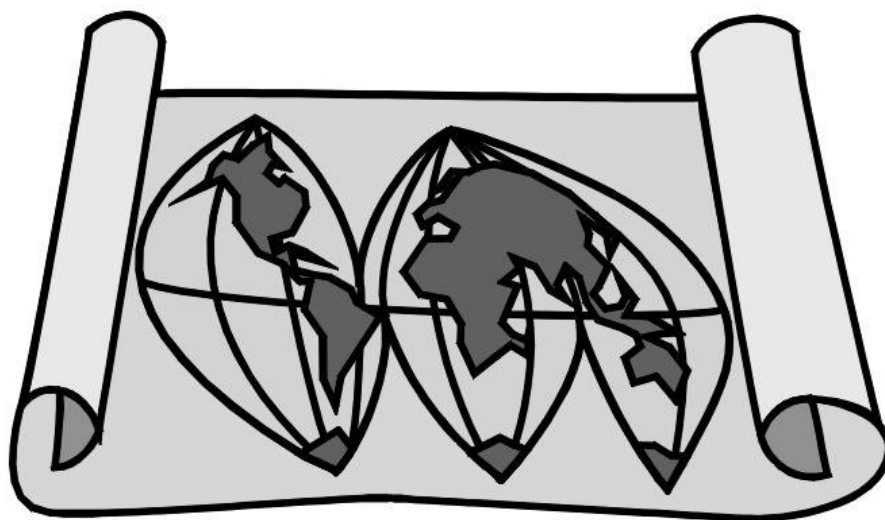


ОСНОВЫ ИНОЯЗЫЧНОЙ КОММУНИКАЦИИ

ПОД РЕДАКЦИЕЙ Н.К. ИВАНОВОЙ

ЧАСТЬ II



Федеральное агентство по образованию Российской Федерации
Государственное образовательное учреждение
высшего профессионального образования
"Ивановский государственный химико-технологический университет"

ОСНОВЫ ИНОЯЗЫЧНОЙ КОММУНИКАЦИИ

Методические указания для студентов II курса,
изучающих английский язык

Часть II

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Цель данных методических указаний – помочь студентам, изучающим английский язык в техническом университете, овладеть основами иноязычного общения, сформировать навыки межкультурной коммуникации.

II часть методических указаний включает 5 тем: "Great Britain", "London", "The United States of America", "Cities of the USA", "Chemical Laboratory".

Основной частью каждой темы является текст, дающий актуальную лингво-культурологическую информацию и сопровождающийся комплексом языковых и речевых упражнений. Упражнения носят творческий характер, позволяя сформировать у студентов навыки иноязычной коммуникации, расширить их лексический запас и кругозор. Многие информативные тексты имеют большой воспитательный и образовательный потенциал.

При работе по данным методическим указаниям предполагается широкое применение аутентичного материала (карт, буклетов, открыток) и мультимедийных средств обучения.

Рецензент

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UNIT 1

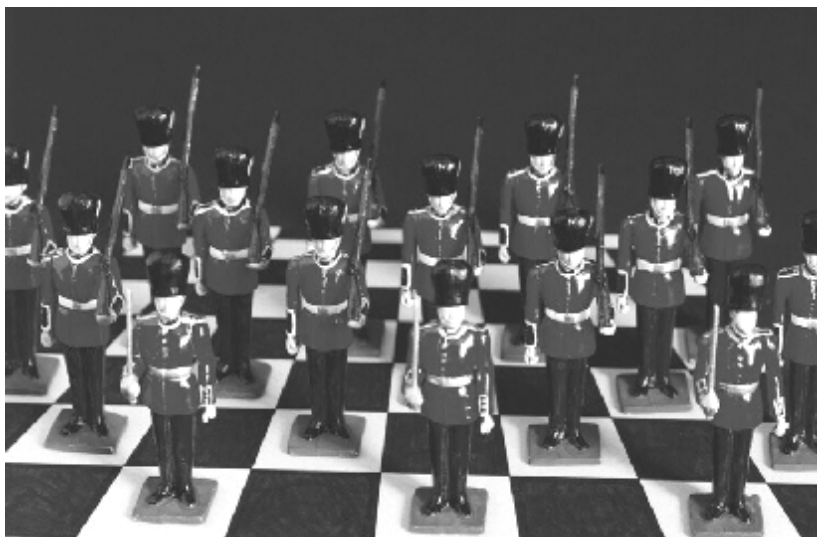
GREAT BRITAIN

1. What is the difference between the United Kingdom and Great Britain?

The United Kingdom is made up of the countries of England, Scotland, Wales and Northern Ireland. Its full name is the United Kingdom of Great Britain and Northern Ireland. Great Britain, on the other hand, comprises only England, Scotland and Wales. It is the largest island of the British Isles. Northern Ireland and the Irish Republic form the second largest island.

The Isle of Man and the Channel Islands are not part of the United Kingdom. They are largely self-governing with their own legislative assemblies and systems of law. The British Government is, however, responsible for their defense and international relations.

The country is situated off the northwest coast of Europe between the Atlantic Ocean on the north and the northwest and the North Sea on the east. It is separated from the Continent by the English Channel, 21 miles (about 32 km) at its narrowest point, and the Strait of Dover. The United Kingdom has an area of 94, 249 square miles. The population of the UK is about 60 million people. The capital of the country is London.



The climate of Great Britain is mild. It is never too hot in summer or too cold in winter. It often rains in England. The surface of England and Ireland is flat, but Scotland and Wales are mountainous. The highest mountain top is Ben Nevis in Scotland. The chief rivers are the Thames, the Severn, the Clyde, the Trent and the Mersey. The longest river is the Severn.

The UK is one of the world's most industrialized countries. Metallurgy, chiefly iron and steel, is vital to other key industries, such as shipbuilding, mechanical engineering, the automotive industry, electrical engineering and electronics. The country is the fourth largest exporter of

manufactured goods. The United Kingdom has few mineral resources, of which the most important are coal and oil. Other minerals are clays, shale, chalk, iron ore, lead, zink, etc. The main industrial centers are Sheffield, Birmingham, Manchester, Leeds, Glasgow, Cardiff. Though the UK is an industrialized country, agriculture remains a major sector of economy.

The United Kingdom is a parliamentary monarchy. British Parliament consists of two Houses: the House of Lords and the House of Commons. The Prime Minister is the head of the Government. The main political parties are: The Labour Party, the Conservative Party, the Liberal Party



(united with the Social Democratic Party in an alliance).

There are many universities, colleges, libraries, museums and theatres in the country. The most famous universities are the Cambridge University (1284), Oxford University (1249), the University of London, etc. The UK is the

country of rich culture and art; it has many interesting traditions and customs. The population of the country (English, Scotch, Irish, Welsh, etc.) observe many religious and traditional national holidays.

The Britons are fond of sports and regard themselves as good sportsmen. The most favorite sports and games are: cricket, football, rugby football (“rugger”), horse racing.

