse, leads, wide, mean, vehicle, weight, sources, general, handed, connected, introduced
--

1. He did not ... anything when he said it.

2. This news comes from different ... .
3. Nothing could grow in this poor dry ... .
4. The steam ... was invented in the 18<sup>th</sup> century.
5. The ... plan of the development of the city was considered as a special meeting.
6. The jeep is a small light ... with great freedom of movement especially for military use.
7. The method of construction is not ... now as it was some years ago. It is quite different.
8. A cold ... was blowing from the northwest.
9. The weight of a heavy tank caused the bridge ... .
10. The train was ... two hours by snow storms.
11. The paper was ... over to the director.
12. He says that the road ... to the forest.
13. The bridge ... the two banks of the river.
14. The lorry was ... to the full.
15. He is big and strong, he is twice my ... .
16. She is an educated person and her interests are rather ... .
17. A new method has been ... at their factory this month.
18. The ... from here to the park is ten kilometres.

## **VI. Translate these expressions into Russian or Ukrainian.**

To mean nothing; a goods train; also successful; a powerful vehicle; huge lorries and coaches; the same route; an ordinary remark; numerous stages; without wind; permanent force; to manufacture car engines; internal affairs; rapid combustion; source of energy; dry soil; to beat animals; a backward country; general weakness; to drag along the road; to vary considerably; quick steps; to repair something at once; rather dark; measured distance; under repair; wide connections; the Earth surface; atomic weight; in due time; in due form; to pay in full; what's the pay; front wheel; on wheels; to wheel the car; collapse of plans; a collapsed building; without delay; rather big; nuclear device; charged with electricity; to get the same mark; to settle the question; because of the accident; a paved street; the general meaning of the word; a chief engineer; to obtain knowledge gradually; to stretch a cable; to stretch legs.

## **VII. Render the following sentences into your native language and identify the functions of the infinitive in them.**

1. This does not mean that the discoveries to be made over a period are planned in advance.
2. They will need much concrete to be used for soil stabilization.
3. The problem to be discussed was connected with the city water supply system.
4. This method is not good enough to be used everywhere.

5. People made many efforts to find a new source of energy.
6. A new comfortable coach was developed to transport people over long distances.
7. He was saving money to travel about the country.
8. It did not take much time to pave the road again.
9. The internal combustion engine to be used in this lorry is of a new design.
10. The road surface to be repaired was destroyed many years ago by heavy vehicle.
11. Goods to be transported to the north are stored at the railway station.
12. The main step to take is to settle the problem of city transport at peak hours.
13. The results to be received may vary considerably.
14. He was too tired to be asked any questions.
15. England looks like one well ordered park. Englishmen like to preserve various old trees. There are some trees which were even too old to be cut for building ships in the seventeenth century.
16. A high speed electronic machine has introduced great changes in carrying out various mathematical calculations. This electronic machine works according to a programme to be prepared in advance and can carry out several thousand arithmetic operations per second.

## LANGUAGE STUDY. FUTURE FORMS.

**I. A friend of yours is planning to go on holiday soon. You ask her about her plans. Use the words in brackets to make your questions.**

1. (where / go?) ..... Scotland.
2. (how long / go for?) ..... Ten days.
3. (when / leave?) ..... Next Friday.
4. (go / alone?) ..... No, with a friend.
5. (travel / by car?) ..... No, by train.
6. (where / stay?) ..... In a hotel.

**II. Put the verb into the more suitable form, present continuous or present simple.**

1. **I'm going** (go) to the cinema this evening.
2. .... (the film / begin) at 3.30 or 4.30?
3. We..... (have) a party next Saturday. Would you like to come?
4. The art exhibition ..... (finish) on 3 May.
5. I ..... (not / go) out this evening. I ..... (stay) at home.
6. '..... (you / do) anything tomorrow morning?' 'No, I'm free. Why?'
7. We ..... (go) to a concert tonight. It ..... (start) at 7.30.

8. I ..... (leave) now. I've come to say goodbye.
9. You are on the train to London and you ask another passenger:  
Excuse me. What time ..... (this train / get) to London?
10. You are talking to Helen:  
Helen, I ..... (go) to the supermarket. ....(you / come) with me?
11. I .....(not / use) the car this evening, so you can have it.
12. Sue ..... (come) to see us tomorrow. She .....  
(travel) by train and her train ..... (arrive) at 10.15.

**III. Read the situations and write sentences with *I think I'll ...* or *I don't think I'll ...***

1. It's a bit cold. The window is open and you decide to close it. You say:  
***I think I'll close the window.***
2. You are feeling tired and it's getting late. You decide to go to bed. You say:  
I think .....
3. A friend of yours offers you a lift in his car, but you decide to walk. You say:  
Thank you, but .....
4. You arranged to play tennis today. Now you decide that you don't want to play. You say: I don't think .....
5. You were going to go swimming. Now you decide that you don't want to go.  
You say:.....

**IV. Put the verb into the correct form. Choose from the following:**

**Present continuous** (*I am doing*)

**Present simple** (*I do*)

**Going to** (*I am going to do*)

**will ('ll) / won't**

**will be doing**

**shall**

1. I feel a bit hungry. I think ..... (I / have) something to eat.
2. Why are you putting on your coat? ..... (you / go) somewhere?
3. What time ..... (I / phone) you this evening? About 7.30?
4. Look! That plane is flying towards the airport. .... (it / land).
5. We must do something soon, before ..... (it / be ) too late.
6. I'm sorry you've decided to leave the company. .... (I / miss) you when ..... (you / go).
7. .... (I / give) you my address? If ..... (I / give) you my address, ..... (you / send) me a postcard?
8. Are you still watching that programme? What time ..... (it / end)?
9. .... (I / go) to London next weekend for a wedding.  
My sister ..... (get) married.

10. I'm not ready yet. .... (I / tell) you when ..... (I / be) ready. I promise ..... (I / not / be) very long.
11. A: Where are you going?  
B: To the hairdresser's. .... (I / have) my hair cut.
12. She was very rude to me. I refuse to speak to her again until ..... (she / apologize).
13. I wonder where ..... (we / live) ten years from now?
14. What do you plan to do when ..... (you / finish) your course at college?

## **Text 2**

### **I. Read and translate the text.**

#### **THE WHEEL, STEAM CARRIAGES AND RAILWAYS**

One of mankind's earliest and greatest inventions was the wheel. Without it there could be no industry, little transportation or communication, only crude farming, no electric power.

Nobody knows when the wheel was invented. There is no trace of the wheel during the Stone Age, and it was not known to the American Indian until the White Man came. In the Old World it came into use during the Bronze Age, when horses and oxen were used as work animals. At first all wheels were solid discs.

The problem to be solved was to make the wheels lighter and at the same time keep them strong. At first holes were made in the wheels, and they became somewhat lighter. Then wheels with spokes were made. Finally, the wheel was covered with iron and then with rubber.