Words and expressions:

to make up – состоять из

full name – полное название

on the other hand – с другой стороны

to comprise – включать в себя

island – остров

largely – в основном, главным образом

self-governing – самоуправление

legislative assemblies and systems of law – законодательные органы и системы власти

coast – побережье

to be separated from – быть отделенным от

the English Channel – пролив Ла-Манш

the narrowest point – самое узкое место

Strait of Dover – Дуврский пролив
square miles – квадратные мили (2, 59 км²)
mild – умеренный
surface – поверхность
flat – равнинный
mountainous – гористый
mountain top – горная вершина
metallurgy – металлургическая промышленность
iron and steel – железодобывающая и сталелитейная
vital – жизненно важный
key industries – основные отрасли промышленности
shipbuilding – кораблестроение
mechanical engineering – машиностроение
automotive industry – автомобилестроение
electrical engineering – электротехническая промышленность
manufactured goods – промышленные товары
mineral resources – полезные ископаемые
coal – уголь
oil – нефть
clays – глина
shale – сланец
chalk – мел
iron ore – железная руда
lead – свинец
major – главный
economy – народное хозяйство, экономика
customs – обычаи
to observe a holiday – отмечать праздник
to be fond of – любить что-либо
regard themselves – считают себя

ASSIGNMENTS:

1. Answer the questions:

1. What is the United Kingdom made up?
2. What is the full name of the country?
3. Find the main parts of the UK in a map.
4. Tell about the geographical position of Great Britain using a map.
5. How large is the population of the UK ?
6. Tell about British climate.
7. What is Ben Nevis? Find it in a map.

8. Find and show the chief rivers.
9. What are the most important mineral resources of Great Britain ?
10. What are the key industries of the country?
11. Find in a map the major industrial centers and tell about them.
12. What state is the UK?
13. What Houses does the British Parliament consist of ?
14. What is the name of the Queen ?
15. What are the most famous Universities? What are the oldest ones ?
16. What are the most popular sports and games ?

2. What do you know about the flag of Britain? What is its nickname? What colours does it have and what do they symbolize? What country, part of Great Britain, is not represented in the flag?

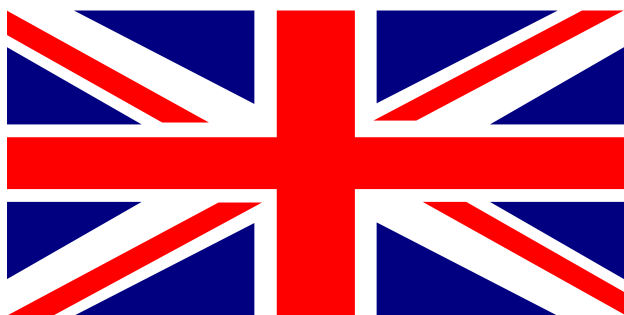
Listen to the text (or read it) and find the information.

WHAT DOES THE UNION FLAG STAND FOR AND HOW SHOULD IT BE FLOWN?

The flag of Britain, commonly known as the Union Jack (which derives from the use of the Union Flag on the jack-staff of naval vessels), embodies the emblems of three countries under one Sovereign. The emblems that appear on the Union Flag are the crosses of three patron saints:

- the red cross of St. George, for England, on a white ground;
- the white diagonal cross, or saltier, of St. Andrew, for Scotland, on a blue ground;
- the red diagonal cross of St. Patrick, for Ireland, on a white ground.

The final version of the Union Flag appeared in 1801, following the union of Great Britain with Ireland, with the inclusion of the cross of St.



Patrick. The cross remains in the flag although now only Northern Ireland is part of the United Kingdom.

Wales is not represented in the Union Flag because, when the first version of the flag appeared, Wales was already united with England. The national flag of Wales, a red dragon on a field of white and green, dates from the 15th century. The Union Flag should be flown with the broader diagonal band of the white uppermost in the hoist (near the pole) and the narrower diagonal band of white uppermost in the fly (furthest from the pole).

3. *What British holidays do you know? What is Guy Fawkes Night? Read the text, put the sentences in the correct order and discuss the information.*

1) They succeeded in storing some 30 barrels of gunpowder (пороховые бочки) in a cellar (подвал) under the Houses of Parliament, but before Parliament opened on November 5th, the “gunpowder plot” (пороховой заговор), as it has come to be known, was discovered.

2) In 1605 Guy Fawkes, a Roman Catholic, and his fellow conspirators attempted to blow up (взорвать) King James I and the Houses of Parliament, as they disagreed with the King’s protestant policies.

3) Guy Fawkes and his colleagues were executed for treason (казнены за измену).

4) These may be large organized events open to members of the public, or smaller, private gathering of family and friends held in people’s gardens.

5) Since then, the 5th of November has been celebrated in England by the burning on bonfires of stuffed figures (чучело) of Guy Fawkes, usually accompanied by fireworks displays.

4. *What other British holidays and traditions do you know? Do they differ from Russian ones? Read the information given below and make up the dialogues.*

Halloween (31 October) – the night of all witches, when spirits were said to walk the earth. Halloween parties for children include games such as apple bobbing, where apples are either floated in water or hung by a string. The players put their hands behind their back and try to take an apple with their teeth alone.

Pancake Day (the Tuesday which falls 41 days before Easter) – is the eve of the Lenten fast (пост). In earlier times all Christians took their last opportunity to eat up all the rich food prohibited during Lent.

Easter – the spring feast of the Christian church, commemorating the resurrection of Jesus. It falls on a Sunday between 22 March and 25 April. Easter eggs, dyed and decorated or made of chocolate, are given as presents symbolising new life and the coming of spring. Egg rolling competitions take place in northern Britain on Easter Monday.

All Fool’s Day – The first of April, some do say
Is set apart for All Fool’s Day;
But why the people call it so
Nor I, nor they themselves, do know,
But on this day are people sent
On purpose for pure merriment.

Is that a spider on your back?
A flash flood washed away the school.
I threw your blanket in the trash.
I never lie – I –
APRIL FOOL !

5. *Do you know that...*

- In 1994 there occurred a sharp change in traffic connections between Britain and Europe (or the Continent, as Britons say). The railway underwater tunnel, the Channel Tunnel, was opened. It takes only 35 minutes to travel by train from Britain to France.
- The idea of building a tunnel between the Continent and Britain dates from the 19th century. First attempts at building the Channel were made in 1882.
- In written English, the most frequently used words are in order: the, of, and, to, a, in, that, I, it, for, as. The most overworked word in English is the word "set" which has 58 noun uses, 126 verbal uses, and 10 uses as a participial adjective.
- The component parts of the University of Oxford are the colleges. Each college is practically autonomous, with its own set of rules of government. There is a central administration, providing services such as libraries and laboratories.

UNIT 2

LONDON



London is the capital of Great Britain. It is one of the largest cities in the world. Its population is about 9 million people.

London is a very old city. Hundreds of years before our era there was a small settlement on the Thames. It was called Llyn-din (a lonely port). In 55 before our era the

Romans with Julius Caesar at the head came there and Llyn-din became Londinium.

London is situated on the river Thames. It is a big seaport and a very important commercial, manufacturing and industrial centre.

London consists of three parts: the City, the West End and the East End.

The City is the oldest part of London. It is about 2,6 square kilometres. About half a million people work in the City but less than 6,000 live here. It is a financial centre of UK with many banks, offices and Stock Exchange.

The West End lies to the West of the City. It is a very fashionable part of London: with the best cinemas, theatres (about 40), concert halls, museums and art galleries, the most expensive hotels and shops. It also includes government, administration buildings and palaces. The West End is rather green; there are many parks and gardens such as Hyde Park, Kensington Gardens. The parks are called the "lungs" of London. The best known streets are Whitehall with important Government buildings, Downing Street, the London residence of Prime Minister and the place where the Cabinet meets, Fleet Street where most newspapers have their offices. It is the West End where the University of London is centered with Bloomsbury as London's student quarter.

The East End is situated to the east of the City. It is the district of industrial enterprises, the port and docks. It is unattractive in appearance but very important for the country industry.

There are many places of interest in London. One of the oldest is the Tower of London (the 11th century). The Tower was a fortress, a royal palace, a prison, and now it is one of the most interesting historical museums.

St. Paul's Cathedral is very beautiful. It was being built during 35 years (1675 – 1710) by the famous English architect Christopher Wren.



The Houses of Parliament are in Gothic style facing the Thames, on one side, and Parliament Square and Westminster Abbey, on the other. In every corner of the building there is a tower. The Victoria Tower and the Clock Tower with the famous clock called Big Ben are the most beautiful.

Westminster Abbey is the crowning and burying place of English monarchs. The oldest part of it dates back from the eighth century. Many English kings and queens were crowned and buried here. Westminster Abbey is famous for its Poets' Corner.

Trafalgar Square with Nelson's Column is one of the central squares of London. The column stands in the geographical centre of the city. It

commemorates the victory of English fleet under Nelson's command over the French and Spanish fleet in 1805 near the Cape of Trafalgar. The work on the foundations of the monument was begun in 1829. The 44.2 – metre – high column (the architect is William Railton) is made of granite. The four panels of the pedestal, with battle scenes on them, were made from the guns of the Nelson's enemy.

London is famous for its museums and picture galleries, among them are the National Gallery and the British Museum.

Words and expressions:

era – эра, эпоха

settlement – поселение

lonely – одинокий

Julius Caesar – Юлий Цезарь

the West End – Вест-Энд (западная часть города)

the East End – Ист-Энд (восточная часть города)

fashionable – фешенебельный

expensive – дорогой

Hyde Park – Гайд-парк

Kensington Gardens – Кенсингтонские сады

lungs – легкие

enterprise – предприятие

to present – представлять собой

striking – удивительный, поразительный

fortress – крепость

royal – королевский

prison – тюрьма

St. Paul's Cathedral – кафедральный собор Святого Павла

architect – архитектор

Christopher Wren – Кристофер Рен (1632 – 1723), английский архитектор

Gothic style – готический стиль

tower – башня

Westminster Abbey – Вестминстерское аббатство

to crown – короновать

to bury – хоронить

Poets' Corner – Уголок поэтов

Trafalgar Square – Трафальгарская площадь

to commemorate – служить напоминанием

fleet – флот

command – командование

ASSIGNMENTS:

Answer the questions:

1. What do you know from the history of London?
2. Where is London situated?
3. How many parts are there in London?
4. What is the City?
5. Do many people live in the City?
6. What is the East End?
7. Are the main dock areas, the port and many industrial enterprises situated in the East End or in the West End?
8. Where do most of the workers live?
9. Is the West End a poor or a fashionable part of London?
10. What does it include?
11. What are the parts of London called?
12. What square is the centre of modern London?
13. What is there in Trafalgar Square?
14. What do you know about the Tower of London?
15. What was Christopher Wren?
16. What can you say about the architecture of the Houses of Parliament?
17. Do you know what Big Ben is?
18. What is Westminster Abbey famous for?
19. Is there a university in London?
20. What do you know about the British Museum?

È DIALOGUES, DIALOGUES...

- Do you like those beautiful old buildings, Helen?
- Sure. They are the Houses of Parliament, aren't they?
- You are right. They were built in 1840 – 1850.
- Will you remind me, who designed them?
- They were designed by Sir Charles Barry.
- I heard they were damaged by air attack in the Second World War.
- That's right. The House of Commons was almost totally destroyed in 1941. Now it is rebuilt.
- Is this area called Westminster?
- Yes, it is. Westminster Abbey is over there. Many famous Englishmen are buried there.
- How interesting! Who of the greatest poets and writers were buried there?

- Oh! They are Charles Dickens, Tennyson, Thomas Hardy, Rudyard Kipling and others. And there are memorials to William Shakespeare, Robert Burns, George Byron, Walter Scott, William Thackeray.
- There is a wonderful sense of history about this area. Many of the buildings are several hundred years old.
- Yes, I agree with you. Just a little way along the river many tall, new office buildings are being erected. Don't you think they will spoil the beauty of the area?
- I don't think so. The contrast between the new and the old is very effective. We can say that London is a historical city as well as a very modern one.

LONDON SIGHTSEEING TOUR

Guide: Good afternoon, ladies and gentlemen. We welcome you to London. From our red double-decker you'll see many famous places. Now we are making our way to St. Paul's Cathedral, the greatest work of the architect Sir Christopher Wren.

Tourist: Will you remind us when it was built?



G.: St. Paul's Cathedral was built in 1675-1708 and was the fifth church put on the same site. Just imagine, the earliest cathedral was erected in 604.

T.: What is the architectural style of the Cathedral ?

G.: Wren's design combined Neoclassical, Gothic, and Baroque elements in an attempt to symbolize the ideals of both the English Restoration and 17th-century scientific philosophy.

T.: I admire this splendid building. It's dome is so impressive...

G.: St. Paul's famous dome, which has long dominated the London skyline, is composed of three shells: an outer dome, a brick cone for structural support, and an inner dome. The cross atop its outer dome stands nearly 366 feet (112 metres) above ground level.

T.: What a magnificent view! Are there rooms under the dome?

G.: Certainly. There are two famous galleries under it – the Golden Gallery, which offers panoramas of London, and the Stone Gallery, another popular viewing spot.

T.: It seems to me, I heard about the Whispering Gallery?

G.: Right. The Whispering Gallery in which a whisper from one side of the gallery can be heard from the other side is 99 feet (30 metres) above the cathedral floor.

T.: I wish I were inside the cathedral now! I'd like to see all these chapels, memorials...

G.: There are some 300 monuments within the cathedral. Many notable soldiers, artists, and intellectuals have been buried in the crypt, including Lord Nelson, the duke of Wellington, and Wren himself.

T.: Oh, yes, I read about the epitaph composed by his son, ending with the oft-quoted sentence "Lector, si monumentum requiris, circumspice" which may be translated "Reader, if you seek a monument, look about you".

Do you know that...

- One of the strongest and most unusual accents in Britain is to be found in the East End of London, the *home of the Cockneys*.
- The Cockney "language" is really more than an accent, since it includes many words and expressions that cannot be heard in any other part of the country.
- Cockneys do not pronounce their "h's", e.g. "house" is pronounced "ouse", "here", "ere". They pronounce "plate", "late", etc., as "plite", "lite", etc.
- One of the interesting features of the Cockney "language" is the rhyming slang – vivid, jocular and expressive way of speech, denoting things, which with the exception of rhyme are utterly different from the phrase itself.
- Some examples:
 - ball of lead – head; bubble and squeak – to speak; fried eggs – legs; hit or miss – kiss; hail and rain – a train.

1. The ancient *City of London* has remained as a separate unit of local government and retains its own Corporation. The City is a centre of commerce, banking and finance; by day its streets are busy with people going to their offices, but in the evenings and at weekends it is deserted, apart from the sightseers, anxious not to miss such places of historic interest as St. Paul's Cathedral and the Tower. The Lord Mayor of London is the chief administrator of this area. The Lord Mayor's show, which celebrates the election of the new Lord Mayor of London, takes place annually in November. It is one of London's most colourful pageants, and each year the procession has a different "theme". The Lord Mayor rides in a gilded coach, drawn by a team of splendid horses.

2. *British Airways* is one of the world's leading airlines.

London's Heathrow airport is the world's busiest airport for international travel, and is Britain's most important airport for passengers and air freight. In 1977 a new underground line was opened direct from London (Heathrow) airport – the station in Heathrow Central – to the centre of London.

Gatwick is the second major airport in the London area.

4. The *Empire Stadium*, as Wembley was originally known, was built as the centre-piece of the British Empire Exhibition of 1924 and was first opened to the public a year before on 28th April, 1923. That first event was, of course, the F.A. Cup Final between Bolton Wanderers and West Ham United, which has gone down in history as the "White Horse" final. Athletics followed that historic Cup Final, then came the multitude of events staged as part of the British Empire Exhibition.