Light two-wheeled carriages were used widely in the ancient world. As time passed they were made lighter, stronger, and better. Later people joined together a pair of two-wheeled carts into a four-wheeled vehicle. At first only kings and queens had the privilege of driving in them.

In the West the first steam carriage was invented in France. The three-wheeled machine had the front wheel driven by a two-cylinder steam engine, and carried two people along the road at a walking pace. It was not a great success, as the boiler did not produce enough steam for keeping the carriage going for more than about 15 minutes.

The steam engine appeared in 1763. It was followed by several improved steam road carriages. Their further development was prevented by railway companies. The rapid spread of railways in the United Kingdom was due largely to George Stephenson, who was an enthusiast as well as a brilliant engineer.

He demonstrated a locomotive that could run eighteen kilometres an hour and carry passengers cheaper than horses carry them. Eleven years later Stephenson was

operating a railway between Stockton and Darlington. The steam locomotive was a success.

Yet at the very time when foreign engineers were submitting their plans, in the Urals a steam locomotive was actually in use. It had been invented and built by the Cherepanovs, father and son, both skillful mechanics. The first Russian locomotive was, of course, a “baby” compared with the locomotives of today. Under the boiler there were two cylinders, which turned the locomotive’s two driving wheels (there were four wheels in all). At the front there was a smoke-stack, while at the back there was a platform for the driver.

## **II. Choose the statements which refer to the text.**

### **1. *The wheel:***

- a) was invented during the Stone Age;
- b) was known to American Indians before the White man came;
- c) came into use during the Bronze Age.

### **2. *In the West the first steam carriage was invented:***

- a) in the United Kingdom;
- b) in France;
- c) in Germany.

### **3. *The steam locomotive:***

- a) was cheaper than horses;
- b) was not cheaper than horses;
- c) was more expensive than horses.

### **4. *The Cherepanovs were:***

- a) engineers;
- b) scientists;
- c) mechanics.

### **5. *The first Russian locomotive had:***

- a) three wheels;
- b) two wheels;
- c) four wheels.

## **III. Answer the questions.**

1. What kinds of animals were used for work during the Bronze Age?
2. What were the first wheels like?
3. What are the stages in the development of the wheel?
4. How many people did the first steam carriage carry?

5. Who demonstrated the first locomotive in the United Kingdom?
6. Was the Russian government interested in railway transportation?
7. What were the Cherepanovs?
8. What was the first Russian locomotive like?
9. Are the locomotive widely used in our country?
10. What kinds of locomotives are used in our country now?

## **LANGUAGE STUDY. IMPERATIVE MOOD.**

### **I. Render into English.**

1. Не закрывайте окна.
2. Позовите носильщика, пожалуйста.
3. Пойдемте домой.
4. Не сердитесь на меня.
5. Прочитайте эту статью.
6. Покажите мне эти документы.
7. Пусть он пойдет туда один.
8. Пусть она сделает эту работу сама.
9. Пусть они подождут меня внизу.
10. Пусть он не ходит туда сегодня вечером.
11. Пусть они не ждут меня.

### **II. Make the sentences negative**

1. Do the shopping.
2. Do the washing.
3. Do these exercises.
4. Do your work today.
5. Do this difficult translation with the dictionary.
6. Do your duty every day.
7. Do the washing up after breakfast.
8. Make a copy of this text.
9. Make money to buy a car.
10. Make friends with her grandparents.
11. Make a fashionable dress for the birthday party.
12. Make coffee for us.
13. Come back home in time.
14. Speak loudly at the lessons.
15. Ask questions.
16. Get up and do morning exercises.
17. Write a composition about your life in Great Britain.
18. Do the cooking yourself.

19. Clean the flat before going to work.
20. Arrange the furniture in your flat with the help of the fashion design.
21. Drink a glass of juice every day.
22. Make your younger sister's bed every morning.
23. Learn this grammar rule.
24. Pay for your purchases.
25. Wear such clothes in summer not in winter.
26. Look at the picture on the left.
27. Describe the picture in English.
28. Put out the lights.

### **III. Translate the sentences from Russian into English**

1. Интересуйся жизнью своих родителей, ухаживай за ними и звони им каждый день.
2. Учи три формы глагола.
3. Обсуди эту проблему со своим племянником.
4. Вызови врача.
5. Помоги другу.
6. Откройте ваши книги на странице двадцать шесть.
7. Будьте, пожалуйста, дома ровно в 5 часов.
8. Спишите эти тексты дома.
9. Посмотрите эту передачу сегодня вечером.
10. Познакомьтесь с моим другом.
11. Слушайте учителя очень внимательно.
12. Переведите этот текст дома.
13. Вызовите такси.
14. Покупайте билеты в театр заранее.
15. Запомните эти слова.
16. Спойте эту песню хором.
17. Копите деньги на поездку в Англию.
18. Оставайтесь дома в такой поздний час.
19. Подождите свою подругу.
20. Идите в театр вместе.
21. Думайте, прежде чем сделать что-либо.
22. Поставьте все чашки в шкаф для посуды.
23. Пригласите своих друзей на вечеринку по случаю дня рождения вашей прабабушки.
24. Закройте переднюю дверь.
25. Бойтесь лжецов.
26. Поставьте все чашки в шкаф для посуды.
27. Поливайте эти цветы раз в неделю.
28. Делайте работу по дому регулярно.



29. Коллекционируйте комнатные цветы. Это очень интересно и увлекательно.  
30. Приготовьте мне кофе, пожалуйста.

**IV. Make positive and negative sentences if possible using the following expressions.**

to do an examination;  
to do good;  
to do harm;  
to do evil;  
to do bad;  
to do one's hair;  
to do one's duty;  
to do one's best;  
to make a fortune;  
to make a mess of something;  
to make a mistake;  
to make a will;  
to make progress;  
to make sense;  
to make sure;  
to make fun of somebody;  
to make trouble.

**Text 3**

**I. Read the text and find the answers to the questions.**

**DIFFERENT KINDS OF LAND TRANSPORT**

**What was the reaction of the people after the invention of the steam engine?**

1. In Washington the story is told of a director of the Patent Office who in the early thirties of the last century suggested that the Office be closed because "everything that could possibly be invented had been invented". People experienced a similar feeling after the invention of the steam engine. But there was a great need for a more efficient engine than the steam engine, for one without a huge boiler, an engine that could quickly be started and stopped. This problem was solved by the invention of the internal combustion engine.

### **Who introduced the first cheap car?**

2. The first practical internal combustion engine was introduced in the form of a gas engine by the German engineer N. Otto in 1876.  
Since then motor transport began to spread in Europe very rapidly. But the person who was the first to make it really popular was Henry Ford, an American manufacturer who introduced the first cheap motor car, the famous Ford Model "T".