Through the years the Stadium has played host to many of the greatest names in sports and music. Wembley is very proud of its heritage but looks solidly

towards the future, with its current plan to provide a flagship National Stadium for the 21st century. A magnificent new Stadium will be created on the existing site. The acknowledgement of tradition, alongside the very latest technology, together with its dramatic vision for the future, paints a perfect picture of the modern Wembley.

LONDON MUSEUMS

There are about 1, 000 museums and art galleries open to the public in Britain. These include the major national collections and a wide variety of municipally and independently owned institutions. The most comprehensive collections of objects of artistic, archaeological, scientific and general interest are to be found in the national museums and art galleries in London.

The British Museum has become the principal museum in the United Kingdom, with a rich collection of archaeological and ethnographical material from all over the world, and a wide variety of art treasures. It is also the National Library for books and periodicals.

The Victoria and Albert Museum comprises collections of fine and applied arts of most countries, periods and styles.

The National Gallery houses an unsurpassed collection of the chief European schools of painting from the 13th century to 1900. The building, which is located in Trafalgar Square, was designed by William Wilkins (1838).



The Tate Gallery's collection includes two collections of paintings: the British School (from the 18th century onwards) and modern foreign schools since 1850, as well as modern sculpture.

The National History Museum has exhibits of animals, insects and plants (fossil as well as living), minerals and meteorites.

Some of these national museums have also opened branches outside London.

LONDON THEATRES

The centre of theatrical activity is in London, with some 63 principal theatres in or near the West End. A successful play can continue to run here for many months or even years, as for instance Agatha Christie's "The Mousetrap", which has been running since 1952. Most of the theatres are let on a commercial basis, but 17 are permanently occupied by subsidized companies. The most outstanding permanent companies are the National Theatre and the Royal Shakespeare Company (RSC).

The National Theatre Company now occupies the National Theatre, which is a part of the South Bank arts complex, overlooking the river Thames. The National Theatre was officially opened by the Queen in 1976. The National, as it is known, has not one, but three auditoria. The largest of the three is the Olivier, named after the National's first artistic director, Lord Olivier and presents a repertoire of famous plays by well-known playwrights.

The RSC now occupies the Barbican Centre, which was opened in London in 1982. It contains two theatres, concert hall, art gallery, library, three cinemas and conference facilities.

The dictionary defines a barbican as the outer line of defense to a city or a castle. It is also the name of Britain's most ambitious arts complex, so called because it has been built in an area adjacent to the remains of the Roman and medieval walls of the City of London.

In London, evening theatre performances start at varying times, usually between 7.30 p.m. and 8.30 p.m. Some theatres have "twice – nightly" shows at 6.15 p.m. and 8. 45 p.m., and there are often matinée performances. On Sundays, the theatres are normally closed but cinemas are open.

G *LONDON QUIZ*

Match the name of each building, place with the sentences below:

1. № 10 Downing street.
2. Bloomsbury.
3. Tower Bridge.
4. Trafalgar Square.
5. The Tower of London.
6. The Houses of Parliament.
7. Wembley Stadium.
8. Marble Arch.
9. St. Paul's Cathedral.
10. Piccadilly Circus.
11. Buckingham Palace.
12. Westminster Abbey.



- A. This is where the Prime Minister lives.
- B. London's student quarter.
- C. This is the Queen's residence in London.
- D. MP's debate and argue here, and there is a clock tower with a famous bell in it.
- E. This building was rebuilt by Christopher Wren after the Great Fire of London in 1666. It has a famous "Whispering Gallery".
- F. English kings and queens are usually married here. Many of them are also buried here, as well as many famous writers.
- G. This place has a memorial to Admiral Nelson and is also famous for its many pigeons.
- H. This round place is often called the Centre of London. There is a statue of Eros in middle of it.
- I. It is quite near the City of London. It opens to let ships through.
- J. It was a fortress, a royal palace and later a prison. It is a museum now.
- K. This was a stadium where Britain's Cup Final was played each year.
- L. The arch is situated in the North-East of Hyde Park, at the entrance to Buckingham Palace.

TEST

Choose the right answer:

1. What is the official residence of the Queen of the UK?
 - a) Windsor Palace
 - b) Kensington Palace
 - c) Buckingham Palace

2. What is the official residence of the Prime Minister of the UK?
 - a) № 10 Downing Street
 - b) Baker's street
 - c) Whitehall

3. Who is the architect of the famous St. Paul's Cathedral?
 - a) Michelangelo
 - b) Sir Christopher Wren
 - c) Rastrelly

4. What is the nickname of London's Underground?
 - a) Metro
 - b) Subway
 - c) the Tube

UNIT 3

THE UNITED STATES OF AMERICA



The United States (excluding Alaska and Hawaii) is situated in the central part of the North American continent. It borders on Canada in the north and on Mexico in the south. It is washed by the Pacific Ocean in the west and by the Atlantic Ocean in the east. The total area of the U.S.A. is over nine million square kilometres (9,364,000 sq.km). The population of the country is over 248 million people. The capital is Washington D.C.

The continental part of the U.S.A. consists of four geographical parts: two highland and two lowland regions. The highland regions are the Appalachian Mountains in the east, and the Cordillera and the Rocky Mountains in the west. The main rivers of the U.S.A are the Mississippi, the Missouri, the Yukon, the Rio Grande, the Colorado, the Columbia, the St. Lawrence and the Hudson River. The country has several different

climate zones.

The U.S.A. is the most powerful and the most advanced country. It leads the world in industrial and agricultural production. The U.S.A. is rich in natural resources. It is a leading producer of fuel – oil, natural gas, and coal. It is also a leading producer of many other minerals, including copper, gold, aluminium, iron, and lead. The major branches of industry are machine-building, metallurgy, electronic, electrical engineering, chemical, automobile and others. The greatest industrial centres are New York, Chicago, Detroit, Boston, San Francisco, Los Angeles and others. International trade is very important to the U.S.A. Major exports include machinery, high-technology equipment, chemicals, cars, aircrafts, and grains.

II

The United States is an indirect democracy – that is, the people rule through representatives they elect. The country has a federalist system: there are 50 individual states, and there is a federal, or national, government. Within the national government, power is divided among three branches: the legislative, the executive, and judicial.

The legislative branch consists of Congress, which has two parts – the House of Representatives and the Senate. Head of the Senate is Vice-President. The House of Representatives is headed by the Speaker. There are 100 senators (two from each state) and 435 representatives.

The President is the head of the executive branch of the country. He is elected once in 4 years in November. In addition to the President, the Vice-President, and their staffs, the executive branch consists of departments headed by the Secretaries (e.g. Secretary of State, Secretary of Defence, etc.) and agencies. There are now 14 departments.



The judicial branch includes several levels of federal courts. The Supreme Court is the most important. It has nine members who are appointed for life.

The United States has two main political parties – the Democratic (its emblem is a donkey) and Republican (its emblem is an elephant) ones. The party, which is elected by the majority, becomes a governing party.

Studies show that about 9 in 10 Americans identify with a religion, and that about 6 in 10 belong to a church. About 94 per cent of religious Americans are Christians. Among Christians there are more Protestants than Catholics. However, there are many different Protestant groups: Baptists, Methodists, and Lutherans, and each of these groups is divided into smaller ones. About 2 per cent of population is Moslem, and smaller numbers are Buddhists and Hindus.

III

There are three basic levels in the U.S.A. educational system – elementary school (from kindergarten to 6th grade), junior high school (from 7th to 8th or 9th grade) and high school (from 9th-10th grade to 12th grade). American children usually attend school from the ages of 7 through 16.

About 90 per cent of all children attend public school, which is free. The remaining 10 per cent go to private schools. About half of all private schools are Catholic.

Some high schools are specialised ones (with vocational subjects like business or auto mechanics), but most of high schools are general.

Many young Americans, upon finishing high school, continue their education in colleges or universities. Usually they have four-year programmes leading to a bachelor's degree or to a master's degree after some more years of education.

There are several national American holidays. Among them are President's Day, Memorial Day (of American soldiers killed in war), Independence Day on July 4, Labour Day, Columbus Day and others.

Thanksgiving Day is considered to be “the most American holiday”. Families and friends get together for a big feast to give thanks to God and Indians who helped the first British settlers to survive in 1620. The meal usually concludes roast turkey with stuffing, a sweet sauce, sweet potatoes and pumpkin pie.

Most Americans enjoy sports – both playing themselves and watching their favourite sports and teams. The most popular kinds of sports are baseball, football, basketball, hockey, golf and tennis. Americans also love to travel. Car travel is the most common leisure activity in America.

Words and expressions:

I. excluding – за исключением

to border on – граничить с ...

to wash – омывать

the Pacific Ocean – Тихий океан
total area – общая площадь
over – свыше
continental part – континентальная часть
highland – высокогорье
lowland – низменность
the Appalachian Mountains – горы Аппалачи
the Cordillera – горы Кордильеры
the Rocky Mountains – Скалистые Горы
powerful – влиятельная
advanced country – высокоразвитая страна
leads the world – занимает первое место в мире
rich in – богата
natural resources – полезные ископаемые
leading producer – основной производитель
fuel – топливо
oil – нефть
natural gas – природный газ
coal – уголь
copper – медь
gold – золото
aluminium – алюминий
iron – железо
lead – свинец
major branches of industry – основные отрасли промышленности
international trade – международная торговля
major exports – главные экспортируемые товары
include – включать
machinery – станки
high-technology equipment – высокотехнологичное оборудование
grains – зернопродукты

II. indirect democracy – непрямая демократия

to rule – управлять
representatives – представители
to elect – избирать
federalist system – федеративная система
government – правительство
power – власть
legislative – законодательная (власть)
executive – исполнительная (власть)
judicial – юридическая

the House of Representatives – Палата представителей
the Senate – Сенат
head (n.,v.) – глава, возглавлять
in addition to – кроме
staffs – сотрудники администрации
departments – департаменты, министерства
Secretary of State – госсекретарь (министр иностранных дел)
Secretary of Defence – министр обороны
Agencies – агентства
several levels – несколько уровней
federal courts – федеральные суды
The Supreme Court – Верховный суд
to appoint for life – назначать пожизненно
a donkey – осел
an elephant – слон
majority – большинство
governing party – правящая партия
studies show – исследования показывают
identify with a religion – признают себя верующими
belong to a church – посещают церковь
Christians – христиане
Protestants – протестанты
Catholics – католики
Baptists – баптисты
Methodists – методисты
Lutherans – лютеране
Moslem – мусульмане
Buddhists – буддисты
Hindus – индусы

III. basic levels – основные уровни
elementary school – начальная школа
grade – класс
kindergarten – детский сад
junior high school – младшая ступень средней школы
high school – средняя школа
to attend school – ходить в школу
public school – общеобразовательная, муниципальная школа
private school – частная школа
vocational subjects – предметы профессиональной подготовки
upon finishing high school – по окончании школы
a bachelor's degree – диплом бакалавра

a master's degree – диплом магистра
President's Day – День президента
Memorial Day – День памяти
Independence Day – День независимости
Labour Day – День труда
Columbus Day – День Колумба
Thanksgiving Day – День благодарения
Feast – торжество, праздник
the first British settlers – первые британские поселенцы
to survive – выжить
meal – угощение
roast turkey with stuffing – жареная индейка с начинкой
a sweet sauce – сладкий соус
sweet potatoes – сладкий картофель
pumpkin pie – тыквенный пирог
sports – отдельные виды спорта
teams – команды
leisure activity – вид досуга

ASSIGNMENTS:

1. *Answer the questions:*

- 1) Where is the United States of America situated?
- 2) What countries does it border on?
- 3) What oceans wash the coasts of the U.S.A.?
- 4) How large is the territory of the U.S.A.?
- 5) How large is its population?
- 6) What geographical parts does the country consist of?
- 7) What are the main rivers in the U.S.A.?
- 8) In what fields is it a world leading country?
- 9) Is the U.S.A. rich in natural resources?
- 10) Name the leading branches of industry.
- 11) What are the largest industrial centres?
- 12) What are the U.S.A. major exports?
- 13) What type of a state is the U.S.A.?
- 14) How many states does the U.S.A. consist of?
- 15) What are the main branches of power?
- 16) What does the legislative branch consist of?
- 17) What does the executive branch consist of?
- 18) What does the judicial branch include?
- 19) What are the main political parties?

- 20) How many Americans identify with religion?
- 21) What are the main religious groups?
- 22) What are three basic levels in the U.S.A. educational system?
- 23) At what age do the American children usually attend school?
- 24) How many children attend public and private schools?
- 25) Where do young Americans can continue their education?
- 26) What are the main national American holidays?
- 27) What is "the most American" holiday?
- 28) What are the most popular kinds of sports?

2. *Scrambled sentences. Make up a sentence from the words below.*

- 1) is, the, powerful, most, the U.S.A., advanced, most, the ,country, and.
- 2) The, Mountains, Appalachian, very, old, are.
- 3) A, subtropical, climate, has, south, the.
- 4) Of, the, one, in, 1620, settlements, British, established, was, in, Massachusetts.
- 5) In, U.S.A., the, is, mainly, education, the, responsibility, of, state, local, governments, and.

3. *Find the information mentioned in the text in the map.*

4. *Define true or false statements:*

- 1) In size, the United States ranks fourth among the nations after Russia, Canada, and China.
- 2) The animal population of the United States is still numerous and many species (виды) are preserved.
- 3) New England is the part of the United States that is most like "old" England.
- 4) Cambridge is America's most famous student town.
- 5) The first people on the American continent came from Asia.
- 6) The Congress adopted the Declaration of Independence in 1776.
- 7) The United States Constitution was adopted in 1778.
- 8) The British culture was a foundation on which America was built.

5. *Read, find in the map and discuss.*

Historically and geographically the United States of America is divided into 9 regions:

1. New England (6 states).
2. New York.
3. The Mid Atlantic region (6 states).
4. The South (11 states).
5. The Midwest (12 states).
6. The Southwest (5 states).
7. The Rocky Mountain region (5 states).
8. The Pacific Northwest and Alaska (2 states).
9. California and Hawaii (2 states).

Some American regions and states have nicknames. What do they mean?

West Virginia - Mountain State

Alabama - Cotton State

Florida - Sunshine State

Arkansas - Bear State, Land of Opportunity

Kansas - Sunflower State

New York - Empire State

California - Golden State

Texas - Lone-Star State

Nevada - Silver State

New Jersey - Garden State

6. *Solve some American "culture puzzles". Indicate the occupation of people and the place where the following phrases could be used:*

- 1) Please, stay with us. We will be back after the commercial break.
- 2) Here or to go?
- 3) Fasten the seat belts.
- 4) Priority, first class or Federal Express?
- 5) Paper or plastic?
- 6) What is the aim of your visit to the USA?
- 7) Hold on, please. I'll be back in a moment.
- 8) Would you like a refill?
- 9) And now for our weekend forecast.
- 10) The check-out time is at 12 o'clock.

Hints: a weather person (meteorologist), anchor person, a post office clerk, a customs officer, a stewardess, an employee at an eating establishment, a pack boy at a grocery store, a receptionist at a hotel, a secretary on the phone, a waiter/waitress in a restaurant.

UNIT 4

CITIES OF THE USA



WASHINGTON D.C.