### **When did diesel-engined lorries become general?**

3. The rapid development of the internal combustion engine led to its use in the farm tractors, thereby creating a revolution in agriculture. The use of motor vehicles for carrying heavy loads developed more slowly until 1930s when diesel-engined lorries became general.  
The motor cycle steadily increased in popularity as engines and tyres became more reliable and roads improved. Motor cycles were found well suited for competition races and sporting events and were also recognized as the cheapest form of fast transport.

### **When were the trams introduced first?**

4. Buses were started in Paris in 1820. In 1828 they were introduced in London by George Shillibeer, a coach builder who used the French name "Omnibus" which was obtained from the Latin word meaning "for all". His omnibuses were driven by three horses and had seats for 22 passengers. Then in the 20<sup>th</sup> century reliable petrol engines became available, and by 1912 the new motor buses were fast replacing horse-driven buses.  
Trams were introduced in the middle of the 19<sup>th</sup> century. The idea was that, as the rails were smoother than the roads, less effort was needed to pull a tram than a bus. The first trams were horse drawn but the later trams were almost all driven by electricity. The electric motor driving the tram was usually with electric current from overhead wires. Such wires are also used by trolley-buses, which run on rubber tyres and do not need rails.  
Another form of transport used in London, Paris, Berlin, Moscow, Petersburg, Kiev and some other crowded cities is the underground railway.  
London's first underground railway of the "tube" type was opened in 1863. The Moscow underground which is considered to be the best and most comfortable underground in the world, was opened in 1935.

### **What do the longest oil pipe-lines connect?**

5. The pipe-lines, which were in use by the ancient Romans for carrying water supplies to their houses, are now mainly used to transport petroleum. The first pipe-line of this kind was laid in Pennsylvania, the United States, in 1865. Some of the longest oil pipe-lines connect oil-fields in Iraq and near the Persian Gulf with ports on the Mediterranean coast. A famous Pipe-Line Under the Ocean (PLUTO) was laid across the English Channel in 1944.

### **What are the cableways used for?**

6. A form of transport which is quite common in some mountainous parts of the world, especially in Switzerland, is the aerial cableway. Cableways are used at nearly all winter sports centres to pull or carry skiers to the top of the slopes. Cableways are used by many Alpine villages which lie high up the mountain-sides for bringing up their supplies from the valley below.

## **II. Retell the text.**

### **LANGUAGE STUDY. THE PASSIVE.**

#### **I. Complete the sentences using one of these verbs in the correct form, present or past:**

Cause   damage   hold   invite   make   overtake   show   surround   translate write
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1. Many accidents ..... by dangerous driving.
2. Cheese ..... from milk.
3. The roof of the building ..... in a storm a few days ago.
4. You ..... to the wedding. Why didn't you go?
5. In the United States, elections for president ..... every four years.
6. A cinema is a place where films .....
7. Originally the book ..... in Spanish, and a few years ago it ..... Into English.
8. Although we were driving quite fast, we ..... by a lot of other cars.
9. You can't see the house from the road. It ..... by trees.

#### **II. Write questions using the passive. Some are present and some are past.**

1. Ask about glass. (how / make) \_\_\_\_\_
2. Ask about television. (when / invent?) \_\_\_\_\_
3. Ask about mountains. (how / form?) \_\_\_\_\_
4. Ask about Pluto (the planet). (when / discover?) \_\_\_\_\_
5. Ask about silver. (what / use for?) \_\_\_\_\_

### III. Make these active sentences passive. Begin with the words in italics.

1. They use *special plastic* instead of metal.
2. He built *the early prototypes* with pieces from other machines.
3. He should patent *his invention* immediately.
4. They have produced *a solar- powered notebook computer*.
5. They are going to give *Julia* a prize for her research.
6. We can't start *production* yet.
7. We have to solve *this problem* first.
8. He spent *his first day* assembling one of the appliances.

### IV. The passive is often used to describe processes. Complete the passage by making the verbs the passive.

It is hardly a hundred years since the first sounds <sup>1</sup> \_\_\_\_\_ (record) by Thomas Edison onto a wax-covered cylinder. The recording principle has essentially remained the same although it <sup>2</sup> \_\_\_\_\_ (develop) with each leap in technology. Wax cylinders <sup>3</sup> \_\_\_\_\_ (replace) by vinyl records, tape recording, and more recently, CDs.

CDs are the result of a complex process. First of all a glass master copy <sup>4</sup> \_\_\_\_\_ (produce) by coating a glass disc with a special substance. Tiny indentations <sup>5</sup> \_\_\_\_\_ (cut) into the disc using a gas laser. After that it <sup>6</sup> \_\_\_\_\_ (give) a metal coating to form a father disc. From this disc, other father and mother discs <sup>7</sup> \_\_\_\_\_ (generate) and used to stamp the CD we buy. Discs <sup>8</sup> \_\_\_\_\_ (treat) with metallic coating and <sup>9</sup> \_\_\_\_\_ (protect) with lacquer.

Nowadays, CDs <sup>10</sup> \_\_\_\_\_ (threaten) by digitally recorded tapes. However, technology is changing so fast that in ten years' time they <sup>11</sup> \_\_\_\_\_ (overtake) by something even more advanced.

## UNIT 2

### Text 1

#### THE EARLY DAYS OF THE AUTOMOBILE

##### I. Read and translate the text.

1. One of the earliest attempts to propel a vehicle by mechanical power was suggested by Isaac Newton. But the first self-propelled vehicle was constructed by the French military engineer Cugnot in 1763. He built a steam-driven engine which had three wheels, carried two passengers and ran at maximum speed of four miles. The carriage was a great achievement but it was far from perfect and extremely inefficient. The supply of steam lasted only 15 minutes and the carriage had to stop every 100 yards to make more steam.

2. In 1825 a steam engine was built in Great Britain. The vehicle carried 18 passengers and covered 8 miles in 45 minutes. However, the progress of motor cars met with great opposition in Great Britain. Further development of the motor car lagged because of the restrictions resulting from legislative acts. The most famous of these acts was the Red Flag Act of 1865, according to which the speed of the steam-driven vehicle was limited to 4 miles per hour and a man with a red flag had to walk in front of it.

Motoring really started in the country after the abolition of this act.

3. In Russia there were cities where motor cars were outlawed altogether. When the editor of the local newspaper in the city of Uralsk bought a car, the governor issued these instructions to the police: "When the vehicle appears in the streets, it is to be stopped and escorted to the police station, where its driver is to be prosecuted."
4. From 1860 to 1900 was a period of the application of gasoline engines to motor cars in many countries. The first to perfect gasoline engine was N. Otto who introduced the four-stroke cycle of operation. By that time motor cars got a standard shape and appearance.

In 1896 a procession of motor cars took place from London to Brighton to show how reliable the new vehicles were. In fact, many of the cars broke for the transmissions were still unreliable and constantly gave trouble.

The cars of that time were very small, two-seated cars with no roof, driven by an engine placed under the seat. Motorists had to carry large cans of fuel and separate spare tires, for there were no repair or filling stations to serve them.

After World War I it became possible to achieve greater reliability of motor cars, brakes became more efficient. Constant efforts were made to standardize common components. Multi-cylinder engines came into use, most commonly used are four- cylinder engines.

5. Like most other great human achievements, the motor car is not the product of

any single inventor. Gradually the development of vehicle driven by internal combustion engine – cars, as they had come to be known, led to the abolition of earlier restrictions. Huge capital began to flow into the automobile industry. From 1908 to 1924 the number of cars in the world rose from 200 thousand to 20 million; by 1960 it had reached 60 million! No other industry had ever developed at such a rate.

6. There are about 3,000 Americans who like to collect antique cars. They have several clubs which possess great influence such as Antique Automobile Club and Veteran Motor Car Club, which specialize in rare models. The clubs practice meetings where members can exhibit their cars. Collectors can also advertise in the magazines published by their clubs. Some magazines specialize in a single type of car such as glorious Model “T”. A number of museums have exhibitions of antique automobile models whose glory rings in automobile history. But practically the best collection – 100 old cars of great rarity – is in possession of William Harrah. He is very influential in his field. The value of his collection is not only historical but also practical: photographs of his cars are used for films and advertisements.
7. In England there is famous “Beaulieu Motor Museum” – the home for veteran cars.

The founder of the Museum is Lord Montague, the son of one of England’s motoring pioneers, who opened it in 1952 in memory of his father. Lord Montague’s father was the first person in England to be fined by the police<sup>4</sup> for speeding. He was fined 5 pounds for going faster than 12 miles per hour!

In the Museum’s collection there is a car called the Silver Ghost which people from near and far go to see. It was built by Rolls-Royce in 1907, and called the Silver Ghost because it ran so silently and was painted silver.

There is a car called The Knight. It is the first British petrol-driven car. Its top speed was only 8 m.p.h.!

In the Museum there is also a two-seater car built in 1903.

**II. What new exciting facts have you learnt from this text?**

**III. Make up a summary of the text.**

## **Text 2**

**I. Make sure that you know these words and expressions.**

**country folk** – сельские жители

**horseless carriage** – «безлошадный экипаж»

**to be around** – быть, существовать

**affordable** – по средствам, по карману

**assembly line** – сборочный конвейер

**manufacturing** – производство

**to speed up** – ускорить  
**to jump behind the wheel** – сесть за баранку  
**Tin Lizzie** – Железная Лизи  
**to roll off** – сходить, скатываться (с конвейера)  
**overnight** – в одночасье  
**to cut back on necessities** – экономить на самом необходимом  
**to appeal to** – импонировать, привлекать, подходить  
**to give rise to** – давать начало, порождать  
**fad** – увлечение  
**from scratch** – практически с нуля  
**short supply** – нехватка, дефицит  
**decline** – снижение  
**getaway** – бегство (с места преступления)  
**to corrupt** – портить, развращать  
**auto dates** – свидания в автомобиле  
**to run out of gas** – остаться без горючего  
**to rattle** – греметь, потрясать  
**to roll** – вертеть, колыхать, переворачивать

## **II. Read and translate the text**

### **AMERICA ON WHEELS**

The 1920 were a decade of dramatic change in American society. Everything, from work to sexual morality, seemed to be changing quickly. Country folk were leaving their farms for factory jobs in cities. U.S. soldiers returned from Europe, still young but now worldly wise, to share their experiences of the First World War. Women now could vote and became a political force. But exciting as these changes were, they were not the most important force shaping America.

The 1920s were the decade of the automobile. From 1919 to 1929, the number of cars on the road more than tripled, from 6.8 million to 23.1 million. The car went from being a rich person's toy to everyone's necessity and in the process changed life for an entire generation.

### **HENRY'S MODEL T**

The "horseless carriage" had been around since the late 1800s. But it took Henry Ford to find a way to make cars affordable for most Americans. Born a Michigan farm boy, Ford (1863-1947) was a brilliant inventor.

## **THE NEW CRAZE OF THE 1920s**

In 1906, Ford declared, “The car of the future, ‘car for the people’, the car that any man own who can afford a horse and carriage, is coming sooner than most people expect.”

It came in 1913. That year, Ford opened a new plant in Highland Park, Michigan. There, Ford and his engineers adapted an “assembly-line” process for building the Model T Ford.

The assembly line revolutionized the way manufactured products were made. In earlier manufacturing, workers performed many tasks, often building an entire product from start to finish. But on an assembly line workers stood in one place while the car and necessary parts came to them. Each worker then performed the same tasks over and over. The tasks were about as exciting as washing dishes, but they greatly speeded up the building process. The time it took to build the Model T dropped from 12 <sup>1</sup>/<sub>2</sub> hours to 1 hour and 33 minutes.

More efficient production meant reduced costs. Lower prices meant more Americans could afford to jump behind the wheel. Americans bought the Model T in record numbers, in the process making Ford a millionaire.

The “Tin Lizzie”, as the Model T was nicknamed, was the McDonald’s hamburger of automobiles. More than 15 million Model T’s rolled off assembly lines between 1908 and 1927. Almost overnight, automobile manufacturing became the largest industry in the United States.

## **ON THE ROAD**

By 1927, one in five Americans owned a car, a figure eight times higher than in any other country. The car appealed to Americans’ restless natures. Many were even willing to cut back on necessities. When a farmer’s wife was asked why she had a car but no bathtub, she answered, ‘Well, you can’t get to town in a bathtub.’

Never had so many people been so mobile. Cars meant that workers could live farther from their jobs, which fueled the growth of city suburbs.

The car also gave rise to a new fad – auto camping. Families could put a tent and some cans of food in the car and go exploring. They saw more of their country, and fellow Americans, than it had ever been possible before. “For the first time in history,” wrote a popular newspaper columnist, C. P. Russell, in 1925, “the common, ordinary folks of the North and South are meeting one another on a really large scale, mostly by means of the national chariot – the Ford car.”

Roadside industries were started to serve the new “autoists.” By the end of the decade, there were more than 120,000 gas stations nationwide. Cheap hotels, called motels, lined major routes. Small towns set up free camp-grounds for tourists.

The car might have given common people the means of moving, but the roads were still dangerous. A road system barely existed and basically had to be built from



scratch. Only about 1 percent of country roads in 1920 were paved. The increasing number of auto owners put pressure on the government to build better and safer roads. By the end of the 1920s, 10,000 miles of roads were being built a year.

Road signs and maps also were new concepts. Their short supply provided plenty of material for jokes in popular magazines and radio shows of the day:

Driver: Do you know which road goes to Chicago?

Country boy: No.

Driver: Do you know which road goes to Joliet?

Country boy: No.

Driver: You don't know anything, do you?

Country boy: Yes, sir. I know I'm not lost.