The city of Washington, the capital of the United States, is situated on the Potomac river in the district of Columbia. This district (a piece of land ten miles square) does not belong to any state. The district is named in honour of Ch.Columbus (1492-1506), the discoverer of America.

The capital owes very much to the first president of the United States, George Washington (1789 – 1797). It was Washington who chose the place for the District and laid in 1790 the corner-stone of **the Capitol**, where the Congress sits.

Washington D.C. is not as large as New York City, Chicago, Philadelphia, Detroit or Los Angeles. Its population is about 900 000 people (70 per cent of the Washington inhabitants are Afro-Americans). It is a one-industry city. That industry is government. Many of the people who live in Washington D.C. work for the federal government.

Washington D.C. has many historical places and attractions for the tourists. The largest and the tallest among the buildings is **the Capitol** with its great Hall of Representatives and the Senate Chamber. There are no skyscrapers in Washington because no other building must be taller than the Capitol. **The Library of the Congress** is situated not far from the Capitol in the Thomas Jefferson building. It is the largest library in the world. There are 27 million books in 470 languages in it.

The White House is the President's residence. George Washington is the only president who did not live there. This two-storey white building was erected in 1799. The White House has 132 rooms. Visitors may tour some of the first-floor rooms. The President and his family occupy the second floor. The White House has many special rooms, among them are art galleries and exhibitions of various collections.



There are many monuments, museums and memorials in the capital of the USA. One can see there President **Jefferson Memorial**, **Washington Monument** (“the Pencil”, 1888), **Lincoln Memorial** (1922). Thousands of tourists visit them annually and enjoy the panorama of the city from the observation decks. The **Smithsonian Institution** with its thirteen museums is the largest complex of museums in the world. The most visited of them is the national **Air and Space museum**.



NEW YORK

New York is the largest city in the USA and the biggest seaport. It is the money centre of the United States. New York is the city of symbols.

New York is situated in the northeast of the USA at the mouth of the Hudson river. The city was founded by Dutch settlers in 1613.

The population of the city numbers 9 million people, and together with the population of its suburbs it comes to 17 million people.

New York is a multinational city – its inhabitants speak seventy-five different languages.

Manhattan is the name of the island (just 13 mile long and 2 miles wide) which forms the heart of New York. The population of Manhattan is about two million people. Here is the heart of American business and culture with its famous skyscrapers (World Trade Centre (1,359 feet above the city), Rockefeller Plaza, Empire State Building), **Wall Street**, **Broadway**. The latter one is the theatre capital of the nation. **Times Square** is named after the *New York Times*, the newspaper that is considered among the best papers in the country.

The greatest monument of New York, **the Statue of Liberty**, is a symbol of America to most people. It was erected by the French sculptor August Bartholdi in 1884 and gifted to the USA in 1885.

Words and expressions:

the Potomac – река Потомак

district – округ

to belong to – принадлежать, относиться к

state – штат

to owe – быть обязанным

to choose (chose, chosen) – выбирать

a corner stone – основание

the Capitol – Капитолий, здание конгресса США

Hall of Representatives – палата представителей

Senate Chamber – зал сената

Government – правительство

tall – высокий

skyscraper – небоскреб

residence – резиденция, местопребывание

to tour – осматривать

exhibition – выставка

to erect – возводить

annually – ежегодно

to enjoy – получать удовольствие, наслаждаться чем-либо

observation deck – обзорная площадка

Dutch – голландский

settler – поселенец

to number – насчитывать

suburb – предместье, пригород

multinational – многонациональный

inhabitant – житель, обитатель

island – остров

heart – сердце

World Trade Centre – название небоскреба, где расположен мировой торговый Центр (разрушен 11.10.2001 в результате террористического акта)

Rockefeller Plaza – центр им. Рокфеллера

Empire State Building – один из самых первых больших небоскребов, в названии которого отражается особое значение штата Нью-Йорк. Занимает 3-е место среди самых высоких зданий мира.

Wall Street – деловая (и самая старая) улица Манхэттена

Broadway – название проспекта в центральной части Манхэттена, на котором расположены театры, клубы, концертные залы.

theatre capital of the nation – национальная театральная столица

to consider – считать

the Statue of Liberty – статуя Свободы

to gift – дарить



ASSIGNMENTS:

1. *Answer the questions:*

- 1) Where is Washington situated?
- 2) Whom does the capital owe much?
- 3) Where does the Congress sit?
- 4) What is the population of Washington?
- 5) What is the Capitol?
- 6) Where is the president's residence?

2. *Scrambled sentences:*

- 1) Washington, during, the war, burned, the British, parts of, 1812, of.
- 2) After, was, painted, to cover, up, white, marks, the war, the, the, house, president's.
- 3) Ended, was, during, the, Abraham, war, civil, president, and, slavery, Lincoln.
- 4) D.C., has, Washington, buildings, neoclassical, grand.
- 5) Thomas, Independence, was, Jefferson, author, the, main, Declaration, the, of.

3. *Write and talk:*

Write a one-day itinerary (маршрут) for your friends' visit to Washington D.C. or to New York City. Discuss it using postcards, posters, various booklets.

4. *Define true or false statements:*

- 1) The city of Washington was designed by President George Washington himself.
- 2) The Central Park is a huge park in the middle part of New York City was designed in the 1850's.
- 3) Metropolitan Museum of Art, with huge collections of art from around the world, is the most important museum in the United States.
- 4) The United Nations building was the first glass curtain wall skyscraper.
- 5) There are many industrial enterprises in Washington D.C.
- 6) New York's first skyscraper was built in 1930 and had twenty-five stories.
- 7) The Dutch were the first Europeans to settle Manhattan.
- 8) Broadway is the oldest street of the N.Y.C.

5. *Read and discuss:*

TOP EIGHT SIGNS YOU ARE FROM NEW YORK CITY

- 1) You say "the city" and expect everyone to know that this means Manhattan.
- 2) You have never been to the Statue of Liberty.
- 3) To believe that being able to swear at people at their own languages makes you multilingual.
- 4) You think \$ 7.00 to cross a bridge is a fair price.
- 5) You've considered stabbing someone just for saying "The Big Apple".
- 6) Your door has more than three locks.
- 7) Your favourite movie has DeNiro in it.
- 8) The most frequently used part of your car is the horn.

Notes:

to swear – обругать

fair price – приемлемая цена

to stab – зд. "подкалывать"

6. *Check if you know these abbreviations:*

NASA, FBI, CIA, MIT, USIA, YMCA, UN, PE, NSF, N.Y.C., IMF.

PROMINENT PEOPLE

Benjamin Franklin (1706-1790)

Benjamin Franklin, one of the leaders of the Revolution, was a universal figure: a printer, a writer, a philosopher, a scientist, an economist and statesman. He participated in the most important events of his time.



B. Franklin was born in Boston, Massachusetts and was the youngest of seventeen children in the family of a poor English immigrant. He learned to read and write very early, and at the age of eight he was sent to school for a year to learn arithmetic. He began to work at 11 – first he helped his father and later his half-brother who was the editor of a famous newspaper.

He was 17 when he left Boston and went to New York City and then to Philadelphia to find employment. He found work in a very old-

fashioned print-shop, where the technique of printing was very bad. Soon B. Franklin decided to sail to Britain to master the British technique of printing. In London he worked in a big publishing house and contacted with British scientists.

On his return to America Franklin organized a literary and philosophic society, where young men met to read and discuss contemporary literature. In 1733 he decided to start a periodical to bring progressive thought to his countrymen. His "Poor Richard's Almanac" was a sort of calendar and contained in addition to useful information and literary selections, a section in which progressive ideas on the mode of living, on education and on the political events of the day were communicated to the reader. They were mostly in the form of sayings and had a powerful influence among the people: "early to bed and early to rise, make a man healthy, wealthy and wise", "God helps them that help themselves".