## **AUTO-MORALITY**

At the same time, the car was blamed for many social ills. Critics blamed it for causing a decline in church attendance (too many Sunday drives), for increasing crime (too many quick getaways), and for corrupting the nation's youth (too much kissing in the backseat).

Not surprisingly, kids quickly discovered the advantages of going out on auto dates. Before the car, it was tough for a young couple to get out from under the watchful eyes of parents. Now, though, kids could hop in the car and drive to a dance in a distant town. They could also 'run out of gas' on a lonely country road on the way home.

But love it or hate it, the car shook, rattled, rolled, and changed American society. The humorist Will Rogers said it best at the time. "Good luck, Mr. Ford. It will take a hundred years to tell whether you have helped us or hurt us, but you certainly didn't leave us like you found us."

### **III. Answer the questions.**

1. How can we characterize the 1920s in American society?
2. When did the car become everyone's necessity?
3. Who found a way to make cars affordable for most Americans?
4. What did Ford declare?
5. When and where did Ford open a new plant?
6. What did the "assembly line" process mean?
7. What did a car mean for Americans?
8. Was the car blamed for many social ills? Why?

### **IV. Make up a summary of the text.**

### **Text 3**

#### **I. Read and translate the text.**

### **THE MINI**

The Mini is Britain's most popular and successful car.

In the late 1950s, BMC, the British Motor Corporation, wanted to build a car that was different from other cars. They wanted it to be small, cheap, and economical – like the “bubble car”. But the “bubble car” could only take two passengers. BMC wanted a family car, big enough to carry four passengers.

Nowadays that doesn't sound like a difficult problem. But in 1957 it was. At that time a typical small family car looked like this. It was quite long about three and a half metres. It had large wheels, and large space for the engine. So there wasn't much room for the passengers. And it was expensive to make, and cost a lot to run.

The Mini was designed by Alec Issigonis. This wasn't his first car. In 1948 he designed the Morris Minor, which was also very successful. He was a fast worker. He drew designs for the Mini on small pieces of paper, even on the back of envelopes! From the first idea to the first complete car took just two years – an incredible achievement.

Issigonis problem was this: how to design a car which was smaller than most family cars but which had more space inside.

First of all he decided that the Mini should be three metres long, half a metre shorter than most small cars. Next, the wheels were made much smaller, with independent suspension. And they were put right at the four corners of the car. Then, the engine was turned sideways, and the gearbox was put underneath. More space was saved by having front-wheel drive. And there was still room for four passengers.

In 1959 this design was revolutionary. Today nearly every small car is based on the design of the Mini.

Like the Volkswagen Beetle in Germany, the Mini was designed as a peoples' car. It was cheap and economical and in the early 1960s many ordinary families in Britain bought one. Everybody was very surprised, then, when the Mini became a very fashionable car. Many famous people drove them: film stars, pop stars, politicians, royalty. Even Enzo Ferrari, the famous Italian sports car designer, owned one.

By the mid-1960s the Mini was both a popular family car and a fashion accessory for the rich. But something even more surprising was happening: the Mini was becoming a very successful high-performance car.

The unique design – especially the position of the wheels with their independent suspension, and the car's low centre of gravity – meant that Mini were very fast, especially when going round corners.

Mini's took part in all the major European rallies from 1960. There were a lot of bigger, faster cars in these races, such as the Porsche 911 and the Citroen DS, but on narrow, winding roads nothing could beat the Mini.

The Mini is not the most elegant car. It's not the fastest car or the most comfortable, either. But it's got plenty of character; it's fun to drive; and although it's over thirty years old, it still looks good. And, of course, it's easy to park.

## **II. What connection do you think the following things and people have with the Mini?**

5 million

1959

The British Motor Corporation

Alec Issigonis

Two years

Three metres

Enzo Ferrari

Low centre of gravity

The Monte Carlo Rally

## **III. What sort of car did BMC want to build? Choose five items from the box.**

Different, fast, small, expensive, cheap, elegant, economical, reliable, room for four passengers, comfortable

## **IV. Are these sentences true or false?**

- a) The Mini was Alec Issigonis' first car.
- b) Issigonis drew designs for the Mini on small of paper.
- c) From the first idea to the first complete car took two months.
- d) Issigonis had to design a car that was bigger than most family cars.

## **V. Make the verbs in brackets passive.**

Next the wheels \_\_\_\_\_(make) much smaller, with independent suspension, and they \_\_\_\_\_(put) right at the four corners of the car.

Then the engine \_\_\_\_\_(turn) sideways and the gearbox \_\_\_\_\_(put) underneath.

More space \_\_\_\_\_(save) by having front-wheel drive. And there was still room for four passengers!

In 1959 this design was revolutionary. Today nearly every small car \_\_\_\_\_(base) on the design of the Mini.

## **VI. Answer the questions.**

1. How many times did Minis win the Monte Carlo Rally? Why did they win?
2. Do you think that the Mini is a good car? Why / why not?
3. Would you like to own a Mini? Why/why not?

## **VII. Read the three texts below. Which one is the best summary of the previous text.**

### **Text A**

The Mini is Britain's most successful car. In the 1950s BMC wanted to build a small economical 'people's car', but the designer, Alec Issigonis, wanted to design a car that could win the Monte Carlo Rally. Issigonis' design for the Mini was revolutionary. He put the wheels right at the four corners of the car, which meant that the Mini was very fast when going round corners. His dream came true, and Minis won the Monte Carlo Rally three times in the 1960s.

### **Text B**

In the 1950s BMC wanted to build a small economical car that would carry four passengers. The result was the Mini. It was designed by Alec Issigonis. His design was revolutionary: He turned the engine sideways and put the wheels right at the four corners of the car. This left plenty of space for the passengers. But two very surprising things happened. First, the Mini became a very fashionable car, and many famous people bought them. Second, the Mini became a successful high-performance car and won the Monte Carlo Rally three times in the 1960s.

### **Text C**

The Mini is Britain's most successful car. Over 5 million have been made. In the 1950s BMC wanted to build a small, high-performance car that would be popular with film stars and pop stars. So everybody was very surprised when the Mini became a very popular family car, like the Volkswagen Beetle in Germany. The Mini was designed by Alec Issigonis. He turned the engine sideways and put the wheels right at the four corners of the car. So, although the Mini was only three metres long, there was plenty of room for four passengers.

## Text 4

### **I. Read and translate the text.**

#### **HOW IT WORKS**

**Fuel warning light.** Many cars have a fuel warning light. The level of fuel (petrol) in the tank being very low, this light switches on and the driver can see that he needs more petrol. How does this fuel warning light work?

The level of the fuel falling, the float moves downwards. When this happens, the arm also moves downwards and makes the lever touch an electrical contact, thus switching on the fuel light in the car.

Seeing the fuel warning light, the driver puts more petrol into the tank. This makes the fuel level rise and pushes the float upwards. When risen, the float makes the arm move upwards and this causes the level to move upwards also. The fuel warning light then switches off.

**A car cooling system.** Most car engines are cooled by water. The water flows around the engine and then passes through the water pump and around the engine again.

Thus, there are several stages in this cycle:

1. Water flows around the engine. The engine is cooled and water is heated.
2. When heated, the hot water enters the radiator through the top hose (шланг).
3. Flowing down through the radiator, the hot water is cooled by air. The air is drawn through the radiator by a fan (вентилятор). This fan is turned by a belt, which is driven by the engine. The cool water leaves the radiator through the bottom hose. The water is pumped around the engine again.

**Finding a fault in a car.** If your car doesn't start in the morning, you should check three things first: the battery, the fuel level and the spark plugs (свеча зажигания). It is easy to repair these faults. If the battery is flat, you should recharge it. If this doesn't work, you should replace it. If the petrol tank is empty, fill it up. If the spark plugs are dirty, clean them, and if the gap in a spark plug is too narrow or too wide, adjust it to the correct width.

If your car still doesn't start, the petrol pump may be broken, or the fuel pipe may be blocked. If the pump is broken, it must be repaired or replaced. If the fuel pipe is blocked, take it off and unblock it.

If there is a loud click when you turn the key, the starter motor may be jammed (заклинивать). If it is, you can try to release it by pushing the car forwards and backwards (in 2<sup>nd</sup> gear). If the car still doesn't start, the starter motor should be repaired or replaced.

## II. Complete the sentences with the appropriate words from the word box.

Flat   be repaired   click   recharge   faults   battery   clean   tank  
empty   replace   fuel   wide   spark plugs   cooling   backwards  
narrow   forwards

1. In a car the flat battery, the empty fuel tank and the dirt spark plugs are the ... that can be easily eliminated.
2. If your car doesn't start, check the ... and the fuel ... .
3. If the battery is flat, try to ... or ... it.
4. If the ... tank is ..., fill it with petrol.
5. If the ... are dirty, ... them.
6. Adjust the gap in a spark plug if it is too ... or too ... .
7. If the petrol pump is broken, it must ... .
8. If the tyres are ... , you should pump them up.
9. If you hear a loud ... , while turning the key, the starter motor may be jammed.
10. If it is jammed, there is a fault in the ... system.

### Text 5

#### I. Read the text and do the tasks after it.

### AUTOMOTIVE ENGINES

Speaking about automotive engines one should say that the two most common types of engine for land vehicles are the petrol engine and the diesel engine.

Since petrol engines are usually lighter and smaller than diesel engines, they are cheaper. Therefore, most cars and motorbikes use petrol engines. Petrol engines are also less noisy than diesel engines. They usually go faster. On the other hand, diesel engines use less fuel and last longer than petrol engines, and this is why larger vehicles such as trucks and trains use them. They are also safer than petrol engines, because there is less danger of fire.

There are two main types of petrol engine – 4-stroke and 2-stroke. All cars and larger motor-cycles use 4-stroke engines. But most smaller motorbikes use 2-stroke engines. These are lighter and smaller than 4-stroke engines, and are therefore cheaper.

#### II. Answer the questions.

1. Which is the lightest of the three engines (2-stroke, 4-stroke or diesel)?
2. Which is the least expensive?
3. Which is the noisiest?
4. Which is the largest?

5. Which is the safest? Why?
6. Which has the lowest fuel consumption?

### III. Speak about:

The main systems of a car.

## LANGUAGE STUDY. THAT, ONE, IT

### I. Translate the sentences into your native language. Pay attention to the meaning of the word ONE.

1. If **one** halves a bar magnet, each of two halves will be a complete magnet.
2. **One** must do it.
3. **One** can do it.
4. **One** cannot see a reactor itself, only its cover.
5. **One** needs as much data on neutron characteristics as possible.
6. The normal state for a body is **one** of rest or of uniform motion in a straight line.
7. The attractions between gas molecules are very slight **ones**.
8. **One** thing in which workers are different is human capital.
9. Many people who do not get a new job after quitting the old **one** often leave the labour force to return to school, to work on a family garden, or for other purposes.
10. A worker in the United Kingdom earns more than the **one** in India.
11. I don't like this method, let's use another **one**.
12. **One** of the most important tasks now is transportation of these goods.

### II. Translate the sentences into your native language. Pay attention to the meaning of the word THAT.

1. Thermodynamics is a science **that** deals with energy.
2. They said **that** the new computer would be used for data processing.
3. Those are lorries **that** carry our brothers to the mines.
4. We regard W. Shakespeare as the greatest dramatist writer **that** the world has ever known.
5. He was the only man there **that** I knew.
6. Power is the rate **that** mechanical work is performed at.
7. **That** method is more reliable than the old one.
8. It is necessary **that** all data be prepared in time.
9. It was you **that** said so!
10. He said **that** it was necessary to buy a new computer.

**III. Translate the sentences into your native language. Pay attention to the meaning of the word IT.**

1. A body has a motion of translation when **it** moves in the same direction.
2. A force may act through contact, or **it** may act from a distance.
3. **It** is the best auto fuel.
4. **It** is cold.
5. **It** is desirable that the technology be improved.
6. **It** is important that the plan be fulfilled in time.
7. **It** is necessary that our engineer take part in this work.
8. **It** is impossible that all these calculations be made in time.
9. **It** is this method of analysis that yielded best results.
10. **It** is this new system of management that gave the best results.



## UNIT 3

### RAIL TRANSPORT

#### I. Make sure that you know these words.

<b>convey</b>	перевозить, транспортировать
<b>conveyance</b>	перевозка, доставка
<b>livestock</b>	живой инвентарь, домашний скот
<b>freight</b>	стоимость перевозки, товарный поезд (Амер.)
<b>viable</b>	жизнеспособный
<b>forerunner</b>	предвестник
<b>tie</b>	шпала
<b>alignment</b>	выравнивание, регулировка, равнение
<b>exceedingly</b>	чрезвычайно, очень
<b>stagecoach</b>	почтовая карета, дилижанс
<b>evolve</b>	развиваться
<b>refinement</b>	обработка, повышение качества
<b>augment</b>	увеличивать, усиливать
<b>dampen</b>	затушить, охладить
<b>enhance</b>	увеличивать, усиливать, повышать
<b>demise</b>	отречение, кончина, смерть
<b>swift</b>	быстрый, скорый

#### II. Read and translate the text.

Rail transport is the process of conveying or transporting people, livestock, and general goods using a vehicle mounted onto a rail system. The most common form of rail transport is generally known as a railroad or railway. One of the older forms of conveyance, rail transportation for freight and people, continues to be a viable and reliable form of moving from a point of origin to a destination in today's world.

Historians do not always agree upon the exact origins of rail transport. Some look upon early conveyances that involved some sort of wheeled device mounted on a system of wood rails as the forerunner to modern rail transport. In this application, the power to move the device was derived from either humans or animals pulling the vehicle up and down the series of tracks.