In the forties Franklin experimented on electricity and invented the so called Franklin-rod to draw electricity from the atmosphere. The Franklin-rod became known in all parts of the world as the lightning-rod.

The approaching revolution claimed his attention and he became a statesman. He was sent to England to defend the interests of the colonies before the British Parliament. During the Revolution he and Thomas Jefferson were chosen to draft the Declaration of Independence. Later he was sent to France – to get financial aid and fleet. While in France, Franklin wrote many essays. His writings helped to create sympathy in Europe for the American people in their struggle for independence, and many countries were ready to recognize the young American Republic.

Mark Twain

Samuel Clemens was born in 1835 in Florida. Mark Twain was his literary name. Tom Sawyer is his alter ego.

Sam Clemens was four years old when his family moved to Hannibal, a small town in the state of Missouri. He spent there fourteen years and carried those years into his literature for the rest of his life.

His father died when he was twelve, and the boy went to work and became an expert printer. Soon he was contributing weekly articles to the Hannibal *Journal*, edited by his elder brother. Then he changed some occupations and places. In 1861 Sam joined the Virginia City local newspaper and wrote



news and editorial for it. On February 3, 1863, Samuel Clemens used the pen name: Mark Twain for the first time.

In time he moved to San Francisco and wrote his first national famous story, "The Celebrated Jumping Frog of Calaveras County". He was sent to the Sandwich islands – what we now call Hawaii – to write columns. He started his first novel in 1870. It was *Tom Sawyer*; it is an American classic now. In 1884 he published *Huckleberry Finn*, a book of some humour as well as some social commentary.

M. Twain developed heart trouble in the last decade of his life. He used to say: "I recognize that I'm old, but I don't realize it". He once remarked he had been born in the year Halley's comet came, 1835. He said, he expected to go out with it when it came again. On April 20, 1910, Halley's comet was seen in the sky, returning from its seventy-five-year journey. At 6.22 in the evening of the 21st of April, Samuel Clemens died.

Elvis Presley – Story of a Superstar

When Elvis Presley died on 16th August 1977, radio and television programmes all over the world were interrupted to give the news of his death. President Carter was asked to declare a day of national mourning.



Carter said, "Elvis Presley changed the face of American popular culture... He was unique and irreplaceable". Eighty thousand people attended his funeral. The streets were jammed with cars, Elvis Presley films were shown on television, and his records were played on the radio all day. In the year after his death, 1000 million Presley's LPs were sold.

Elvis Presley was born on January 8th, 1935, in Tupelo, Mississippi. His parents were very poor, and Elvis had never had music lessons, but he was surrounded by music from an early age. His parents were very religious, and Elvis regularly sang at church services. In 1948, when he was thirteen, his family moved to Memphis, Tennessee. He left school in 1953 and got a job as a truck driver.

In the summer of 1953 Elvis paid \$4 and recorded two songs for his mother's birthday at Sam Philip's Sun Records studio. Sam Philips heard Elvis and asked him to record *That's All Right* in July 1954. 20,000 copies were sold, mainly in and around Memphis. He made five more records for Sun, and in July 1955 he met Colonel Tom Parker, who became his manager in November. He sold Elvis's contract to RCA Records. Sun Records got \$ 35,000 and Elvis got \$ 5,000. With the money he bought a pink Cadillac for his mother. On January 10th, 1956, Elvis recorded

Heartbreak Hotel, and a million copies were sold. In the next fourteen months he made another fourteen records, and they all were big hits. In 1956 he also made his first film in Hollywood.

In March, 1958, Elvis had to join the army. He wanted to be an ordinary soldier. When his hair was cut, thousands of women cried. He spent the next two years in Germany, where he met Priscilla Beaulieu, who became his wife eight years later on May 1st, 1967. In 1960 he left the army and went to Hollywood where he made several films during the next few years.

By 1968 many people have become tired of Elvis. He had performed live since 1960. But he recorded a new LP *From Elvis to Memphis* and appeared in a special television programme. He became popular again, and went to Las Vegas, where he was paid \$ 750,000 for four weeks. In 1972 his wife left him, and they were divorced in October, 1973. He died from a heart attack. He had been working too hard, and eating and drinking too much for several years. He left his money to his only daughter, Lisa Marie Presley. She became one of the richest people in the world when she was only 9 years old. Do you know who did she get married?

Listen and complete the song with the words.

LOVE ME TENDER

1. Love _____ tender
Love _____ sweet,
Never let _____ go
_____ have made _____ life complete
And _____ love _____ so.

CHORUS Love _____ tender,
 Love _____ true,
 All _____ dreams fulfil,
 For _____ my darling _____ love _____
 And _____ always will.

2. Love _____ tender,
Love _____ long,
Take _____ to _____ heart
For it's there that _____ belong,
And we'll never part

CHORUS

3. Love _____ tender,
Love _____ dear
Tell _____ are _____
_____ ' ll be _____ through all the years
Till the end of time

CHORUS

UNIT 5

CHEMICAL LABORATORY

The students of the Ivanovo State University of Chemistry and Technology begin their first experimental work in the laboratory of inorganic chemistry.

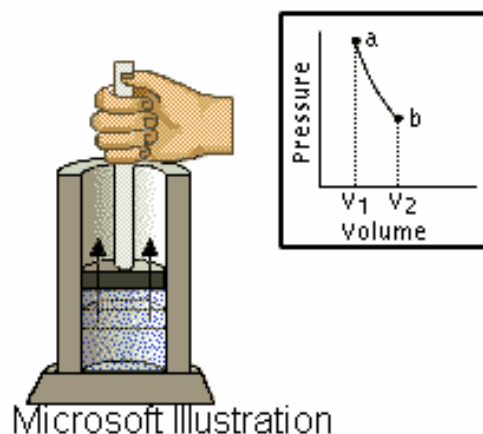
The second-year students work in the laboratory of analytical chemistry. It is situated in the laboratory building and occupies several large rooms. Every room is furnished with many long tables or benches. On every bench there are shelves and racks. On the shelves there are many bottles. Some bottles contain solids, others – liquids. Some substances are colourless and odourless while others possess various colours and have pungent odours.

For their work the students use various glassware such as test-tubes, beakers, flasks, evaporating bottles, pipettes, burettes, glass rods, funnels, watch glasses, etc.

The laboratory is equipped with many apparatuses and devices. A desiccator is used for keeping a substance after ignition in order that it does not absorb moisture from the air. Analytical balances are used for accurate weighing of samples and precipitates. They are usually kept in a special room. Various burners serve for producing flame of different intensity. In the analytical lab

the students usually use a muffle for heating substances. Every chemical lab is equipped with a hood. Various poisonous, volatile, inflammable substances and concentrated acids are kept in the hood. Near each bench there is a sink with running water. The students also use ring-stands in their work. A universal ring-stand was constructed by Robert Bunsen.

Some other things are necessary for lab work, e.g. spoons and spatulas, thermometers and crucibles. Crucibles are used for igniting



substances. They are made of porcelain, platinum or corundum.

When working at the chemical lab every student should observe some rules of work:

- 1) be careful with concentrated, poisonous, volatile and inflammable substances;
- 2) keep the working place in order;
- 3) be careful in handling various glassware.

The purpose of analytical chemistry is to determine the constituents and their quantities in a mixture or a compound. Analytical chemistry uses two analyses; they are qualitative and quantitative.

Several methods are used for qualitative analysis: physical, chemical and physico-chemical ones.

The methods of quantitative analysis are gravimetric, titrimetric and instrumental.