Others tend to consider the real history of rail transport as beginning with the development of the steam engine. With the steam engine came the ideal of creating a conveyance that would move by using steam pressure to turn the wheels on the device. In order for this type of railway transport to function, metal tracks were laid down and connected with heavy wood ties on the underside of the track. The ties kept the two rails in proper alignment and helped to make the locomotive more stable when moving along the track system.

Created in the late 18th century, the steam engine was a major factor in the Industrial Revolution of the 19th century. Over time, railway transportation became exceedingly popular for not only the transport of livestock and various types of goods, but also for the transport of humans. Without a doubt, rail transport played a huge role in the expansion of the United States during the entire 19th century, especially after the completion of a major project to connect the West Coast with the East Coast by way of rail. From 1869 on, the westward migration was fueled by the use of railway transportation, a much more efficient method than the use of horse drawn wagons or stagecoaches.

Rail car transport continued to evolve during the first half of the 20th century. Further refinements allowed the steam engine to handle the transportation of more goods as well as more people. Railways were improved with the implementation of electrical transmission to augment the steam locomotive. Rail transport had become so popular that even the introduction of the private motor vehicle was unable to dampen the public's enthusiasm for traveling by rail. At the same time, railways remained the chief means of conveying goods in many nations.

While the creation of diesel locomotion after World War II helped rail transport to remain a viable option, other forms of transportation began to cut into the use of railways for the transport of both people and manufactured goods. Enhanced road systems made the use of long haul trucks much more affordable and faster, allowing trucking firms to directly compete with railroads. Bus companies also took advantage of the better roads and began to run nationwide routes, allowing people to take long trips at relatively inexpensive rates. Passenger airlines were much more common by the 1950's and are often cited as the reason for the decrease in passenger traffic on railroads in a number of countries.

While there were those who predicted the demise of rail transport, this form of transportation continues to operate. In recent years, major railways have found ways to compete with other forms of ground transportation. In some instances, the railways interline with other transportation options as part of an overall transportation package. The creation of light rail transportation that provides swift conveyance to and from a limited number of locations has also proven to be a viable alternative to flying or driving in some cases.

### **III. Answer the questions.**

1. What is rail transport?
2. What is the most common form of rail transport?
3. What do historians think about the origins of rail transport?
4. What was the major factor in the Industrial revolution?
5. What provides swift conveyance to and from a limited number of locations?

#### **IV. Retell the text.**

### **LANGUAGE STUDY. DIRECT AND INDIRECT SPEECH**

#### **I. Transfer into reported speech.**

1. He has just said, "I want to speak to you."
2. He has said, "We have finished our work."
3. He will say "I will do it at once."
4. He said, "This exercise is very easy."
5. He said to her, "I met him last year."
6. He said, "He is going to Kiev tomorrow."
7. He said to me, "I have never been here before."
8. I said, "I was ill yesterday."
9. He said to them, "She will be here in half an hour."
10. I said to him, "I have been waiting for you since two o'clock."
11. He said, "I was working hard all the time."
12. He said to me, "I'll come as soon as I can."
13. He said, "I sent them a telegram two days ago."
14. He said, "I'm afraid I can't go there now but I shall probably be able to go tomorrow."

#### **II. Use indirect speech instead of direct speech.**

1. He has just asked me, "Who will come to the cinema with me?"
2. He has asked me, "Will you be at home to-night?"
3. He has just asked me, "Is it time to go?"
4. He asked me, "Where are you going?"
5. She asked me, "Does he always come so late?"
6. He asked her, "How did you do that?"
7. She asked him, "Have the children returned from school?"
8. She asked me, "Why didn't you come here yesterday?"
9. She asked me, "How long have you been studying English?"
10. He asked her, "Did anybody call this morning?"

#### **III. Render into English.**

1. Он спросил меня, где работает мой брат.
2. Я спросил секретаря, когда придет директор.
3. Он только что спросил меня, в котором часу будет лекция.
4. Он сказал, что он должен сделать это сам.
5. Доктор не велел мне выходить несколько дней.
6. Он сказал нам, что переговоры ведутся около двух недель.

7. Я спросил, придет ли он сюда вечером, и он сказал, что придет.
8. Он сказал ей, чтобы она перепечатала этот контракт в трех экземплярах.
9. Он только что сказал, что он вполне удовлетворен результатом нашей работы.
10. Я спросил его, был ли он когда-нибудь в Средней Азии.

**IV. Complete the sentences by underlining the correct alternative in *italics*.**

1. She *told* / *said* me to sell commodities.
2. He *told* / *said* it was a great opportunity.
3. She asked *that* / *if* she should trade on-line.
4. He suggested *me to* / *that I should* turn my shares into cash.
5. We *advised* / *suggested* them to invest in gold.

**V. Report the following using an appropriate introductory verb from the list below:**

Complain	advise	refuse	warn	beg	suggest	agree
exclaim	deny	offer	insist	apologise	threaten	accuse
prefer						

1. "You should take more exercise," the doctor said.
2. "This film is so boring," he said to his mother.
3. "Please, please let me go out to play, Mum," she said.
4. "Shall I carry your shopping for you?" he said to her.
5. "Don't get dirty in the garden," she said to Jane.
6. "I'm not going to tidy Helen's bedroom," Tim said.
7. "I didn't eat the cake," he said to her.
8. "What a silly thing to say!" she said.
9. "You really must get your hair cut," she said to him.
10. "You broke my record player," she said to him.
11. "I'm sorry I didn't write to you," she said to him.
12. "Let's go to Jamaica for our holiday," he said to her.
13. "Yes, that is a nice colour," the sales assistant said to her.
14. "I'd rather watch a film than the news," she said to her.
15. "How rude he is!" she said to me.
16. "I think you should go on a diet," she said to him.
17. "I didn't take your dress," she said to her sister.
18. "What a nice gift!" he said.
19. "I'll kill you if you try to escape," the kidnapper said to her.
20. "I'm sorry I spoke to you like that," he said to his mother.

## UNIT 4

### TRANSPORTATION SYSTEM IN UKRAINE

#### I. Read and translate the text.

Transportation system in Ukraine is very developed and involves various transportation means.

First of all, it is closely associated with public city transportation which includes buses, trolley buses, and trams and is the cheapest way to travel within cities. Prices range from 10 cents to 50 cents a ticket. One can purchase a ticket at the bus stops at the little "kiosks", however it's possible to get the one from the conductor once you board. At that, it is the best way to get acquainted with a city. Should you make up your mind to travel by these kinds of transportation, be sure not to use them during rush-hour periods.

As for the metro options, Kyiv, Kharkiv, and Dnipropetrovsk feature this fastest way of transportation that is renowned also for its decorative designs and architectural solutions.