Gravimetric method

The purpose of it is to determine the quantity of the substance to be analysed. We need such glassware as flasks, glasses, a glass rod, a funnel, a pipette and a beaker. We also need some filter paper, a desiccator and analytical balances, a crucible, a muffle. We take a precipitating solution and add it to the solution to be analysed. We heat the solutions and then add some more precipitating solution dropwise for complete precipitation. The precipitate is filtered off through ash-free filter and washed. Then we weigh a crucible on analytical balances and put the precipitate together with filter into it. Now we place the crucible into a muffle to ignite the precipitate. After ignition the crucible is cooled in a desiccator and weighed on the analytical balances. The difference between the result obtained and the weight of an empty crucible is the weight of the substance in question.

Titrimetric method



Our task is to determine the concentration of an acid or alkali solution. We need flasks, beakers, a pipette, a burette and a ring-stand as well. We prepare a standard solution (a titer) and pour it into a burette. By means of a pipette we measure a definite volume of the solution to be analysed and add a few drops of litmus, methyl-orange, or some other indicator. We place this solution beneath a burette from which the titer is released little

by little until the indicator changes its colour. It means that the equivalence point is reached. On the basis of the added quantity of the titer we calculate the concentration of the solution in question.

Instrumental method (physico-chemical)

This method is studied in the third year. Some physical property of the constituent to be identified is measured by means of some instrument, such as colorimeter, picnometer, spectrograph, etc. For example, colour is measured by colorimeter, density – by picnometer, spectrum – by spectrograph, etc.

Words and expressions:

inorganic chemistry – неорганическая химия

analytical chemistry – аналитическая химия

to occupy – занимать

to furnish – снабжать

bench – лабораторный стол

shelf – полка

rack – штатив (деревянный)

to possess – обладать

pungent – едкий

bottle – бутылка, баллон

glassware – стеклянная химическая посуда

test-tube – пробирка

evaporating dish – выпарная чашка

beaker – химический стакан

weighing bottle – бюкс

flask – колба

pipette – пипетка

burette – бюретка

rod – палочка, стержень

to equip – оборудовать

device – устройство, прибор

desiccator – эксикатор

to ignite – прокалывать

moisture – влага

to generate – производить, получать

analytical balances – аналитические весы

accurate – точный

to weigh – взвешивать

weight – вес

sample – образец
precipitate – осадок
burner – горелка
flame – пламя
muffle – муфель, муфельная печь
hood – вытяжной шкаф
poisonous – ядовитый
volatile – летучий
inflammable – легко воспламеняющийся
sink – раковина
running water – водопроводная вода
ring-stand – штатив
spatula – шпатель
thermometer – термометр
crucible – тигель
porcelain – фарфор
platinum – платина
corundum – корунд
to observe – соблюдать
rule – правило
careful – осторожный, внимательный
to keep in order – содержать в порядке
to handle – обращаться
qualitative – качественный
quantitative – количественный
gravimetric – гравиметрический
titrimetric – титриметрический
instrumental – инструментальный
dropwise – по каплям
complete – полный
ash-free – беззольный
empty – пустой
titer – титр
to pour – лить, наливать
to measure – отмерять
definite – определенный
litmus – лакмус
methyl-orange – метил-оранж
beneath – под
to reach – достигать
to calculate – вычислять
to identify – определять

Answer the questions:

1. What chemical laboratory do the second-year students work at?
2. Where is this laboratory situated?
3. How many rooms does it occupy?
4. How is the laboratory of analytical chemistry furnished?
5. What is there on the shelves?
6. What glassware do the students use?
7. What apparatuses is the laboratory equipped with?
8. Is there a hood in the lab? What does it serve for?
9. What serves for producing flame of different intensity?
10. Do you often use analytical balances and with what purpose?
11. What does a desiccator serve for?
12. What are a Dementiev apparatus and Keep gas generator used for?
13. Who constructed a universal ring-stand?
14. How do you determine the purpose of analytical chemistry?
15. What analyses does analytical chemistry use?
16. What is the qualitative analysis?
17. What is the quantitative analysis?
18. Name the methods of the qualitative analysis.
19. How do you classify the methods of the quantitative analysis?
20. How do you carry out gravimetric analysis and titrimetric analysis?

Use the following plan:

- 1) the purpose of the analysis;
- 2) glassware and devices used;
- 3) the procedure

EXERCISES

1. Give the English equivalents for:

лабораторный корпус
едкий запах
хранение вещества
аппарат Кипа
получение сероводорода
аналитические весы
точное взвешивание образцов
пламя разной силы
водопроводная вода

прокаливание веществ
вещества которые необходимо проанализировать
осадительный раствор

2. *Fill in the blanks with the prepositions:*

1. The laboratory is equipped ... many apparatuses.
2. The second-year students work ... the laboratory of analytical chemistry.
3. ... the racks there is different chemical glassware.
4. A Bunsen burner is the most common ... laboratory use.
5. In the gravimetric method the reagent ... an unknown concentration is added ... the solution to be analysed.
6. Standard solutions are used ... the volumetric analysis.

to, at, in, with, on, of, for

3. *Name the apparatuses and devices which are used for:*

1. drying materials;
2. for accurate weighing of samples;
3. for generating hydrogen sulfide;
4. for keeping poisonous and volatile substances and concentrated acids;
5. for producing flame of different intensity.

4. *Name all the chemical glassware you use in your laboratory work.*

5. *What is it?*

1. It is used for measuring colour. It is used in the instrumental method of analysis.
2. It is made of wood and covered with plastic. There are shelves and racks on it. There is a sink with running water near it.
3. It is not large. It is made of glass. It has many "brothers" and "sisters" of different size and shape. They all are on the shelf. They are closed by a cork.
4. It is a very important apparatus. It serves for keeping a substance after ignition. Now there is a crucible in it.
5. It is used for generating hydrogen sulfide and other gases. It is made of glass.
6. Its father's name is Bunsen. It is he who invented it in the XIX century for producing flame of different intensity.

7. It is to be in every chemical lab. It keeps various poisonous, volatile, inflammable substances and concentrated acids. Sometimes it is full of them.
8. There are many of them in every lab. They are used for ignition of substances. They are made of porcelain. Sometimes they are made of platinum.
9. It is not in the laboratory room. It has his own flat. It is used for accurate weighing of samples and precipitates.
10. It is made of glass. It is used for measuring temperature.

analytical balances, a crucible, a hood, a burner, a Kipp gas generator, a desiccator, a bottle, a bench or laboratory table, a colorimeter, a thermometer, a hood.

6. *Make up sentences with the help of the following words:*

- 1) to be analysed, unknown concentration, of, the reagent, is added, in, gravimetric, the, analyses, the solution.
- 2) separation, a reaction product, after, weighed, is.
- 3) used, is, the, in volumetric, titer, analyses.
- 4) use, standard, the analyses, volumetric, we, solutions, in.
- 5) by means of, property, some physical, measured, is, instrument, some.

7. *Open the brackets choosing the suitable word:*

- 1) (*A balance, a calorimeter, a thermometer*) is a device to determine the quantity, but not the quality of heat in a body.
- 2) If a chemist determines mass, he is to employ (*a flask, a thermometer, a balance*).
- 3) (*A calorimeter, a flask, a microscope*) is used if a chemist is to examine small samples of matter.
- 4) To measure volumes of gases a chemist uses (*burettes, pipettes, gas burettes*).
- 5) The unit of (*volume, mass*) in the metric system is the gram.
- 6) On (*the Centigrade scale, the Fahrenheit scale*) the freezing point of water is 0°.
- 7) If a chemist is to measure extremely short distances, (*the centimeter, the micron*) must be used.

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Часть II

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