You can also take a taxi by phoning or simply by putting out your hand on the street.

Another very convenient and fast way of traveling is done by "marshrutka," or a taxi van. Marshrutkas are very popular in every town and city in Ukraine. These taxi vans not only travel within a certain town/city, but they also operate intercity routes.

Train is a very popular way to travel within Ukraine for it to reach a final destination on time or with minimum delay. One can purchase a train ticket both at the railroad stations and offices. As a rule, one can buy a ticket within 42 days term prior to the departure date. It's recommended to buy the tickets beforehand, especially on the holiday's eve. When traveling by train just observe some advices and your journey will be safe and pleasant. Keep your money and valuables near yourself; try not to leave your luggage with strangers; always lock the cabin door during the night time.

Ukrainian trains are equipped with the wagons of 3 types: 1st class cabins, 2nd class (coupe) and 3rd class, (platzcart) that offers the lowest ticket's price. The quality of services in such wagons depends on trains and destinations, yet the best solution is to take an express train providing good quality and services and traveling at high speed.

Moreover, Ukrainian international railway links connect Kyiv to many CIS and European countries. Thus, there are trains operating to Warsaw (Poland), Moscow (Russia), St.Petersburg (Russia), Minsk (Belarus), Berlin (Germany), Bratislava (Slovakia), Prague (Czech), Vienna (Austria), etc.

Bus traveling is also popular in Ukraine: apart from domestic routes there are regular bus schedules to the majority of European cities.

As for Ukrainian sea connection, it is carried out via the Black sea ports of Odessa, Sevastopol and Yalta with the major part of ferries serving Turkey and Greek destinations.

One can also take advantage of traveling by air with most international flights operating to and from Boryspil International Airport in Kiev (KBP) and domestic flights in Zhulyany (IEV). The most popular Ukrainian airlines are 'Aerosvit', 'International Ukrainian airlines', 'UMA' and 'WizzAir'.

All in all, travelling in Ukraine can be of a big fun, provided you think through your transportation priorities and ponder over all pros and cons of the time spell you'd like to spend en route.

**II. Make 10 questions on the text.**

**III. What facts have you learnt about transportation system in Ukraine?**

**IV. What do you think about public transport? Read the text and be ready to discuss the questions.**

To my mind the best way to travel along the city is to walk. When you go on foot you do not depend on any kind of transport. You can observe the beauty of the buildings and landscapes wandering along the streets, you can go anywhere you like. These are the advantages. But of course the disadvantages of foot walks are the time you spent while walking. If you are short of time and you are in a hurry it is better take advantage of any means of public transport. If you live not far from the underground I advise you to use this means of transport. First of all it's the fastest. Underground trains run every 3 to 5 minutes. It is also the most reliable type of transport. With trams, trolley-buses and buses, there are lots of things that may interfere with their normal operations. But all years I have been travelling by metro it has never let me down. As for the fare, it's a little more expensive than trams and trolley-buses but cheaper than most buses and shuttle minibuses (route taxis). The only problem with the underground that it does not cover the whole city. But every metro station has good trolley-bus, bus and shuttle minibus connections. You can also travel along the city by car if you have one. But the traffic in the city is very heavy, especially during the day time. There are a lot of traffic jams on the roads, so maybe it is more convenient to go by underground. If you want to reach the place of destination without any problems and in a short period of time you can order a taxi by telephone. But bear in mind that it can be rather expensive. I wish you to have a good time and nice impressions of the city.

### ***Vocabulary***

**to depend on** — зависеть от

**landscape** — ландшафт, пейзаж, панорама, вид

**to wander** ['wɒndə] — бродить, прохаживаться, прогуливаться

**advantage** [əd'vɑ:ntɪdʒ] — преимущество

**disadvantage** [ˌdisəd'va:ntɪdʒ]—препятствие, затруднение, неблагоприятное условие, помеха

**to be in a hurry** — торопиться

**to take advantage** — воспользоваться преимуществом

**reliable** [ri'laɪəbl̩] — надежный; верный, испытанный

**to interfere** — служить препятствием, мешать, быть помехой, повлиять (на исход чего-л.)

**fare** [fɛə] — стоимость проезда, тариф, плата за проезд

**traffic jam** — «пробка», затор (в уличном движении)

**bear in mind** — помнить, принимать во внимание

## V. Answer the questions

1. What is the best way to travel along the city? Why?
2. What are the disadvantages of foot walks?
3. How should you travel if you are short of time and you are in a hurry?
4. What means of transport do you like best of all? Why?
5. What are the advantages of travelling by underground?
6. How should you go if you want to reach the place of destination in a short period of time?

## LANGUAGE STUDY. THE VERBS: TO BE, TO HAVE, TO DO

I. Определите, в каких предложениях глаголы *to be* и *to have* выступают как:

a) *Заменитель модального глагола*

b) *Смысловый глагол*

1. Our life is revolving around electricity and its many uses.
2. Common sources of electricity are batteries and power plants.
3. Heat is radiated by the sun to the earth.
4. Automation is to be introduced into all production processes.
5. Mankind's dream about cosmic flights has come true.
6. Many scientists had to leave Ukraine because they were given no help from /by/ the government.
7. Beta particles have a smaller mass than alpha particles.
8. The machines have completely transformed our life.
9. Years ago scientists were trying to explain how electricity passed through space.
10. The vacuum diode is a two-electrode vacuum tube.
11. We are not able to study science without experimenting.
12. The molecules of a solid are moving constantly.
13. Automation has found wide application in all branches of industry.

14. We have such common sources of electricity as batteries and power plants.
15. A speed of 35 miles a day had given way to regular schedules exceeding many miles an hour.
16. They have to show their achievements.

**II. Определите, в каких предложениях глаголы *to be* и *to have* выступают как:**

**a) *Вспомогательный глагол***

**b) *Смысловой глагол***

1. Direct energy converters are to replace old-fashioned designs.
2. Silver will be the best conductor of electricity.
3. Specialists in cybernetics will be working on the development of self-learning machines.
4. Radio is to play an ever increasing part in human life.
5. A bridge has to carry one of the biggest loads – its own weight.
6. Aluminium has three electrons in its outer shell.
7. Theory has to be combined with practice.
8. Our scientists have made great contribution to the development of space exploration.
9. An atom is allowed to gain one or more electrons.
10. We are able to see large molecules in an electron microscope.
11. Titanium is finding increasing application in many different fields.
12. Most elements have stable atoms.
13. The students have to use different methods of work.
14. We have to develop all the resources of television.
15. The Earth itself is a sort of magnet.
16. Electromagnets are widely used in practice.

**III. Explain the usage of the verb to do in the following sentences and translate into your native language.**

1. Did you speak to him? No, I didn't.
2. Do stay with us a little longer.
3. Where does he live?
4. He will do it by himself.
5. Don't open the window.
6. What did he do there?
7. I am sorry you don't know my brother. – But I do know him.



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